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MIP: A Method for Identifying Metaphorically Used Words in Discourse

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This article presents an explicit method that can be reliably employed to identify metaphorically used words in discourse. Our aim is to provide metaphor scholars with a tool that may be flexibly applied to many research contexts. We present the "metaphor identification procedure" (MIP), followed by an example of how the procedure can be applied to identifying metaphorically used words in 1 text. We then suggest a format for reporting the results of MIP, and present the data from our case study describing the empirical reliability of the procedure, discuss several complications associated with using the procedure in practice, and then briefly compare MIP to other proposals on metaphor identification. The final section of the paper suggests ways that MIP may be employed in disciplinary and interdisciplinary studies of metaphor.

One of the major developments in metaphor research in the last several years has been the focus on identifying and explicating metaphoric language in real discourse. Isolated constructed examples, often seen in linguistic research, or stimuli created by psychologists for experimental purposes, provide important materials for studying the structure and functions of metaphor. Yet making claims about the ubiquity and realistic understanding of metaphoric language demands that metaphor scholars explore "metaphor in the wild" as speakers and writers produce it in varying contexts.

The primary difficulty with this line of work, however, is that researchers often differ in their intuitions about what constitutes a metaphoric word or phrase. Metaphor scholars often do not provide criteria in their empirical investigations

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for specifying what is, and what is not, metaphorical, and not surprisingly focus on different aspects of metaphorical language depending on their own theoretical orientation and research purpose. Variability in intuitions, and lack of precision about what counts as a metaphor, makes it quite difficult to compare different empirical analyses. More important, the lack of agreed criteria for metaphor identification complicates any evaluation of theoretical claims about the frequency of metaphor, its organization in discourse, and possible relations between metaphoric language and metaphoric thought (see Cameron, 2003; Semino, Heywood, & Short, 2004).

As a group of metaphor scholars, from a variety of academic disciplines, we have attempted to create an explicit, reliable, and flexible method for identifying metaphorically used words in spoken and written language. This article presents our procedure, and outlines the ways it may be used by metaphor scholars for different empirical research. The procedure aims to establish, for each lexical unit in a stretch of discourse, whether its use in the particular context can be described as metaphorical. Our procedure adopts a maximal, and not a minimal, approach such that a wide range of words may be considered as conveying metaphorical meaning based on their use in context. We require that a clear decision be made about whether a word conveys, or does not convey, a metaphorical meaning, although we recognize that words, and language more generally, differ in the degree to which they express metaphoricity. Although we make no claims as to whether actual writers or speakers intended their specific words to express metaphorical meanings, our procedure may be viewed as providing a reliable research method for determining whether words in contexts convey metaphorical meaning.

We are not concerned, at this time, with identifying metaphorical utterances or with finding conventional linguistic metaphors that may arise from postulated conceptual metaphors. Furthermore, we do not claim that our identification procedure reflects what ordinary listeners or readers do when they judge that some word is used metaphorically. Finally, we emphasize that any decision not to mark a word as metaphorical in context does not imply the word is being used literally (i.e., the word may express metonymic, hyperbolic or some other type of figurative meaning). Our general purpose is only to provide a research tool that is relatively simple to use and flexible for adaptation by scholars interested in the metaphorical content of natural discourse.

Presented next is the "metaphor identification procedure" (MIP), followed by an example of how the procedure can be applied. We then propose a format for reporting the results of metaphor identification using MIP, and present findings from our case study on two texts. Following this, we discuss several issues associated with using MIP in practice given the varying goals of metaphor researchers, and briefly compare MIP to other proposals on metaphor identification. The final sec-

tion suggests ways that MIP may be employed in disciplinary and interdisciplinary studies of metaphor.

PROCEDURE AND EXPLICATION

The MIP is as follows:

1. Read the entire text–discourse to establish a general understanding of the meaning.
2. Determine the lexical units in the text–discourse
3. (a) For each lexical unit in the text, establish its meaning in context, that is, how it applies to an entity, relation, or attribute in the situation evoked by the text (contextual meaning). Take into account what comes before and after the lexical unit.
   (b) For each lexical unit, determine if it has a more basic contemporary meaning in other contexts than the one in the given context. For our purposes, basic meanings tend to be
   —More concrete [what they evoke is easier to imagine, see, hear, feel, smell, and taste];
   —Related to bodily action;
   —More precise (as opposed to vague);
   —Historically older;
   Basic meanings are not necessarily the most frequent meanings of the lexical unit.
   (c) If the lexical unit has a more basic current–contemporary meaning in other contexts than the given context, decide whether the contextual meaning contrasts with the basic meaning but can be understood in comparison with it.
4. If yes, mark the lexical unit as metaphorical.

We now demonstrate the MIP by applying it to the first sentence of a newspaper article from *The Independent* (Internet edition) titled "Sonia Gandhi stakes claim for top job with denunciation of Vajpayee" (see Appendix). A reading of the whole article, step 1, reveals that it is concerned with contemporary Indian politics, and particularly with Sonia Ghandi's controversial role as a politician. The first sentence focuses specifically on Ghandi's difficulties in being accepted by Indians as a political leader and potential future Prime Minister:

> For years, Sonia Gandhi has struggled to convince Indians that she is fit to wear the mantle of the political dynasty into which she married, let alone to become premier.

At step 2, the lexical units in the sentence are identified as follows, with slashes indicating the boundaries between lexical units:

> / For / years /, Sonia Gandhi / has / struggled / to / convince / Indians / that / she / is / fit / to /wear/ the / mantle / of / the / political / dynasty / into / which / she / married /, let alone / to / become / premier /.

We discuss in greater detail below the issue of choosing an appropriate unit of analysis, the rationale for our approach to lexical units, and our use of a dictionary in this process. For the moment, we have subsumed more than one word under a single lexical unit in the case of proper names (e.g., *Sonia Ghandi*) and in those cases where the meaning of a whole expression cannot be arrived at via the composition of the meaning of the parts (e.g., *let alone*).

At step 3 we consider each lexical unit in turn, starting from the beginning of the sentence. For each lexical unit, we outline our decisions for each of the three parts of step 3 in our procedure, and report our final decision as to whether the unit is used metaphorically in the context of the article, step 4.

For

(a) *contextual meaning*: In this context, the preposition "for" indicates temporal duration, that is, it introduces a noun phrase (*years*) that indicates the period of time spanned by the action/process referred to by the main verb phrase in the sentence (*has struggled*).

(b) *basic meaning*: The preposition "for" can be used to introduce the beneficiary or recipient of an action, often involving the transfer of a physical entity from one person to another (e.g., *I've brought a cup of tea for you*). This could be regarded as the basic meaning of the preposition. This is the first sense of "for" in the contemporary dictionary used (discussed later).

(c) *contextual meaning versus basic meaning*: The contextual meaning contrasts with the basic meaning. However, we have not found a way in which the contextual meaning can be understood by comparison with the basic meaning.

Metaphorically used? No

years

(a) *contextual meaning*: In this context, "years" indicates a long period of time encompassing several calendar years. The use of "years" emphasizes the length of the relevant period of time, rather than demarcating it with any precision.

(b) *basic meaning*: The most basic meaning of *year* is the cyclical period of time in which the earth completes a full revolution around the sun, consisting of

365 or 366 days (although the precise number of days is not necessarily part of the basic meaning).

(c) *contextual meaning versus basic meaning*: The contextual meaning is very closely related to the basic meaning and does not significantly contrast with it.

Metaphorically used? No.

Sonia Ghandi

(a) *contextual meaning*: The proper name refers to a specific, uniquely identifiable individual in a particular historical and geographical context.

(b) *basic meaning*: The proper name does not have a more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

has

(a) *contextual meaning*: In this context, "has" is the operator in the verb phrase "has struggled," where it signals agreement with the singular grammatical subject "Sonia Ghandi," and expresses an aspectual meaning, that is, it indicates that the relevant action/process started in the past and has not yet been completed.

(b) *basic meaning*: As an auxiliary verb, *to have* does not have a more basic meaning. As a lexical verb, *to have* has the more basic meaning of possession (prototypically involving physical objects).

(c) *contextual meaning versus basic meaning*: If we consider *to have* as an auxiliary verb, the contextual meaning is the same as the basic meaning. If we consider the lexeme *to have* as a whole, the contextual meaning contrasts with a more basic meaning. However, we have not found a way in which the contextual meaning can be understood by comparison with the basic meaning.

Metaphorically used? No

struggled

(a) *contextual meaning*: In this context, "struggled" indicates effort, difficulty and lack of success in achieving a goal, namely changing other people's negative views and attitudes.

(b) *basic meaning*: The basic meaning of the verb *to struggle* is to use one's physical strength against someone or something, as in *She picked up the child, but he struggled and kicked*. The evidence cited in the etymological dictionary consulted, the Shorter Oxford Dictionary on Historical Principles, also suggests that this meaning is historically prior (p. 2,157).

(c) *contextual meaning versus basic meaning*: The contextual meaning contrasts with the basic meaning and can be understood by comparison with it: We can understand abstract effort, difficulty, opposition and conflict in terms of physical effort, difficulty, opposition and conflict.

Metaphorically used? Yes.

to

(a) *contextual meaning*: In this context, "to" has the purely grammatical function of signaling the infinitive form of the verb. Hence, it has a very abstract and schematic "meaning."

(b) *basic meaning*: As an infinitive marker, *to* does not have a more basic meaning. As a preposition, *to* has the more basic meaning of introducing the end point or destination of movement in physical space, as in *There are daily flights to Boston*.

(c) *contextual meaning versus basic meaning*: If we consider *to* as an infinitive marker, the contextual meaning is the same as the basic meaning. If we consider the lexeme *to* as a whole, the contextual meaning contrasts with the basic, spatial meaning of the preposition *to*. However, we have not found a way in which the contextual meaning can be understood by comparison with the basic meaning.

