Zbigniew KOPEĆ Akademia im. Jana Długosza w Częstochowie

# SOME COMMENTS ON METAPHOR IDENTIFICATION PROCEDURE (MIP)

#### Streszczenie:

Artykul omawia ostatnio wypracowaną metodę identyfikacji metafory językowej w dyskursie (MIP). Metoda opiera się na fundamentalnych założeniach teorii metafory pojęciowej według Lakoffa i Johnsona, wobec której twórcy metody słusznie nie pozostają bezkrytyczni. Podkreślając ogromne znaczenie i dynamiczny rozwój językoznawstwa kognitywnego, grupa językoznawców (Pragglejaz Group) wykazuje jego niedoskonalości i brak rygoru metodologicznego w opisie relacji między metaforycznymi wyrażeniami językowymi a metaforami pojęciowymi. MIP jest odpowiedzią i propozycją metody, która ich zdaniem w zadowalający sposób rozwiązuje problem. Autor prezentuje zasady działania metody na podstawie analizy krótkiego fragmentu tekstu dziennikarskiego i podkreśla jej wymiar pragmatyczny oraz przydatność w analizie dyskursu.

Although metaphor has been thriving business over the last more than thirty years, it seems odd that no particularly rigorous methodological approach towards metaphor identification in discourse has been worked out. So far, cognitive linguists have been examining clear cases of metaphor, exhibiting underlying patterns of metaphorical reasoning. For example, expressions such as 'crossroads', 'dead-end street', 'bumpy road', 'spin our wheels', or 'be on the rocks', are often used to talk about relationships, love, or life, and they are considered to evoke abstract metaphorical meanings which are motivated by such conceptual metaphors as LOVE IS A JOURNEY, or LIFE IS A JOURNEY.

However, there has been some criticism of this approach. In his article, 'AR-GUMENT IS WAR – Or is it a game of chess? Multiple meanings in the analysis of implicit metaphors', Ritchie suggests 'that war is not necessarily the primary conceptual metaphor for contentious argument, as Lakoff and Johnson claimed'<sup>1</sup>. It may

Ritchie, D. 2003. ARGUMENT IS WAR – Or is it a game of chess? Multiple meanings in the analysis of implicit metaphors. In: Gibbs, R.W. (ed.): Metaphor and Symbol, 18 (2). Pp. 125–146.

as well be a game of chess or a boxing contest. A group of researchers, the Pragglejaz Group, with Gerard Steen as the primary investigator, have proposed a new and practical approach to identifying metaphor in discourse<sup>2</sup>. They agree with Ritchie<sup>3</sup> and Vervaeke and Kennedy<sup>4</sup>, the critics of the cognitive-linguistic approach, that 'the delimitation of conceptual metaphors is not sufficiently constrained to allow for the precise identification of specific linguistic items as related to them'<sup>5</sup>. What is required is a very precise and accurate identification of conceptual metaphors in terms of their cross-domain correspondences, which may paradoxically imply even less systematic mappings between conceptual domains.

## 1. Methodological issues

The basic question about metaphor identification is how to move from linguistic to conceptual metaphor, how to get from linguistic data at hand to the underlying conceptual correspondences. First of all, it is vital to differentiate between linguistic and conceptual metaphors. The former are just words or linguistic expressions that derive from the usually more concrete source domain in the conceptual metaphor, which I define here in Lakoffian terms as a set of correspondences between two conceptual domains, the source domain and the target domain.

Metaphor identification can be carried out in two major ways, deductively or inductively. One can move from the general to the specific, a deductive method, or from the specific to the general, an inductive method. The deductive method means that the analyst assumes the existence of a set of conceptual metaphors and employs them for the detection of relevant linguistic metaphors. The inductive method involves moving from the available linguistic metaphors towards a set of conceptual metaphors, the existence of which has not been assumed a priori. The linguist's task is to reconstruct these conceptual structures that constitute cross-domain correspondences.