Metaphorically used? No

convince

(a) *contextual meaning*: In this context, "convince" means to persuade a large number of people to change their views about Sonia Ghandi's suitability as a political leader.

(b) *basic meaning*: The verb *convince* does not have a different, more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

Indians

(a) *contextual meaning*: In this context, "Indians" refers to the inhabitants of contemporary India, and particularly those who have the right to vote in elections.

(b) *basic meaning*: The basic meaning of *Indians* is all inhabitants of India.

(c) *contextual meaning versus basic meaning*: The contextual meaning does not significantly contrast with the basic meaning, and, in any case, is not understood by comparison with the more general meaning

Metaphorically used? No.

that

(a) *contextual meaning*: In this context, "that" has the purely grammatical function of signaling grammatical subordination: it introduces the direct object–complement of the verb *to convince*. Hence, it has a very abstract and schematic meaning.

(b) *basic meaning*: As a complementizer–subordinating conjunction, *that* does not have a more basic meaning. If we consider the lexeme *that* as a whole, the demonstrative pronoun–determiner *that* has the basic physical meaning of indicating that a particular referent can be identified as being spatially distant from the speaker (or deictic centre) in the situation evoked by the text, as in *Give me that hammer.*

(c) *contextual meaning versus basic meaning*: If we consider *that* as a complementiser–subordinating conjunction, the contextual meaning is the same as the basic meaning. If we consider the lexeme *that* as a whole, the contextual meaning contrasts with a more basic meaning. However, we have not found a way in which the contextual meaning can be understood by comparison with the basic meaning.

Metaphorically used? No

she

(a) *contextual meaning*: In this context, "she" indicates a female referent who is uniquely identifiable in the situation evoked by the text.

(b) *basic meaning*: The pronoun *she* does not have a more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

is

(a) *contextual meaning*: In this context, "is" introduces a (possible or hypothetical) property of a particular referent in the text world: Sonia Ghandi.

(b) *basic meaning*: As a copular–linking verb, *to be* does not have a different, more basic meaning. If we consider the lexeme *to be* as a whole, the verb also has the meaning of indicating existence. However, this meaning is rather formal in contemporary English, and cannot easily be regarded as the basic meaning of the verb.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

fit

(a) *contextual meaning*: In this context, "fit" indicates suitability to play a particular (public) role. It therefore refers to personal qualities such as leadership, integrity, talent, independence, and so on.

(b) *basic meaning*: The adjective *fit* has a different meaning to do with being healthy and physically strong, as in *Running around after the children keeps me fit*. We note that the "suitability" meaning is historically older than the "healthy" meaning; the Shorter Oxford English Dictionary on Historical Principles (SOEDHP) gives the "suitability" meaning as from medieval English and used in Shakespeare, whereas the earliest record of the sport meaning is 1869. However, we decided that the "healthy" meaning can be considered as more basic (using the description of "basic" set out earlier) because it refers to what is directly physically experienced.

(c) *contextual meaning versus basic meaning*: The contextual meaning contrasts with the basic meaning and can be understood by comparison with it: We can understand abstract suitability in terms of physical health and strength.

Metaphorically used? Yes.

to

(a) *contextual meaning*: In this context, "to" has the purely grammatical function of signaling the infinitive form of the verb. Hence, it has a very abstract and schematic "meaning."

(b) *basic meaning*: As an infinitive marker, *to* does not have a more basic meaning. As a preposition, *to* has the more basic meaning of introducing the end point or destination of movement in physical space, as in *There are daily flights to Boston*.

(c) *contextual meaning versus basic meaning*: If we consider *to* as an infinitive marker, the contextual meaning is the same as the basic meaning. If we consider the lexeme *to* as a whole, the contextual meaning contrasts with the basic, spatial meaning of the preposition *to*. However, we have not found a way in which the contextual meaning can be understood by comparison with the basic meaning.

Metaphorically used? No

wear

(a) *contextual meaning*: In this context, the idiomatic expression "wear the mantle" means to have a leading role within a family whose members have recently occupied positions of high office in a particular democratic system. The contextual meaning of "wear" is have or bear, and the contextual meaning of "mantle" is the familial responsibility.

(b) *basic meaning*: The basic meaning of *wear* in *wear the mantle* is defined as the first sense of the word in the Macmillan dictionary as follows: "to have something on your body as clothing, decoration or protection" (p. 1,622). The SOEDHP indicates that this meaning is also historically prior (p. 1,274).

(c) *contextual meaning versus basic meaning*: The contextual meaning contrasts with the basic meaning and can be understood by comparison with it: We can understand the process of following family members in having a prominent political role in terms of physically wearing the item of clothing that symbolizes royal power.

Metaphorically used? Yes.

the

(a) *contextual meaning*: In this context, "the" has the grammatical function of indicating definite reference.

(b) *basic meaning*: The definite article *the* does not have a more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

mantle

(a) *contextual meaning*: In this context, "mantle" refers to the role that the Ghandi family has played in the political leadership of India.

(b) *basic meaning*: The basic meaning of *mantle* is an old-fashioned piece of clothing now usually only worn by people in power, such as monarchs, as a symbol of their position.

(c) *contextual meaning versus basic meaning*: The contextual meaning contrasts with the basic meaning and can be understood by comparison with it: We can understand the role of political leadership that someone may take on in a democracy after other members of their family in terms of the garment that is traditionally worn by a monarch.

Metaphorically used? Yes.

of

(a) *contextual meaning*: In this context, the preposition "of" has the abstract, grammatical meaning of indicating a relationship between two entities in the situation evoked by the text.

(b) *basic meaning*: The preposition *of* does not have a more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

the

(a) *contextual meaning*: In this context, "the" has the grammatical function of indicating definite reference: It indicates that the referent of the noun phrase of which it is part is uniquely identifiable in the situation evoked by the text; in this case, this is the Ghandi family as a major player in recent Indian politics.

(b) *basic meaning*: The definite article *the* does not have a more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

political

(a) *contextual meaning*: In this context, "political" indicates the property of being related to politics, and particularly power, influence, and government in India.

(b) *basic meaning*: The adjective does not have a different, more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

dynasty

(a) *contextual meaning*: In this context, "dynasty" refers to the Ghandi family, and specifically to the fact that various members of the family successively played an important role in Indian politics, and ruled the country for considerable periods of time.

(b) *basic meaning*: It can be argued that *dynasty* has the more basic meaning of a royal family in a monarchic system, where power is inherited from one generation to the next.

(c) *contextual meaning versus basic meaning*: The contextual meaning contrasts with the basic meaning, and can be understood by comparison with it: We can understand the way in which different members of a family successively acquire power in a democracy in terms of the way in which successive members of a royal family inherit the throne within a monarchic system.

Metaphorically used? Yes

into

(a) *contextual meaning*: In this context, the preposition "into" introduces a family group that Sonia Ghandi has become a member of via marriage.

(b) *basic meaning*: The preposition *into* has the more basic meaning of introducing a container or bounded area that is entered via physical movement, as in *She got into her car and drove away.*

(c) *contextual meaning versus basic meaning*: The contextual meaning contrasts with the basic meaning, and can be understood by comparison with it: We can understand social–kinship groups as containers, and the process of becoming a member of a group as entering a container or a space.

Metaphorically used? Yes.

which

(a) *contextual meaning*: In this context, "which" functions as a relative pronoun and has the abstract, grammatical function of referring back to the referent of the head of the noun phrase within which the relative clause is embedded, "dynasty."

(b) *basic meaning*: As a relative pronoun, *which* does not have a different, more basic meaning. If we consider the lexeme *which* as a whole, the pronoun–determiner also has an interrogative meaning, which may be regarded as more basic.

(c) *contextual meaning versus basic meaning*: If we consider *which* as a relative pronoun, the contextual meaning is the same as the basic meaning. If we consider the lexeme *which* as a whole, the pronoun–determiner has a more basic, interrogative meaning. However, we have not found a way in which the contextual meaning can be understood by comparison with the basic meaning.

Metaphorically used? No

she

(a) *contextual meaning*: In this context, "she" indicates a female referent who is uniquely identifiable in the situation evoked by the text.

(b) *basic meaning*: The pronoun *she* does not have a more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

married

(a) *contextual meaning*: In this context, "married" refers to the process whereby Sonia Maino became Rajiv Ghandi's spouse, and thereby a member of their family.

(b) *basic meaning*: The verb *marry* does not have a different, more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

let alone

(a) *contextual meaning*: In this context, "let alone" introduces a hypothetical scenario in which Sonia Ghandi becomes Prime Minister of India, that is presented as even less likely to happen than the previously mentioned hypothetical scenario in which Sonia Ghandi is fit to take on the political inheritance of other members of the Ghandi family.

(b) *basic meaning*: As a single lexical unit, *let alone* does not have a different, more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

to

(a) *contextual meaning*: In this context, "to" has the purely grammatical function of signaling the infinitive form of the verb. Hence, it has a very abstract and schematic "meaning."

(b) *basic meaning*: As an infinitive marker, *to* does not have a more basic meaning. As a preposition, *to* has the more basic meaning of introducing the end point or destination of movement in physical space, as in *There are daily flights to Boston*.

(c) *contextual meaning versus basic meaning*: If we consider *to* as an infinitive marker, the contextual meaning is the same as the basic meaning. If we consider the lexeme *to* as a whole, the contextual meaning contrasts with the basic, spatial meaning of the preposition *to*. However, we have not found a way in which the contextual meaning can be understood by comparison with the basic meaning.

Metaphorically used? No.

become

(a) *contextual meaning*: In this context, "become" refers to a process of change whereby Sonia Ghandi acquires a particular, political, role.

(b) *basic meaning*: It can be argued that *become* has a more basic meaning to do with starting to have different properties, as in *People are becoming increasingly angry about the delay*, but we do not regard this meaning as substantially different from the contextual meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No.

premier

(a) *contextual meaning*: In this context, "premier" refers to the position of Prime Minister of India, that is, leader of the government.