The Pragglejaz Group has adopted the inductive approach to their metaphor identification procedure, which is natural since a top-down approach from conceptual to linguistic metaphor might miss many metaphors in discourse. Moreover, it is important to note that the procedure aims at describing metaphor in discourse, as opposed to analysing a set of conceptual metaphors and their linguistic realisations. The latter would be too difficult because an established and exhaustive list of con-

<sup>&</sup>lt;sup>2</sup> Pragglejaz Group. 2007. MIP: A method for identifying metaphorically used words in discourse. In: Gibbs, R.W. Metaphor and Symbol, 22. Pp. 1–39.

<sup>&</sup>lt;sup>3</sup> Ritchie, D. 2003. Pp. 125-146.

<sup>&</sup>lt;sup>4</sup> Vervaeke, J. & Kennedy, J. M. (1996). Metaphors in language and thought: Falsification and multiple meanings. In: Gibbs, R.W. (ed.) Metaphor and Symbol, 11. Pp. 273–284.

<sup>5</sup> Steen, G.J., Dorst, A.G., Herrmann, J.B., Kall, A., Krennmayr, T., Pasma, T. 2010. A Method for Linguistic Metaphor Identification. Amsterdam: John Benjamins Publishing Company.

ceptual metaphors does not exist. This does not mean that the deductive method has been ignored and rejected. There are many instances of well-defined and established conceptual metaphors that can be successfully employed in the analysis. But 'in order to be able to suggest the existence of conceptual metaphors, we need to know which linguistic metaphors point to their existence'. With this in mind, the Pragglejaz Group has designed a tool called MIP (Metaphor Identification Procedure). Its purpose is to find linguistic metaphors in discourse. It consists of a set of instructions:

- 1. Read the entire text/discourse to establish a general understanding of the meaning.
- 2. Determine the lexical units in the text/discourse.
- 3a. For each lexical unit in the text, establish its meaning in context, i.e. 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.
- 3b. 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.

- 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.
- 4. If yes, mark the lexical unit as metaphorical<sup>7</sup>.

To see how the procedure works, consider the following excerpt, from news text, from COCA (Corpus of Contemporary American English), A-SECTION, Pg. A01, published in *Washington Post*:

- 1) "I'm at the crossroads in my own life," Stupak, 58, said in an interview here. "All those things I said in 1992, I've done. It's time to come home. It's been a hell of a ride for me, but I'm glad to step offstage now." Stupak's announcement Friday that he would not seek re-election rippled across Washington, with Democrats expressing anxiety that his politically conservative district had become a ripe opportunity for Republicans in their bid to regain a majority.
- Step 1.Read the entire text/discourse to establish a general understanding of the meaning. One of our example sentences above 'I'm at the crossroads in my own life' is part of a larger stretch of news text from Washington Post and we interpret it as

<sup>&</sup>lt;sup>6</sup> Kövecses, Z. 2010. Metaphor: A practical introduction. Oxford: Oxford University Press. 4.

<sup>7</sup> Pragglejaz Group. 2007. 3.

- being about the politician, named Stupak, who is tired of his political career and will not seek re-election. This sentence is an example of direct speech.
- Step 2. Determine the lexical units in the text/discourse: The lexical units in the sentence are (exactly what counts as a unit of MIP is briefly explained later): 'I', 'am', 'at', 'the', 'crossroads', 'in', 'my', 'own', and 'life'.
- *Step 3a. Contextual meaning.* 'I' refers to Bart Stupak, a democrat politician, mentioned previously in the text; 'am' means 'exist'; 'at' is used for stating what state or situation someone is in (*Macmillan Online Dictionary*), 'the' has the grammatical function of indicating definite reference; 'crossroads' indicates a point during the development of something when you have to make an important decision about what to do next (*Macmillan Online Dictionary*); 'in' expresses a state; 'my' is a possessive determiner and has the indexical function of indicating that something is connected with the speaker, in this example of direct speech, with Bart Stupak; 'own' is used for showing that something belongs to a particular person and not to anybody else; 'life' is a state in which one is alive.
- *Step 3b. Basic meaning*: 'I', 'am', 'the', 'my', and 'own' do not have more basic meanings than their contextual meanings. The basic meaning of 'at' in *Macmillan* is 'in a particular place'. The meaning of 'crossroads' is just 'a place where one road crosses another'; 'in' means 'inside a container' in its physical, concrete, and basic sense; the basic meaning of 'life' points to bodily processes, bodily sensations, and physiological processes.
- Step 3c. Contextual vs. basic meaning: The contextual and basic meanings of 'at', 'in', 'crossroads', and 'life' can be contrasted. The contextual sense of 'at' is abstract and indicates a particular point in a sequence of events in time. This contrasts with a particular point in space where a crossroads is situated. The question arises whether these two meanings can be seen as related by comparison. The answer is affirmative. An abstract point in time that you arrive at in life can be compared to a concrete and physical place in space (e.g., a crossroads). Thus a point in space corresponds to a point in time (cf. TIME IS SPACE). Now, this point is elaborated and specified in the text by the use of the lexical unit 'crossroads', the contextual meaning of which signals a moment when an important decision has to be taken about what to do next. Its basic meaning indicates just a place where one road crosses another and one has to decide which road to take. Thus, making an important decision about what to do next in life can be compared to making a decision about which road to take (cf. LIFE IS A JOURNEY). It seems that a matter of making life decisions is more complex and complicated than just a simple decision about which road to take. The contextual sense of 'in' points to a state a person is in. Its basic meaning points to a physical container<sup>8</sup> and therefore it is more concrete than its contextual sense. These two meanings contrast with each other and can be understood in com-

<sup>&</sup>lt;sup>8</sup> Note also that the human body is often conceptualised as a container.

parison with each other. And finally, the contextual meaning of 'life' is fairly abstract and indicates a state in which one is alive. Its basic meaning can only be inferred either from the meaning of the preposition 'in', which points to a physical container, or from the physicality and tangibility of our bodies. Thus a state in which one is alive is contrasted with a physical container and the two are comprehended in comparison with each other (cf. STATES ARE CONTAINERS).

Not all cases of metaphor identification are so clear and straightforward, but this set of instructions serves as a good rule of thumb in many cases of identifying linguistic metaphors in discourse.

According to the procedure, metaphorical meanings are indirect meanings because they result from a contrast between the contextual meaning of a lexical item and its basic meaning. The basic meaning is usually absent from the actual context but is observable in others. Consider again such lexical units as 'dead-end', 'crossroads', 'headway', 'route', 'ride', and 'direction'. When used in a context of life, their contextual meanings refer to events in life. They are indirect because they can be contrasted with their basic meanings in other contexts, such as journeys, which involve moving from A to B.

What is well worth noting here is the fact that metaphor is a relational term in MIP and it is metaphorical to some language user who is the idealized native speaker of English. His linguistic competence is represented in modern and up-to-date monolingual English dictionaries. The procedure strongly favours a typically synchronic approach to language and brushes historical metaphor aside. For example, *Macmillan*, *Longman*, and other contemporary English dictionaries define 'ardent' and 'fervent' only in terms of emotions, their original temperature sense being dropped. Thus these words are not metaphorical to the typical native speaker of English, and by the same token are not considered metaphorical in MIP.

Another important point about MIP is that it does not aspire to be conceptual in nature. Moreover, it is in fact independent from conceptual analysis:

Linguistic forms are identified as related to metaphor on the basis of shallow lexical-semantic analysis that only involves distinct and comparable meanings. Findings may subsequently be analysed for their possible relations to one or more cross-domain mappings in conceptual structure, but this is not required for the identification of metaphor in the language data<sup>10</sup>.

Such an approach runs contrary to common practice in cognitive linguistics. The procedure does not aim to describe the exact nature of the underlying correspondences between conceptual domains. Rather it concentrates on linguistic metaphors, but not really on their conceptual structures. As illustrated above, MIP only requires to find a more basic sense of a lexical unit in a stretch of metaphorical dis-

Steen, G., Dorst, A.G., Hermann, J.B., Kaal, A., Krennmayr, T. 2010. Metaphor in Usage. In: Dabrowska, Ewa (ed.) Cognitive Linguistics. Berlin: Walter de Gruyter. Pp. 757–788.

<sup>10</sup> Ibidem. P. 763.

course, which is then by comparison related to its contextual sense. The precise description of the conceptual domains that these lexical units may belong to is not needed, extremely difficult, and a research question of its own<sup>11</sup>. Nevertheless, MIP constitutes a good starting point for a cognitive linguistic analysis of the conceptual metaphors evoked by metaphor related lexical units. The procedure does not really answer the question of how to move from linguistic to conceptual metaphor, or how to get from linguistic data to underlying conceptual correspondences. Even so, it constitutes a first step in the right direction and explains, in a satisfactory way, how to more reliably identify metaphorical linguistic expressions.