(b) *basic meaning*: The noun *premier* does not have a different, more basic meaning.

(c) *contextual meaning versus basic meaning*: The contextual meaning is the same as the basic meaning.

Metaphorically used? No

In summary, 6 out of the 27 lexical units in this single sentence were judged as being used metaphorically. Our explication of MIP as applied to the lexical units of a single sentence of written text is intended to illustrate how the procedure works and some of the decisions researchers must make in judging whether any word is used metaphorically in discourse. Of course, we realize that some people might make different decisions than we did. The nine of us also disagreed over certain cases, and sometimes had different reasons for supporting the same judgments as to whether a specific word should be judged as metaphorical. One of the most valuable purposes of MIP is that its explicit set of steps allows scholars to pinpoint the locus of their disagreements as to why, or why not, a word is presumed to convey metaphorical meaning in context. But the MIP would not serve much purpose if it produced highly variable judgments across individual metaphor analysts. In the next section, we provide a template for reporting the results of any analysis based on the MIP, and then present a case study, based on the complete analysis of two texts, from our collaborative work on metaphor identification. The results of this study demonstrate that the MIP can indeed produce reliable metaphor identification.

REPORTING THE RESULTS

For any metaphor identification project, we urge that researchers report their results as fully as possible by including, as much as practically possible, details about the texts studied, the readership assumed, the determination of lexical units, resources used to aid decisions in completing the steps of the MIP, specific coding decisions, who the analysts were, and the statistical reliability of the analysis. Resources that we recommend are large electronic corpora and corpus-based dictionaries. We specifically recommend that scholars provide the information listed in Table 1.

OUR CASE STUDY

We again acknowledge that metaphor scholars may have very different aims in doing metaphor identification analyses. For example, some researchers may only be interested in one specific text or conversation, whereas others may study a larger

TABLE 1
Form for Reporting the Use of Metaphor Identification Procedure to Analyze a Text, and Decisions Taken

(a) Text details:
Name
Source
Mode
Genre, register
Date of composition or production (or publishing or modification)
Length of text
Length of context read by the analysts (as apart from coded)
(b) Listener or readership assumed for the analysis:
Were contemporary meanings retained?
Were text external indications by the author used?
(c) Lexical unit decisions
Linguistic decisions: idioms, phrasal verbs, etc.
Transcription decision for oral (or dialectal) data
(d) Resources used
Which dictionary?
Which corpora?
(e) Coding decisions
Decisions about grammatical words: modals, auxiliaries, prepositions/particles, infinitive markers
Whether there is good reason to treat the whole text as metaphorical, as in allegory
(f) Analysis details
Number of analysts
Who the analysts were (at least in outline)
Precoding training received
How many "passes" (codings) were made
At what point discussion between coders took place
Reliability with respect to coders and individual words
(g) Additional/subsequent analyses
e.g., Whether an iterative procedure was adopted, coding higher level units after words
(h) Results of analyses
including statistical analyses on the agreement among metaphor analysts

corpus of texts. Some researchers, like experimental psycholinguists, may wish to verify the metaphorical words used in texts created for experimental purposes. In other instances, an individual metaphor scholar may wish to identify metaphorically used words in some discourse, and not be particularly concerned if his or her judgments match those of other possible analysts. Finally, there may be research teams, such as our own, where finding agreement across a number of individual analysts is critical to establish.

The MIP can be used for all of these needs. Of course, as with any empirical analysis, the larger the database (i.e., language materials examined) and number of analysts in agreement, the more reliability one can attach to a particular metaphor

identification study. We now present details of our own case study of two texts to give a full illustration of using MIP, report its findings, and establish the statistical reliability of the procedure.

(a) Text Details

Text 1
Name: A rocky road to peace
Source: *The Observer*
Mode: written
Genre, register: newspaper article, comment page
Date of composition (or publishing or modification): 4 May, 2003
Length of text: 676 words
Length of context read by the analysts (as apart from coded): none

Text 2
Name: Central Weekend Live, discussion programme
Source: British National Corpus, file HV1, fragment 1.
Mode: spoken
Genre, register: television broadcast
Date of composition (or publishing or modification): 29th October 1993
Length of text: 668
Length of context read by the analysts (as apart from coded): None

(b) Readership Assumed for the Analysis

A present day audience was assumed. Contemporary meanings are thus identical with present-day meanings.

(c) Lexical Unit Decisions

Linguistic decisions. One researcher, who applied the following guidelines for using the dictionary to identify lexical units, identified all lexical units in advance, using the *Macmillan English Dictionary for Advanced Learners* (Rundell & Fox, 2002; discussed later). All single headwords in the dictionary were regarded as lexical units, with a few exceptions, described in the following. Collocations treated after the main entry for a word, termed "run-ons," were not regarded as lexical units. We analyzed such collocations into their component words. A specific type of run-on is the phrasal verb. There is a strong case for treating phrasal verbs as single lexical units; they therefore form an exception to the general practice of decomposing run-ons.

Frequent collocations, listed separately in the dictionary for the purpose of the advanced language learner, seem to be generally decomposable; therefore, where

they follow a definition of their first component word (in the way that *golden age* follows the headword *golden*), they are not regarded as true lexical units but are analyzed at the level of word.

In the identification of lexical units we consider words with identical base forms such as *dog* (noun) and *dog* (verb) to be a single lexical unit, even where they are different parts of speech and defined under different headwords in the *Macmillan Dictionary* (Rundell & Fox, 2002). See the section on complications for an explanation of this decision.

Transcription decision for oral (or dialectal) data. No decisions taken additional to the ones manifest from the file from the British National Corpus.

(d) Resources Used

Which dictionary? We used the *Macmillan English Dictionary for Advanced Learners* (Rundell & Fox, 2002), a corpus dictionary based on a fairly recent corpus of contemporary English. There were several reasons for this choice. The *Macmillan Dictionary* is based on a systematically processed corpus of 220 million words, which in corpus linguistic terms is considered adequate for general language analysis, and which is large enough to provide a number of citations for all but the rarest words. The corpus is relatively recent, and the dictionary aims at providing a description of current English. This is important for our purposes because we are attempting to identify metaphors in contemporary texts. In our approach we are concerned with what is metaphorical within the text world, not with uses that may have been derived through a metaphorical process at some previous time; we therefore need a contemporary description. The corpus used is well sampled, containing language data from a wide range of text types (see www.macmillandictionary.com for details). Creating a corpus that is truly representative of the language as a whole is probably an unattainable goal, but it is nonetheless important to attempt to analyze a spread of data. The dictionary includes notes specifically addressing the issue of metaphor, implying that there was an awareness of the importance of this during the process of analysis.

The *Shorter Oxford English Dictionary on Historical Principles* (SOEDHP; Little et al, 1973) was consulted for supplementary information about etymology.

Which corpora? No corpus was used.

(e) Coding Decisions

Solutions about grammatical words: modals, auxiliaries, prepositions–particles, infinitive markers. The distinct parts of step 3 were all handled in the same way for all word classes. Decisions about the contextual meaning, the basic meaning (if any), and the relationship between any basic meanings and

the contextual meaning were done on an intuitive basis by individual researchers, with the crucial proviso that researchers' intuitions about any difficult cases had to be checked against the meaning descriptions in the Macmillan dictionary.

Whether there is good reason to treat the whole text as metaphorical, as in allegory. No.

(f) Analysis Details

Number of analysts. 6

Who the analysts were (at least in outline). The analysts are all linguists, and senior researchers with expertise on metaphor in discourse; five analysts are native speakers of English. All analysts have collaborated with each other as a group on this metaphor identification project for 5 years.

Precoding training received. Two 3-day discussion sessions spread with a 1-year interval served as training sessions. In the first session, all analysts did one individual round of metaphor identification in two texts according to the aforementioned instructions. These data were discussed with reference to all different aspects of the procedure, to promote an identical understanding between analysts of the wordings and assumptions of the instructions. In the 2nd year, a first draft of the present article focusing on the analysis of the newspaper article in the Appendix was discussed for the same purpose.

How many "passes" (rounds of coding) were made. Analysis took place in two passes. After the first pass, analysts sent their results to the coordinator of the case study. At least 1 week later, they had to do a second pass. Having finished the second pass, each analyst had to compare their results with their decisions during the first pass. On the basis of the two sets of data, each analyst had to decide on a case-by-case basis which decision they thought was best, and send the resulting data set to the coordinator of the case study. The resulting data set was then subjected to statistical analysis for reliability.

At what point discussion between coders took place. Discussion took place after the coordinator had collected all data. Reliability after discussion was not examined.

TABLE 2
Frequencies and Percentages of Total Number of Words Marked as Metaphorically Used by Six Analysts in Two Texts

Number of Times Marked	*Conversation*[a]		*News*[b]	
	Frequency	*%*	*Frequency*	*%*
0	564	84.4	510	75.4
1	26	3.9	33	4.9
2	27	4.0	22	3.3
3	9	1.3	18	2.7
4	10	1.5	20	3.0
5	6	0.9	25	3.7
6	26	3.9	48	7.1

[a]$n = 668$. [b]$n = 676$.

(h) Results of the Analyses, Including Statistical Analyses of Reliability

Six analysts, working independently, applied the metaphor identification procedure to the two texts. Table 2 shows the marking of words as metaphorically used in the two texts.

Two groups of scores stand out: There is a large group of cases which are unanimously marked as not metaphorically used, on average accounting for about four-fifths of the data; and there is a small group of data which are unanimously marked as metaphorically used, on average accounting for about 5% of the data. In all, there is unanimous agreement before discussion between these six analysts about some 85% of the data. These data apparently constitute perfectly clear cases. An example is the following series of utterances from the beginning of the conversation, where no word was scored as metaphorically used by any of the six analysts. For reasons of readability, we do not attach the zero scores to these words.