### 2. Technical issues

There are two primary questions concerning lexical units and how they relate to metaphorical ideas in conceptual structures. The first question is about what counts as a unit of analysis. The second is how this unit relates to the conceptual structure it evokes.

The procedure focuses on the word as the unit of analysis. The motivation for choosing the word as a unit lies in the functional and conceptual relation between words, concepts and referents in discourse analysis<sup>12</sup>. Throughout the procedure, the word is referred to as a lexical unit. Lexical units are analysed as independent word classes and annotated, in accordance to BNC (British National Corpus), as an appropriate POS (Part(s)-Of-Speech).

Although most lexical units are single words, there are some borderline cases, such as phrasal verbs, some compounds, some proper names, and polywords. Both most polywords and most idioms are considered as single lexical units. These include such examples as 'of course', 'in fact', 'by means of', 'a good deal of', etc. Similarly, phrasal verbs and compounds function as single lexical items in MIP. The idea that they 'have a unitary, single conceptual and referential function in discourse, where they designate distinct entities, attributes, or relations'<sup>13</sup> seems to work as a kind of an overarching principle for all complex units<sup>14</sup>.

The most distinct group of exceptions concern novel compounds. Although these are single lexical units, they are always analysed into their component parts. Since they are new coinages, they are usually not listed in dictionaries and absent from the mental lexicon of the idealised native speaker of English. Thus the language user has to analyse them into their distinct parts, activate the two related concepts, and establish some referential relation between them. Therefore new

<sup>&</sup>lt;sup>11</sup> Steen, G.J. 2007. Finding metaphor in grammar and usage. Amsterdam: John Benjamins. P. 286.

<sup>12</sup> Steen, G.J., Dorst, A.G., Herrmann, J.B., Kall, A., Krennmayr, T., Pasma, T. 2010.

<sup>13</sup> Ibidem. P. 767

For a more detailed discussion of exceptions and borderline cases, see chapter 1 and 2 in Steen, G.J., Dorst, A.G., Herrmann, J.B., Kall, A., Krennmayr, T., Pasma, T. 2010.

compounds should be considered as consisting of two lexical items and each of them analysed in the regular way as a separate unit in MIP. For instance, 'land fishing' is a very creative and novel compound of which 'fishing' can be annotated as MRW (a metaphor related word), whereas the whole combination counts as one case in the analysis. The two constituents of 'land fishing' evoke two separate concepts, one non-metaphorical for land-related activities and one metaphorical for fishing, which prompt us to look for associations between these separate concepts so as to arrive at a possible interpretation that fits the immediate context of the expression.

The second question is precisely how such lexical units are related to metaphorical ideas in underlying conceptual structures. This manifests itself in three different ways and results in three different types of metaphors in discourse<sup>16</sup>:

- 1) indirect metaphor, with its source domain expressed indirectly
- 2) direct metaphor, with direct reference to its source domain
- 3) implicit metaphor, with no lexical manifestation of a source domain

In more specific terms, the question is how a particular lexical item relates to the source domain of conceptual metaphor. Given the contextual meaning of a lexical item, the analyst needs to look for its basic sense, which, in majority of cases, can be found indirectly, that is, outside a stretch of text or discourse under analysis. Technically, the *Macmillan English Dictionary for Advanced Learners* has been chosen as the main tool for making decisions about lexical items, not only their basic but also contextual meanings, and of course about distinctness of contextual and basic senses. The reason for using *Macmillan* is that it is recent and corpus-based. As supplementary to *Macmillan*, the Pragglejaz Group used the *Longman Dictionary of Contemporary English* to verify and solve problems, occasionally arising in *Macmillan*.