A: So you deny all the studies that prove that …
B: No
A: … conclusively?
B: And what I'm saying is that
A: Do you deny those studies?
B: What I'm saying is that y— I probably do <unclear> deny those studies.

In contrast, all sentences in the newspaper text contain at least one word that was marked as metaphorically used by at least one analyst. An example of perfect

agreement about both metaphorical and nonmetaphorical usage in the conversation is the following utterance:

> What i— emerges(6) is depression(6) is a common condition which is under-diagnosed and under-treated.

The words *emerges* and *depression* were marked as metaphorically used by all six analysts, and all other words were not marked as metaphorically used by any of the six analysts. Again, there are no comparable sentences in the news text.

The next groups of cases are those in which only one analyst disagrees with the other five, either about the nonmetaphorical use of a word (3.9% and 4.9% of all cases, respectively) or about the metaphorical use of a word (0.9% and 3.7% of all cases, respectively). In our experience, these cases often involve an error on the part of the one analyst who disagrees with the other five—although this is not necessarily so. As a rule, discussion is able to resolve this difference of opinion. An example of this group of cases will be given later, from the news text; again, the words that have no scores behind them in effect should have a zero attached to them and display unanimous agreement that they are not metaphorically used:

> In (5) October 1991 Secretary James Baker was able to take(6) advantage of the momentum(6) created(5) by Arab support(6) for the use of force to liberate Kuwait from(1) the clutches(6) of Saddam Hussein to cajole a reluctant Likud Israeli prime minister and sceptical Arab leaders to participate in(5) an US-USSR-sponsored Middle East Peace conference.

There are three cases here where one analyst (not necessarily the same one) did not mark a word as metaphorically used whereas the others did: Two of these cases concern the use of the preposition *in*, and the other case involves the verb *created.* There is also one case, the preposition *from*, where only one analyst judged its use to be metaphorical whereas all others did not. All of these problems were resolved during discussion.

When there is a 2–4 or 3–3 split between the analysts, there usually are somewhat more serious issues about the data. In the conversation, this group of cases involves 6.8% of all cases, and in the news text, this group includes 9%. These cases may require further and more precise analysis, although this does not mean that they cannot be resolved. Examples are offered in the following text.

> President Bush the elder's "new world order(2)" led(6) to(4) the establishment, for the first time, of a Palestinian government, the Palestinian National Authority, on Palestinian soil, and the establishment of diplomatic relations between(3) Jordan and Israel.

All words without a score were unanimously judged to be nonmetaphorical, and the verb *led* was unanimously agreed to be metaphorically used here. However, opinion was divided over the words *order, to,* and *between*. It is not accidental that some of our illustrations of lack of agreement involve prepositions (*in, from, to, between*), where clear guidelines about the distinction between contextual and basic meanings are essential for identical performance across analysts.

In previous case studies, which we carried out in less formal ways, similar patterns have been found. There typically is a large group of data that are never scored as metaphorically used, usually between 70% and 80%, and there is a small group of lexical items that are unanimously regarded as metaphorical, typically less than 5%. For both groups, there is a related, small group of cases where one analyst disagrees with the others, but this disagreement can usually be redressed by discussion. And, finally, there is a small group of cases, ranging between some 5% and 10%, which is really problematic and which requires more extensive analysis and discussion. The crucial question now arises whether these findings can be said to be reliable as measured by some forms of statistical analysis.

Testing Reliability

Determining the extent to which a number of analysts agree in making repeated binary decisions for any set of materials can be done in at least two principally different ways (Dunn, 1989; Scholfield, 1995). In our work, too, one type of analysis examines the overall degree of difference between researchers by measuring the number of cases (i.e., lexical units) that analysts have marked as metaphorical or not and then comparing these proportions between analysts. If the differences between the proportions are too great to be due to chance alone, the analysis is not seen as sufficiently reliable. This can be measured by computing a test statistic called Cochran's *Q*, which measures the importance of the differences between the metaphor analysts. If Cochran's *Q* becomes statistically significant, MIP would not be deemed to be a sufficiently reliable research tool.

One problem with this first type of reliability measurement, however, is that it does not look at potentially metaphorical items as individual cases. This is important for, even if there were a big difference between researchers, it could still be possible for all or most researchers to agree about a core group of cases while having different opinions about another group of more marginal cases. Thus, some words in a text might be consistently marked as metaphorical by all analysts, whereas other words would be judged in a less consistent manner. Analyzing the data in this particular way would give more weight to differences among metaphorically used words instead of among analysts. The appropriate test statistic for this measurement approach is Cohen's Kappa.

Given the prime interest in a reliable description of the nature of the linguistic items and not in the performance of the human analysts, most linguistic studies

that assess agreement across individual analysts on some topic adopt the second method. For instance, Markert and Nissim (2003) have reported Cohen's Kappa for assessing the reliability of their method of metonymy identification. However, we believe that the first type of analysis also provides critical information, and so report both types below for comparison purposes.

Results of Reliability Analysis Across Cases

Agreement across cases, or ratings, was measured by computing Cohen's Kappa. Two methods of calculation can be used here. The first method involves the computation of observed and expected agreement for each pair of raters, after which their means are entered into the formula for computing Kappa. This method yielded a Kappa of 0.70 for the news text and 0.56 for the conversation. The second method involves the observation of agreement per case across all six raters. This method yielded a kappa of 0.72 for the news text and 0.62 for the conversation.

The interpretation of Cohen's Kappa is somewhat problematic, as various researchers have used different thresholds for sufficient performance. Markert and Nissim (2003) report one rather widely held view that a value of 0.80 or higher is adequate, a value between 0.60 and 0.80 is marginally reliable, and anything under 0.60 is not reliable. From that perspective, the individual application of the MIP between six analysts *before* discussion is marginally reliable.

It should be noted that the two methods of calculation yield slightly different ratios, so that it becomes important to be explicit about which method has been utilized. It should also be noted that the two text samples produce rather different results, with the written news text being more reliable than the spoken conversation. It may hence also be important to report reliability tests across a range of materials. And finally, most research projects do not stop with independently collected data: A round of discussion between analysts will enhance reliability figures, so that testing reliability before discussion merely serves as a report of the lower threshold of a method.

We do not wish to fix sufficient reliability at one arbitrary cutoff point. Instead, we suggest that it is more helpful to collect more reliability data measured by the same statistical techniques across a wide range of data by different researchers and research groups. This will lead to further insights into the various sources of error that lower interanalyst agreement about metaphor in discourse. In this way, both theoretical and empirical work may profit from the methodological interests spelled out in this article.

Results of Reliability Analysis Across Analysts

Agreement across analysts, or raters, was examined by computing Cochran's Q to test whether there was a reliable difference between the analysts in their total num-

ber of scores for metaphorically versus nonmetaphorically used words. For the news text ($N = 676$), $Q = 94.65$, $df = 5$, $p < .01$, and for the conversation ($N = 668$), $Q = 102.38$, $df = 5$, $p < .01$. In both cases, there was a statistically significant difference between the six analysts in their distribution of metaphorical and nonmetaphorical scores. There was a wide range of scores for metaphorically used words: For the news text, the minimum number of metaphorically used words assigned by one of the judges was 78, whereas the maximum number of scores, assigned by another judge, was 125. For the conversational data, the range was even broader: min = 34, max = 97.

The analysis of the differences between the total scores of the analysts shows significant disagreement. The six analysts show too much disparity to be solely due to chance when it comes to their total scores for metaphorically and nonmetaphorically used words. Some analysts observe many more metaphorically used words than others. Expressed as percentages, there is a 7-point difference between the lowest (11.5%) and the highest (18.5%) scores for metaphorically used words in the news text, and 9.5 points between the lowest (5%) and highest (14.5%) scores for the conversation. In the news text, the highest scoring judge sees half as many metaphorically used words more than the lowest scoring judge, whereas in the conversation, the highest scoring judge sees three times as many metaphorically used words more than the lowest scoring judge.

In our experience, these are enduring individual biases in judges' metaphor identifications. However, our experience has also shown that group discussions of the data after individual analysts have made their metaphor identifications have a positive effect on the extremes. Low scores usually rise and high scores usually drop, simply as a result of pointing out generally recognized errors in the application of the procedure.

Reliability Analysis: Conclusion

Disagreement between raters, as measured by Cochran's Q, does not necessarily mean that there is fundamental disagreement in the ratings for specific words in texts, as measured by Cohen's Kappa. If all scores for metaphorically used words of the lowest scoring judges are included in the more generous range of scores for metaphorically used words by the highest scoring judges, then there may still be considerable reliability across the ratings for a large group of words in spite of the overall lack of agreement between raters. Thus, there may still be a (relatively small) hard core of metaphorically used words that are observed by all judges, just as there is an extremely large group of words that are not metaphorically used at all according to all judges. The finding of significant individual biases between analysts may be an indication of the magnitude of the number of borderline cases that fall in between these two areas, but such a statistic does not say anything about the degree of agreement regarding the clearly metaphorical or nonmetaphorical cases.

ISSUES IN APPLYING THE PROCEDURE

Applying the MIP requires that researchers make a variety of decisions on the structure and meaning of language. These decisions are not usually "theory neutral," because they reflect analysts' ideals about a wide variety of linguistic and cognitive matters that surely influence what words get marked as metaphorical. Our experiences in creating the MIP have led us to recognize a number of specific problems that many analysts will face in their own research. We describe some of these issues in this section. Our aim is by no means to provide concrete solutions to these issues, although we report how we have dealt with some of these for our present case study. Instead, we discuss these issues both as practical matters to be addressed whenever one tries to do systematic metaphor identification, and as broader theoretical questions that surely shape our complex intuitions about what constitutes metaphor.

DISCOURSE TYPE

The type of discourse to which MIP is applied may alter some judgments of metaphoricity. The language of our sample text, for example, is fairly formal, contemporary, standard, British English, in written format as a newspaper article. Because a standard variety of the language is involved, a wide array of dictionaries and grammars are available for enriching researchers' own, individual, subjective intuitions. When we move away from standard varieties of a language, from the purely written modality, and from relatively "straightforward" genres familiar to those with some level of tertiary education, then certain ambiguity for our procedure of the variety of discourse types becomes particularly evident. These implications are best shown by moving sequentially through the steps that follow on from step 1 of the procedure.

Modality is likely to be of particular importance regarding lexical unit segmentation (step 2). For example, with a spoken corpus, when a word is spoken only partially, such as when one restarts one's utterance, and is transcribed as a word fragment, the researcher may be able to infer from the context the entire word that was likely intended. Does one count such a word as a lexical unit? Such a decision is left open in the procedure, but should best be specified in one's reporting of use of the procedure.

When we establish the meaning of the lexical unit in context for step 3a, judgments may vary considerably given stylistic, dialectal, historical, or geographical variation. Consider the problem of historical variation by reading the opening of Keats' long poem "The Fall of Hyperion": *Fanatics have their dreams wherewith they weave / A paradise for a sect.* If this were read as a piece of standard, contemporary, British English, rather than a piece of standard British English from about

1820, the contextual meaning of "fanatics" is simply that of fanatics in general, "dreams" is a reference to the fantasies or illusions of fanatics. The word "weave" refers to the process of constructing or creating the fantasies or illusions, "paradise" refers to the state of psychological satisfaction fanatics experience by creating their fantasies or illusions, and "sect" refers to the group, of an unspecified type, to which the fanatics belong.

However, when we treat these lines as indeed a piece of standard British English from the early 19th century, a crucial difference emerges about the contextual meaning attributed to several of these words. Thus, in the early 19th century the lexeme *fanatic* referred to specifically religious fanatics and so this is the contextual interpretation that *Fanatics* receives. This makes no difference to the judgment of metaphoricity for "Fanatics" itself given that its contextual meaning is still nonmetaphorical, albeit narrower than the meaning attributed to it relative to early 21st century, standard English. Yet the metaphor judgment for "sect" is now reversed, because there is no longer any contrast between its contextual meaning which, due to the topic reference of "fanatics," is to a specifically religious sect and its basic meaning which is identical with this contextual meaning.

Of course, the contrast between the two interpretations of "sect" is not simply a matter of a contrast between early 19th- and early 21st-century readers, since early 21st readers may have the relevant historical knowledge and use it in their reading. Poets also often assume historical knowledge of the language in contemporary readers of their poetry. Thus, in literary and religious discourse, a broader awareness of older meanings of lexical units may be crucial for identifying metaphors in a particular text. The importance of the demarcation of one variety of a language from another may be illustrated with reference to the difference between American and British English. These are just some illustrations of how different types of language materials can affect metaphor identification.

Genre variation can also have very significant effects on step 3 as a whole. Consider the opening of Dickens' *Bleak House* and the "fog" that rises from the river. There is no question but that the fog described in detail existed literally in the London of the novel and that the novel's language refers to it literally. There is also no question but that the fog itself further signifies metaphorically the obscurantism and obfuscation of the English legal system. In other words, the language relates literally to a fictional scene which itself has further metaphorical significance. This is true of allegorical and symbolic genres generally (Crisp, 2001, 2005). Such genres do not establish a contrast between a contextual meaning and a basic meaning for their lexical units, which are therefore not marked as metaphorical. Their lexical units relate directly and literally to situations that themselves have further metaphorical significance. (For further details and qualifications, see Crisp, 2001, 2005.) This is one of the ways that our procedure brings out the importance of the distinction between metaphorical language and conceptualization. Metaphorical concepts can be found without metaphorical language, as with allegory and sym-

bol, just as metaphorical language can be found without metaphorical concepts when a metaphorical expression is not processed metaphorically by either producer or receiver.

SOURCES OF NORMS

The traditional norm for most decisions about metaphoricity has been the intuitions of native speakers and individual analysts. Other scholars, including conversation analysts but also literary scholars and theologians, also typically rely on their subjective judgment. In principle, comparing the intuitions of individual analysts could lead to some assessment of the reliability of metaphor identification. However, our experience has shown that this is not sufficient. We have found it very helpful to consult external resources, such as dictionaries and other corpus materials, which can be used as a frame of reference to check individual intuitions, especially regarding establishing the basic meanings of words. The use of external sources reduces the degree of error and inconsistency and thereby increases the degree of interanalyst agreement. Of course, it is also important to realize that some external resources like dictionaries will also vary considerably from one to another, which means that the choice of external source can have a significant impact on metaphor identifications. Some dictionaries, for example, provide a very general, abstract meaning for a word that could capture aspects of both its metaphorical and nonmetaphorical meanings, whereas other dictionaries tend to list concrete physical meanings before describing more abstract and metaphorical meanings. Our recommendation is that scholars carefully survey these external resources before choosing one that meet the needs of the research project. Moreover, as suggested earlier, scholars should report the resources used in their reports of their metaphor identification research.

Linguistic Form

Several questions concerning linguistic form arise from the procedure, which are described in this section.

Multiword units. The MIP focuses on metaphorically used words and determining what constitutes a word is sometimes difficult. There are several types of expression where a word level analysis is problematic, including multiword units. Many multiword units take the form of two or more separate word forms but can be considered as single units. For the purposes of metaphor identification, the central problem is in deciding whether to treat specific types as a single lexical unit or to break them up into their constituent words. In making our decisions about the boundaries of lexical units for our case study, the key criterion we used was

decomposability. This refers to whether a multiword unit can be analyzed through the meanings of its constituent parts, or whether it can only be understood as a whole (Gibbs, Nayak, & Cutting, 1989). If a multiword unit can be semantically decomposed, then we considered each component word as a lexical unit; otherwise, we considered the multiword item as a single lexical unit.

Polywords. The term "polywords" describes expressions such as *of course*, *all right*, and *at least*, which, like lexical units, have no variability and appear as a continuous unit in text (Nattinger & DeCarrico, 1992). For the most part, there is no reason apart from historical accident why polywords are not written as single words (e.g., *all right* is written as *alright*). We generally treated polywords as single lexical units in our case study (e.g., in the Ghandi text, "let alone" meets the criteria for a polyword in that it does not inflect and is continuous).

Phrasal verbs. Phrasal verbs consist of a verb followed by a particle that is generally adverbial. A small number of phrasal verbs are followed by two particles, such as *get on with*, *get out of*, and *put up with*. Classical phrasal verbs cannot be decomposed without loss of meaning; for instance, *take off* (of an aeroplane) and *get up* (arise) are not the semantic sum of their parts. Treating these as single lexical units is unproblematic. Difficulties arise for less clear-cut cases, where the meaning of the phrasal verb is more transparently related to its components. For instance, there is a small set of phrasal verbs containing the particle *up*, including *eat up*, *drink up*, and *grow up*, where the verbal component is understood with its usual meaning, and *up* contributes the notion of finishing. There is a cline from this almost transparent type of phrasal verb through to semantically opaque, and the transparency of a particular expression is to some extent subjective.

A further difficulty for classifying phrasal verbs as lexical units is that some are formally separable: Another word or words can be inserted between the verbal component and the particle. For instance, *give up* (cease) is not normally separable when its object is a lexical word, as in *give up smoking*. However, when the object is a pronoun, the phrasal verb is separable: *give it up*. Despite these observations, we treated phrasal verbs in our case study as single lexical units because they typically have nondecomposable meanings.

Classical idioms. Classical idioms include expressions such as *have a bee in one's bonnet, be tied to someone's apron strings,* and *(not) have a leg to stand on*. For many researchers, an expression can be regarded as nondecomposable if its idiomatic meaning is lost when the words do not appear in a given sequence and with other specified words. For instance, *pop* in *pop the question* only means "ask" when it collocates with "question." Corpus searches show the expression appears in the sequence *pop[ped] the question* with very few variations, and almost always refers to a proposal of marriage; if used to refer to other kinds of proposal, the in-

tention is clearly humorous, by virtue of echoing the original *pop the question* phrase. Taken outside this linguistic context, *pop* never refers to asking or proposing. Its usual meaning as a verb is something like "go" or "appear," in phrasal verbs such as *pop in*, *pop out*, *pop up*, and *pop along*. For many researchers this would suggest that the expression *pop the question* is not decomposable. However, there is much psycholinguistic evidence showing that people can find metaphoricity at the level of word, and therefore see *pop* as having the meaning of "ask" in this expression (Gibbs, 1994). In our case study, we therefore treat each component of an idiom as a separate lexical item because most, if not all, idioms are decomposable to some extent for speakers.

Fixed collocations. Fixed collocations, such as "staking a claim" and "suffering many blows" from the Ghandi text, are almost certainly the largest lexical units, both in terms of types and tokens. The degree of collocation between any two or more words can range from completely fixed, through semifixed, to insignificant statistically. At the fixed end of this cline, collocations border on idioms, which are a form of fixed collocation. However, unlike idioms, collocations have no requirement of semantic opacity. Because fixed collocations are decomposable, they may be divided into their component words. Some fixed collocations are dealt with as "run-ons" in many dictionaries, including the *Macmillan Dictionary* (Rundell & Fox, 2002), and are given a status below the level of word entry and defined separately. This is likely done for the benefit of the dictionary users rather than as a principled reflection of word boundaries. We decided to consider fixed collocations as semantically decomposable and considered the words of each item separately in our case study.