Definitely, indirect metaphor is the most frequent pattern. This is the classic example of metaphorically used lexical units. Thus, when such lexical items as 'crossroads', 'route', 'dead-end' and so on are employed to talk about life, they are employed metaphorically. Speakers use these words on the basis of some underlying comparison, or cross-domain correspondences between the more concrete and thus basic 'journey' meanings of these words and their abstract and contextual meanings in a given piece of text or discourse about 'life' (cf. LIFE IS A JOUR-NEY)<sup>17</sup>. Therefore these lexical units indirectly evoke different referents from the ones indicated by their basic meanings and that is the reason for referring to them as instances of indirect metaphor. In the discourse about events in life, the source domain is evoked indirectly and results from the contrast between the contextual sense of life and the basic sense of journey.

Benczes, R. 2006. Creative Compounding in English: The Semantics of Metaphorical and Metonymical Noun-Noun Combinations. Amsterdam: John Benjamins Publishing Company.

<sup>&</sup>lt;sup>16</sup> Steen, G., Dorst, A.G., Hermann, J.B., Kaal, A., Krennmayr, T. 2010.

<sup>&</sup>lt;sup>17</sup> Lakoff, George, Johnson, Mark. 1980. Metaphors We Live By. Chicago: University of Chicago

The source domain of conceptual metaphor can also be expressed directly as some form of comparison. This concerns the use of direct metaphor, instances of which are quite infrequent. Steen et al. give the following example: "When Shakespeare asks 'Shall I compare thee to a summer's day?', we have a direct expression of a metaphorical comparison which includes direct reference to the source domain of the summer's day"18, which manifests itself in the text or discourse and by the same token makes the addressee access the source domain as a relatively autonomous conceptual domain and sets up a cross-domain comparison between the discourse referents. In Shakespeare's line of Sonnet XVIII, we are simply instructed to establish the correspondence between one referent connected with 'you' and another one that has to do with 'summer's day'. Another example of direct metaphor is: 'And he wings up high, like an eagle, said of a bicycle racer who has escaped from the pack and races up a steep mountain'19. Here the instruction from the addresser to access the source domain is lexically signalled by 'like'. Other lexical signals of cross-domain mappings include 'as', 'more', 'less', 'more/less ... than', which are potential markers of similes, analogies, and comparisons. They all alert the addressee to the idea that some form of contrast is at play. In MIP, they are annotated as metaphor signals and coded with 'MFlag'. More complex markers include such flags as 'imagine', 'think', 'regard as', 'conceive of', 'as if' and so on. For all practical purposes, it is impossible to comprehend direct metaphor without contrastive and comparative processing between the two independent referents, and without some intention on the part of the addresser. Direct metaphor is deliberate<sup>20</sup>.

Another group of metaphor in discourse, implicit metaphor, seems to be the least frequent. It differs from the previous forms of metaphor in that it does not have any lexical item that derives from the source domain. It emerges in two forms, implicit metaphor by substitution and implicit metaphor by ellipsis. The former is well illustrated in the following example from Steen et al.: 'Naturally, to embark on such a step is not necessarily to succeed immediately in realising  $it^2$ . Here 'step' is a metaphorically related word and 'it' is a substitution for the notion of 'step'. Such expression is 'metaphorical on the grounds of underlying metaphorical propositions that need to be reconstructed when language users process the surface text and produce a conceptual model of the discourse'22. Regardless of the form of implicit metaphor, substitution or ellipsis, one linguistic element of cohesion is required. It need not be metaphorical by itself but either anaphorically or cataphorically refers to a metaphorically used word. Potential linguistic elements of cohesion usually include pronouns, primary and modal verbs, and so on.

<sup>&</sup>lt;sup>18</sup> Steen, G., Dorst, A.G., Hermann, J.B., Kaal, A., Krennmayr, T. 2010. P. 778.

<sup>&</sup>lt;sup>19</sup> Ibidem. Pp. 766–767.

<sup>&</sup>lt;sup>20</sup> See Steen, G. In press. When is metaphor deliberate? In: Nils-Lennart Johannesson, Christina Alm-Arvius and David C. Minugh (eds.): Selected Papers from the Stockholm 2008 Metaphor Festival. Stockholm: Acta Universitatis Stockholmiensis.

<sup>&</sup>lt;sup>21</sup> Steen, G.J., Dorst, A.G., Herrmann, J.B., Kall, A., Krennmayr, T., Pasma, T. 2010. P. 39.

<sup>&</sup>lt;sup>22</sup> Ibidem. P. 780.