Word class. Linguistic research has shown that many metaphors do not have identical grammatical characteristics to their literal counterparts (Deignan, 2005). In a significant number of cases, different parts of speech are used differently, as, for example, is the case with "cemented" in the Ghandi text. A corpus analysis shows that the noncount noun, *cement*, is much more frequently used nonmetaphorically, whereas the verb form is more frequently used metaphorically, although not always. The metaphorically used verbal form can therefore be seen as related to the nonmetaphorically used verbal form. If the verbal form were only used metaphorically, however, a problem would arise and a decision would need to be made as to whether to treat the different parts of speech as different lexemes (essentially different words; a lexeme refers to a word together with all its inflections). This would mean that, although the forms of words such as *cement* (noun) and *cement* (verb) are identical, they would be homonyms. Clearly, two homonyms cannot be regarded as a literal–metaphorical pair, so this decision is significant.

Consider the use of verbal *squirrel* in a context such as *He squirreled away their savings.* Corpus searches suggest that there is no conventionalized literal verbal

form of *squirrel*. If the noun and the verb are to be treated as distinct lexemes, a metaphorical relationship cannot be presumed between *squirrel* (small tree-dwelling animal known to store nuts to survive the winter) and *to squirrel* (of people, to hoard items or save money, sometimes secretly), despite the clear link between the two meanings for many speakers. We have therefore decided that word class may be ignored in MIP.

Ignoring part of speech information may also have benefits in the analysis of polysemy, where it is usual for different meanings to be realized through differences in form (Hunston & Francis, 2001), often below the level of part of speech. For instance, the verb *reflect* has several literal uses and a number of metaphorically related senses. Most of these can be distinguished by their grammatical patterning. When used of a mirror, *reflect* is usually passive, as in *His image was reflected in the mirror.* However, when used metaphorically to describe the act of contemplating, the verb is intransitive, as in *give ourselves time to reflect* or *reflect on the future*. Other literal and metaphorical meanings of *reflect* show different groups of grammatical patterns. At the most detailed grammatical level it seems that it is rare to find identical patterns across different meanings of a word. We therefore treated words with identical base (noninflected) forms as the same lexical unit in our case study. This allowed us to find metaphoricity between *squirrel* (animal) and *squirrel* (verb), as well as between *reflect* (throwback images) and *reflect* (contemplate).

Establishing Basic Meanings

Generally speaking, it is easier to establish basic meanings for "lexical" or "content" words (nouns, verbs, adjectives, and adverbs) than for "grammatical" words (prepositions, conjunctions, and so on). Among content words, nouns prototypically designate concrete, bounded, enduring entities, so that their meanings tend to be highly concrete and precise. This is not of course true of all nouns, but is true of a significant proportion of frequently occurring ones. Nouns are thus generally the class to which it is easiest to assign basic senses as we characterize them. Verbs prototypically designate transitory acts, so their meanings tend to be less concrete and precise than those of nouns, though still prototypically concrete and related to bodily action.

Although assigning basic senses to verbs tends to be harder than with nouns, they still present a fair proportion of relatively easy cases of metaphor identification. Adjectives prototypically designate simple properties such as colors and shapes, so their meanings tend to be less concrete and precise than nouns and verbs and to lack a direct link to bodily action. Deciding whether to assign a basic sense to an adjective tends therefore to be more difficult. Of the remaining traditionally recognized lexical, as opposed to grammatical, word classes, (process) adverbs,

which are frequently derived from adjectives, have the same general kinds of characteristics as adjectives.

It is notoriously difficult to establish the basic meanings of delexicalized verbs such as *make, have,* and *get.* These verbs often seem to undergo a process of semantic "bleaching," that is, to lose all or most of their precise semantic content. In analyzing expressions such as *make a promise*, for example, one would have to decide whether the "physical construction" meaning of *make* (e.g., *make a cake*) can still be taken as the basic meaning of the verb. In our case study, we took the physical meanings of these verbs as their basic meanings, but this is clearly an area where different principled decisions can be made, depending on one's theoretical standpoint and research goals.

"Grammatical words" pose similar problems. Prototypical prepositions, such as *in, on, into* designate spatial relations and are frequently extended metaphorically without posing a problem for identifying basic meanings by our criteria. For example, the basic meaning of *into* is physical movement from the outside of some concrete container to the inside. The situation is problematic, however, for prepositions such as *with, for,* and, particularly, *of*: These prepositions have highly abstract meanings, so that it is often inappropriate to attempt to establish a distinction between contextual meanings and basic meanings. Similarly, conjunctions, auxiliary verbs, pronouns, and determiners typically have abstract and schematic meanings, which are also difficult to define as basic. In our case study, we included no instances of these word classes as metaphorically used. There are two important exceptions here though, both involving deixis. Personal pronouns can be used to personify or depersonify. In these cases, the original personal or impersonal meaning functions as a basic meaning. Demonstratives can also be used metaphorically through empathetic deixis. The choice between *what's this?* and *what's that*? may be motivated not by questions of spatial location but of emotional attitude, with *this* expressing a positive and *that* a negative attitude. The basic sense here is that of spatial proximity or distance.

Another complication in establishing basic meanings results from the process of semantic change. For example, our decision to exclude auxiliary verbs from our analysis seems to ignore the existence of a well-established analysis of epistemic modality as a metaphorical extension of deontic modality (Sweetser, 1990). But epistemic modal auxiliaries do not count as metaphorical expressions because the metaphorical extension of deontic to epistemic modality is a historical phenomenon, not currently active in English. However, epistemic modals would be regarded as metaphorical in texts from those periods of old and middle English when this extension was active. Palmer (1986, pp. 123–125) points out that there is too much syntactic and semantic variation between deontic and epistemic modals for epistemic modals to be considered now as metaphorically used deontic modals. Epistemic modals, like auxiliary verbs generally, currently have multiple abstract senses, which resist being defined as basic.

Dead Metaphors

There are many words that have metaphoric origins, but no longer retain these roots in contemporary use. Lakoff (1987) gives the examples of *pedigree, comprehend,* and *grasp*. *Pedigree* originally arose as a metaphorical extension of the French term for a crane's foot (*pied de grue*) that served as the basis of similarity between the foot of a crane and a diagram of a family tree. But this metaphorical mapping is no longer current to contemporary speakers and thus pedigree is a true "dead metaphor." On the other hand, for the verb *comprehend*, the original metaphorical meaning of *take hold* is dead, whereas for the metaphorical mapping of the physical act of taking hold onto the mental act of comprehension is still active. Finally, the verb *grasp* is a conventionalized metaphor whose nonmetaphorical (*take hold of with one's hand*) and metaphorical (*understand*) senses are both alive to current speakers. This observation illustrates that the fact that a word's meaning is highly conventional (i.e., that *grasp* is frequently used to mean *understand*, or *see* is frequently used to mean *know*) does not necessarily make its meaning dead.

In our case study, we aimed to mark as metaphorical any word that has an active metaphorical basis, in the sense of there being a widespread, knowable, comparison, and contrast between that word's contextual and basic meanings. Of course, depending on one's specific research interests, an analyst could adopt a more liberal scheme and identify as metaphorical any word that currently has, or once possessed, a metaphorical comparison and contrast between its basic and contextual meanings. This could be done, for example, for the contextual meaning of *pedigree "family tree"* if the historically original basic meaning, *crow's foot,* is considered. As usual, scholars are urged simply to be explicit in acknowledging the bases for their decisions at specific points in applying the procedures in MIP.

Metaphor and Polysemy

Corpus research has shown that a vast number of words, especially the most frequent, are polysemous (Sinclair, 1991). Metaphor is not the only mechanism that leads to polysemy; for instance, *life* (way of living, *in lead a happy life*) and *life* (living things, in *before life on earth*) are related meanings of the same word, but for most speakers there is no metaphorical connection. The parts of step 3 that require researchers to identify contextual meaning and decide whether there is a more basic meaning are intended to separate out cases of nonmetaphorical polysemy. For nonmetaphorical polysemy, a more basic meaning cannot be identified—other meanings can be identified, but these cannot be said to be more basic. Clearly, the decision as to whether a meaning is more basic is ultimately subjec-

tive; our guidelines as to the nature of basic meanings are intended to make this part of the procedure more reliable.

Metaphor and Metonymy

Metaphor and metonymy are often confused, even in scholarly discussions of figurative language. The MIP was designed to correctly discriminate metaphor from other types of meaning, including metonymy, through the application of step 3c: "If the lexical unit has a more basic current/contemporary meaning in other contexts than the given context, decide whether the contextual meaning contrasts with the basic meaning but can be understood in comparison with it." The key term here is "comparison." There are heated debates over whether metaphors are understood via comparison, as opposed to some other kinds of processes (Bowdle & Gentner, 2005; Glucksberg, 2001; Steen, in preparation). We do not employ the term "comparison" to necessarily support comparison theories of metaphor. Instead, the word "comparison," and the decision whether the contextual meaning of a lexical unit can be understood as distinct from, but in comparison to, the basic meaning is simply intended as a way of roughly identifying metaphorically used words as distinct from those that express other kinds of meaning, including metonymy. Metonymic words typically express a stand-for, or part-for-whole, relationship that differs from comparison processes.

Of course, as the literature of metonymy clearly shows, there are many examples where metaphor and metonymy are intertwined. Consider a case from our study where metaphor may turn into metonymy. In the sentence *Indira Gandhi was cut down by her own bodyguards,* the words "cut down" appear to be metaphoric because the contextual meaning is "killed—and possibly that she fell in the process," but the basic meaning of both *cut* and *cut down* requires the act of physical cutting. However, had she been literally cut with swords or cuirasses, rather than shot, the contrast would disappear, the cutting would be one aspect of the act of killing (metonymy), and "cut down" would be coded as nonmetaphoric. However, there is again a degree of complexity to the situation. If it was felt that there were also resonances of "cut down a tree" or even "cut down an enemy in battle" then the "like" test using the domains of plants or battle would indicate a metaphor. Such cases need to be decided on an individual basis by looking hard at the context in which the word is used.