#### 3. Conclusion

Metaphor in discourse may be a thriving business but has turned out a complex affair. It comes in three different types, indirect metaphor, direct metaphor, and implicit metaphor. The bulk of metaphor concerns indirect metaphor, metaphorically used lexical units, not signalled by any metaphor flags. This metaphor can be used either deliberately or non-deliberately in contrast to direct metaphor that can only be used deliberately in order to realise particular communicative intentions.

Cognitive linguistics has greatly contributed to the study of metaphor but it seems that the relation between metaphorical lexical units and cross-domain correspondences in conceptual domains still needs much further research. How to get from linguistic to conceptual metaphor remains open to further study. MIP does not suggest a one-to-one relation between metaphorically used lexical units and underlying conceptual metaphors, such as, for example, ARGUMENT IS WAR, or LIFE IS A JOURNEY.

MIP examines linguistic manifestations of metaphor in thought as an independent process. The procedure concentrates on the linguistic aspect of metaphor in discourse. It shows how linguistic metaphor structures discourse in its different registers. There are distinct differences between the registers of conversation, academic texts, fiction and news texts in terms of its saturation with metaphorical meaning. Is it true that metaphor appears most often in fiction? In fact, it turns out that metaphor permeates academic texts to a much higher degree than fiction. MIP shows that 18.6% of lexical units in academic texts are metaphorical, while fiction has only 11.8%.<sup>23</sup> This is primarily because academic texts are characterised by a high degree of abstractness. It would be interesting to see, for example, how different types of metaphor work in different registers, fulfilling different pragmatic functions, or how deliberate vs. non-deliberate metaphors are used.

In its more developed version, the procedure, called MIPVU (VU stands for Vrije Universiteit in Amsterdam), goes outside the confines of the current two-dimensional model of metaphor. This model limits our attention to metaphor in language and thought. The MIPVU model postulates the third dimension, that is, metaphor in communication. 'The communicative function of metaphor as a deliberate or non-deliberate rhetorical device is essential in accounting for the presumed processes of cross-domain mapping'<sup>24</sup>. Cognitive linguistics has made extraordinary advances in the study of metaphor in its two dimensions of language and thought. Its third dimension, communication, is definitely no less promising.

<sup>&</sup>lt;sup>23</sup> Ibidem. P. 782.

<sup>&</sup>lt;sup>24</sup> Ibidem. P. 782.

## Bibliography:

- Benczes, R.: Creative Compounding in English: The Semantics of Metaphorical and Metonymical Noun-Noun Combinations. Amsterdam: John Benjamins Publishing Company 2006.
- Kövecses, Z.: Metaphor: A practical introduction. Oxford: Oxford University Press 2010.
- Lakoff, George, Johnson, Mark: Metaphors We Live By. Chicago: University of Chicago Press 1980.
- Pragglejaz Group. MIP: A method for identifying metaphorically used words in discourse. In: Gibbs, R.W. Metaphor and Symbol 2007.
- Ritchie, D.: ARGUMENT IS WAR Or is it a game of chess? Multiple meanings in the analysis of implicit metaphors. In: Gibbs, R.W. (ed.) Metaphor and Symbol 2003.
- Steen, G.J.: Finding metaphor in grammar and usage. Amsterdam: John Benjamins 2007.
- Steen, G.: In press. When is metaphor deliberate? In: Nils-Lennart Johannesson, Christina Alm-Arvius and David C. Minugh (eds.): Selected Papers from the Stockholm 2008 Metaphor Festival. Stockholm: Acta Universitatis Stockholmiensis.
- Steen, G.J., Dorst, A.G., Herrmann, J.B., Kall, A., Krennmayr, T., Pasma, T.: A Method for Linguistic Metaphor Identification. Amsterdam: John Benjamins Publishing Company 2010.
- Steen, G., Dorst, A.G., Hermann, J.B., Kaal, A., Krennmayr, T.: Metaphor in Usage. In: Dabrowska, Ewa (ed.): Cognitive Linguistics. Berlin: Walter de Gruyter 2010.
- Vervaeke, J. & Kennedy, J. M.: Metaphors in language and thought: Falsification and multiple meanings. In: Gibbs, R.W.: (ed.): Metaphor and Symbol, 11, 1996.