In sum, metonymy can at times lead to some confusion about coding for metaphoricity, but the use of procedures such as check the cotext or apply the "like" test serve in most cases to resolve the problem (e.g., if "like" fits meaningfully in an "A is B" statement, such as in *Lawyers are like sharks*, then the expression is metaphorical). Once more, even if a word is ultimately determined to be

nonmetaphorical, MIP does not presently provide a mechanism for then suggesting whether the word may have metonymic meaning.

Metaphor and Simile

The MIP is not designed to identify similes as metaphoric, whether one defines them formally, as a comparison marked by "like," "as," "as if," or "as though" (which may or may not be metaphoric), or rhetorically, as a metaphoric comparison that has a marker. Consider a simile from the novel *Purple Hibiscus* by the Nigerian author Chimanda Ngosi Adichie: "It was the same way I felt when he smiled, his face breaking open *like a coconut with the brilliant white meat inside*" (p. 25, emphasis added). "The spotless tub had a triangular hole at one corner, and the water groaned *like a man in pain* as it drained" (p. 127, emphasis added). The words *a coconut with the brilliant white meat inside* all have their basic meanings, as do the words *a man* and *pain*, because no different senses are evident from the context; they are therefore treated as nonmetaphorical. The verbs *break open* and *groan* and the preposition *in*, on the other hand, do have more concrete meanings and would be coded as metaphorically used. At a higher level of analysis, the coconut and pain comparisons may be construed as metaphorical, but in terms of this procedure, the individual words themselves, except for *in*, are *not* metaphorically used.

The marker "like" itself might be coded as metaphorical at times. If the basic meaning is considered to be "marking a concrete, physical similarity" (e.g., *an apple is round like a pomegranate*), then linking the concrete *coconut* with the more abstract "smiling" would represent a similar but contrasting use. However, if the basic meaning of "like" is simply "marking some sort of similarity," then it is not usually metaphorical.

MIP AND OTHER METAPHOR IDENTIFICATION PROCEDURES

There have been several other metaphor identification methods proposed in the interdisciplinary study of figurative language. Although some progress has been made in the development of programmes for the automatic identification of metaphors (e.g., Berber, 2006; Fass, 1991; Mason, 2004), most existing methods are concerned with the manual analysis of linguistic data, which remains the most flexible and widely used approach to metaphor identification. Perhaps the most popular of these is Barlow, Kerlin, and Pollio's (1971) training manual designed to teach raters to identify figurative language in contexts ranging from psychotherapy interviews, children's compositions, to political speeches. This manual provides brief definitions for a wide range of tropes (e.g., simile, personification, oxymora, metonymy, anthimeira, irony), and offers several linguistic examples relevant to

each type. Raters are then given practice identifying different figures of speech, and a scoring procedure is used to determine the degree to which different raters agree. Over the last 35 years, figurative language scholars have used this manual in a vast number of research domains, with early work suggesting that training with the manual can produce reliable figurative language identifications (Pollio, Barlow, Fine, & Pollio, 1977). Within the context of metaphor, Barlow et al.'s manual distinguishes between alive versus dead metaphors and personification, by again presenting representative examples of each type of figure.

Despite its popularity, and empirical attempts to establish the reliability of the procedure, Barlow et al.'s manual does not provide explicit criteria for judging whether a given word, or phrase, is metaphorical, and it only offers a few prototypical instances of the category on which analysts are supposed to base their classifications. Furthermore, Barlow et al.'s distinction between alive and dead metaphor cast many conventional words and phrases into the "dead" category that are clearly motivated by vitally alive metaphorical schemes of thought, or conceptual metaphors. For these reasons, Barlow et al.'s manual does not, in our view, provide the kind of instrument that can be reliably used in empirical metaphor identifications projects, and cannot, unlike MIP, specify exactly what distinguishes metaphorically used words from those that are nonmetaphorical.

Cameron (1999) presents a family resemblance approach to metaphor description and thus to metaphor identification, as an alternative to attempting the definition and operationalization of metaphor as a classical category with necessary and sufficient conditions. Applying this to a study of metaphor in spoken and written discourse raised many of the identification issues reported here and highlighted the need for researchers to report explicit decisions made in the process of identification to facilitate replicability (Cameron, 2003, chapter 3). Cameron's method differs from MIP in aiming to identify metaphor vehicle terms, rather than metaphorically used words.

The rise of cognitive linguistic research on metaphor has given rise to a simple definition of metaphor that a number of researchers have used to identify instances of metaphorical language. Following Lakoff and Johnson (1980), many metaphor analysts have attempted to identify metaphors in natural discourse by noting cases in terms of "the understanding of one thing in terms of another" (Lakoff & Johnson, 1980, p. 3). For example, a study of the metaphors used by clinically depressed clients had two analysts mark transcripts for instances of metaphor using this simple definition, with a resulting 80% agreement between the analysts after a first pass, with complete agreement being produced after further discussion (Levitt, Korman, & Angus, 2000). The metaphors identified in this study were primarily phrasal, with many being identified as arising from prominent conceptual metaphors discussed in the cognitive linguistic literature. Our intention in developing MIP, however, was to not start with any preconceived set of conceptual metaphors from which to base further identification of metaphorically used words. In-

stead, the purpose of MIP is to provide a procedure that starts from the actual discourse, and inductively builds the case for why a particular word was used metaphorically in context. Our experience in developing MIP also suggests that the criterion of "understanding one thing in terms of another" is simply insufficient to provide for reliable metaphor identification across a group of analysts.

Finally, a very recent proposal suggests that a metaphor can be determined under the following conditions (Schmitt, 2005):

1. A word or phrase, strictly speaking, can be understood beyond the literal meaning in context of what is being said.
2. The literal meaning stems from an area of physical or cultural experience (the source area).
3. Which, however, is—in this context—transferred to a second, often abstract, target area.

The gist of this procedure is not significantly different from that seen in MIP, although MIP adopts the term "basic" rather than "literal" in step 3, primarily due to the wide variety of ways that "literal" is employed in interdisciplinary language research with, indeed, some people suggesting that certain conventional metaphorical word meanings are "literal." Moreover, MIP offers a set of criteria by which analysts may identify a word's "basic" meaning, and also explicitly demands that the contextually appropriate meaning of a word be explicated. Simply having the intuition that a word's contextual meaning somehow differs from its literal meaning in context is not sufficient, in our view, if analysts are to produce consistent metaphor identifications. Finally, MIP, as shown via our case study, has been demonstrated in at least one empirical investigation to produce statistically reliable metaphor identifications across a group of analysts. Schmitt's proposal has not yet been examined in this manner.

USING THE PROCEDURE FOR DIFFERENT RESEARCH PURPOSES

The MIP has value for researchers in a variety of fields addressing different kinds of research questions in the study of metaphor. Metaphor scholars from many fields may profitably use MIP, especially the step associated with defining basic meaning, to identify the source and target domains underlying metaphorical words in context. Experimental psycholinguists could use MIP as a check of their metaphor stimuli to ensure that their materials are analytically valid (i.e., that a so-called metaphorical word in a study actually conveys metaphorical meaning in that context). Metaphor scholars working within the fields of stylist-

ics, discourse analysis, and critical discourse analysis could apply MIP to different text types in the analysis of the content and style of various genres of discourse. Child language scholars may use MIP to focus attention on long-standing problems such as whether there are differences for the given child speaker between contextual meanings and other meanings that are more basic. Anthropologists and linguists may adapt MIP to study the frequency, diversity, and variation in metaphorical mappings across different languages. Alternatively, they might use MIP as the bottom level of a hierarchical set of analyses, with higher levels adding in similes, for example. Finally, MIP also provides a starting point for studying the interaction of verbal and nonverbal metaphoric expressions. In fact, this could potentially serve as a model for the development of comparable procedures to study metaphorical expressions in other modalities, for example, pictorial metaphor, gestural metaphor, and metaphorical expression in music, dance, and ritual. At least one study on metaphor and gesture has made use of MIP (Cienki & Müller, in press).

In addition to these applications, MIP can be used to address very specific research questions. For instance, one emerging issue in metaphor research concerns the density of metaphorical expressions in discourse, such as in different discourse genres. MIP should provide the basics for doing this kind of analysis. Cienki (2006) has reported on using MIP as a means for selecting items for use in a pile sort to investigate reactions to political discourse. Low (in press) also used MIP to generate baseline indexes of metaphoric density for a study on metaphor and positioning in book reviews. Lastly, Steen and colleagues are applying MIP to a series of texts in four different genres (Steen, Biernacka et al., submitted). MIP could also be applied to investigate what (contextual, pragmatic) circumstances lead to metaphorical clustering (see, e.g., Cameron & Stelma, 2004), and what functions that may serve. For example, how does it differ according to different physical contexts of language use (see, e.g., Boers, 1999), or different cultural contexts (see, e.g., Kövecses, 2005)?

A different issue where MIP could be useful concerns the scope of particular metaphorical lexical units (i.e., all the contextual meanings that a word or expression has). This would make it possible to characterize the mappings (here the correspondences between the basic meaning and the set of contextual meanings) with greater precision than typically done in linguistic research, for example, which rely solely on an individual analyst's intuitions with no supporting criteria. When these metaphorical mappings are discerned, MIP can be used to understand which types of mappings are most common in a given context of language use. Finally, by supplementing use of the procedure with evidence from linguistic corpora to determine the frequency of metaphorical use of given lexical units, one can study the circumstances in which novel metaphors are likely to arise.

CONCLUSION

MIP has been created to provide a reliable and flexible tool for the identification of metaphorically used words in context. The procedure has been streamlined to make metaphor identification as simple as possible. But, as we have gone to some length to point out, various decisions must be made at each step of the procedure that often require researchers to determine how they will proceed when encountering specific instances of language in varying contexts (e.g., multiword units, discourse type, polysemy). Our experience in developing MIP suggests that researchers will need to spend some time getting acquainted with the procedure, by applying to various segments of texts, to best recognize exactly those decisions that must be made prior to applying MIP in a systematic manner to the discourse of interest to obtain reliable metaphor identification. In this manner, MIP is not just a research tool to reliably judge metaphorically used words in discourse, but also it is an "intuition-sharpener" to alert scholars to various linguistic and theoretical issues related to questions about metaphoricity in language and thought.

Our experience with MIP also suggests that applying the procedure to natural discourse and obtaining reliable identification results is not a task that can be accomplished easily or quickly. Identifying metaphorically used words in a large text may be something that all metaphor scholars have ready intuitions about, but justifying those intuitions, and being consistent in how they are applied to individual words in context, is far trickier than many would imagine. Metaphor identification, and specifically using MIP, is hard work and must be done slowly, with analysts constantly reminding themselves to go through all the steps of the procedure, for each lexical unit as it is encountered, without jumping to premature conclusions about the metaphorical nature of any case. As noted earlier, we recommend that analysts make at least two passes in doing their metaphor identifications, with the most reliable results across analysts being obtained when the two passes are done on different days.

Despite these cautionary words about using MIP, we can also report that using the procedure, and discussing the outcome of different analysts' metaphor identification judgments, is extremely rewarding. At a personal level, MIP allows individual analysts to discover the underlying bases for many of their intuitions about metaphoricity in language, and can often alter one's initial impressions about whether a word is used metaphorically in context. A great deal about the nature of metaphor can be learned from applying MIP to various kinds of spoken and written discourse. As important, MIP may serve as the first tool that can be reliably employed to identify metaphorically used words in discourse and it thus provides metaphor scholars with a method to compare and contrast different metaphor analyses, leading to more ecologically valid measures of metaphor and more realistic theories of metaphorical language use.

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REFERENCES

Barlow, J., Kerlin, J., & Pollio, H. (1971). *Training manual for identifying figurative language*. Technical report #1. Metaphor Research Group, University of Tennessee.

Berber Sardinha, T. (2006, April 10–12). *A tagger for metaphors.* Paper given at the sixth Researching and Applying Metaphor (RAAM) Conference, Leeds University.

Boers, F. (1999). When a bodily source domain becomes prominent: The joy of counting metaphors in the socio-economic domain. In R. W. Gibbs, Jr., & G. J. Steen (Eds.), *Metaphor in cognitive linguistics* (pp. 47–56). Amsterdam/Philadelphia: John Benjamins.

Bowdle, B., & Gentner, D. (2005). Career of metaphor. *Psychological Review, 112,* 195–216.

Cameron, L. (1999). Identifying and describing metaphor in spoken discourse data. In L. Cameron & G. Low (Eds.), *Researching and applying metaphor* (pp. 105–132). Cambridge, UK: Cambridge University Press.

Cameron, L. (2003). *Metaphor in educational discourse.* London: Continuum.

Cameron, L., & Stelma, J. (2004). Metaphor clusters in discourse. *Journal of Applied Linguistics, 1*(2), 7–36.

Cienki, A. (2006, April). *Using the pile-sort method to investigate metaphoric models in political discourse.* Paper presented at the conference Researching and Applying Metaphor (RaAM 6), Leeds, UK.

Cienki, A., & Müller, C. (in press). Metaphor, gesture, and thought. In R.W. Gibbs, Jr. (Ed.), *The Cambridge handbook of metaphor and thought*. Cambridge, UK: Cambridge University Press.

Crisp, P. (2001). Allegory: Conceptual metaphor in history. *Language and Literature, 10*(1), 5–19.

Crisp, P. (2005). Allegory, blending, and possible situations. *Metaphor and Symbol, 20,* 115–131.

Deignan, A. (2005). *Metaphor and corpus linguistics.* Amsterdam, The Netherlands: Benjamins.

Dunn, G. (1989). *Design and analysis of reliability studies: The statistical evaluation of measurement errors*. New York: Oxford University Press.

Fass, D. (1991). Met*: a method for discriminating metonymy and metaphor by computer. *Computational Linguistics, 17*(1), 49–90.

Gibbs, R. (1994). *The poetics of mind: Figurative thought, language, and understanding*. New York: Cambridge University Press.

Gibbs, R. W., Nayak, N. P., & Cutting, C. (1989). How to kick the bucket and not decompose: Analyzability and idiom processing. *Journal of Memory and Language, 28,* 576–593.

Glucksberg, S. (2001). *Understanding figurative language: From metaphor to idioms*. New York: Oxford University Press.

Hunston, S., & Francis, G. (2001). *Pattern grammar: A corpus-driven approach to the lexical grammar of English.* Amsterdam, The Netherlands: Benjamins.
Kövesces, Z. (2005). *Metaphor and culture*. New York: Cambridge University Press.
Lakoff, G. (1987). The death of dead metaphor. *Metaphor and Symbolic Activity, 2,* 143–147.
Lakoff, G., & Johnson, M. (1980). *Metaphors we live by.* Chicago: University of Chicago Press.
Levitt, H., Korman, Y., & Angus, L. (2000). A metaphor analysis in treatment of depression: Metaphors as a measure of change. *Counseling Psychology Quarterly, 13,* 23–55.
Little, W., Fowler, H. W., Coulson, J., & Onions, C. T. (Eds.). (1973). *The shorter Oxford dictionary on historical principles* (3rd ed.). Oxford, UK: Clarendon.
Low, G. D. (in press) Metaphor and positioning in academic book reviews. In M. Zanotto, L. Cameron, & M. Cavalcanti (Eds.), *Confronting metaphor in use: Research perspectives*. Amsterdam, The Netherlands: John Benjamins.
Markert, K., & Nissim, M. (2003). Corpus-based metonymy analysis. *Metaphor and Symbol, 18,* 175–188.
Mason, Z. (2004). CorMet: a computational, corpus-based conventional metaphor extraction system. *Computational Linguistics, 30*(1), 23–44.
Nattinger, J., & DeCarrico, J. (1992). *Lexical phrases and language teaching.* Oxford, UK: Oxford University Press.
Palmer, F. R. (1986). *Mood and modality.* Cambridge, UK: Cambridge University Press.
Pollio, H., Barlow, J., Fine, H., & Pollio, M. (1977). *Psychology and the poetics of growth: Figurative language in psychology, psychotherapy, and education*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
Rundell, M., & Fox, G. (Eds.). (2002). *Macmillan English dictionary for advanced learners*. Oxford, UK: Macmillan Education
Scholfield, P. (1995). *Quantifying language: A researcher's and teacher guide to gathering language data and reducing it to figures*. Clevedon, UK: Multilingual Matters.
Schmitt, R. (2005). Systematic metaphor analysis as a method of qualitative research. *The Qualitative Report, 10,* 358–394.
Semino, E., Heywood, J., & Short, M. (2004). Methodological problems in the analysis of metaphors in a corpus of conversations about cancer. *Journal of Pragmatics, 36,* 1271–1294.
Sinclair, J. (1991). *Corpus, concordance, collocation*. Oxford, UK: Oxford University Press.
Steen, G. J. (in preparation). *Finding metaphor in grammar and usage: A methodological analysis.*
Steen, G. J., Biernacka, E. A., Dorst, A. G., Kaal, A. A., López-Rodríguez, I. & Pasma, T. (Submitted). Pragglejaz in practice: Finding metaphorically used words in natural discourse.
Sweetser, E. (1988). Grammaticalization and semantic bleaching. *Proceedings of the Fourteenth Annual Meeting of the Berkeley Linguistics Society*, 389–405.
Sweetser, E. (1990). *From etymology to pragmatics: Metaphorical and cultural aspects of semantic structure*. Cambridge, UK: Cambridge University Press.

APPENDIX

Sonia Gandhi stakes claim for top job with denunciation of Vajpayee

For years, Sonia Gandhi has struggled to convince Indians that she is fit to wear the mantle of the political dynasty into which she married, let alone to become premier.

Her opponents have not allowed the world to forget that she was born in Italy, or that—despite 35 years in India—she has yet to conquer her thick foreign accent when speaking Hindi. They portray her as aloof, out of touch with the vast nation

once ruled by her husband, Rajiv, who was assassinated 12 years ago, and her formidable mother-in-law, Indira Gandhi, who was cut down by her own bodyguards in 1984.

But India's political pundits gave Sonia Gandhi unusually enthusiastic reviews yesterday after her blistering performance in a no-confidence vote in India's parliament.

Their verdict was that she might at last have cemented her leadership.

The gladiatorial contest between her and the Prime Minister, Atal Bihari Vajpayee, dominated the national headlines for two days, and ended in the early hours yesterday. Indians arose to find their newspapers full of reports of the debate alongside full-page advertisements marking the 59th birthday of her late husband, who was blown up by a Tamil Tiger suicide bomber in 1991. For one day at least, the Nehru–Gandhi dynasty and the party that for so long dominated post-independence India seemed in ascendancy anew.

Sonia Gandhi and her allies were always certain to lose the no-confidence vote. The result, 312 to186, was a formality. What was significant, though, was the new forcefulness that she displayed as she laid into the government as "incompetent, insensitive, irresponsible and brazenly corrupt."

Five years ago, she was persuaded to assume presidency of the Congress Party, which was riven with divisions and a shadow of its former years. She did not want the job. But now, there was a "new combative quality about her," said Manini Chatterjee, political writer for the Indian Express paper. Another analyst, Mahesh Rangarajan, said her performance was "a major milestone in her evolution as a political leader. She was staking a claim for the top job."

Mr Vajpayee's Bharatiya Janata Party has suffered many blows since it assumed power. There are four state elections later this year. General elections loom next year.

The BJP, and the Hindu nationalists aligned with it, will continue to jeer at Ms Gandhi's foreign origins. But now, it seems, she has an answer. As she said in parliament, "When I talk of the nation, they talk of my style and language."