

## Using Dictionaries in Metaphor Identification

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### Abstract

Metaphor has been the focus of cognitive linguistics, psycholinguistics, applied linguistics, corpus linguistics, and metaphor identification lays a solid foundation for metaphor research. Since Lakoff and Johnson (1980) proposed the Conceptual Metaphor Theory, much attention has been given to the conceptual and cognitive dimensions of metaphor, leaving linguistic dimension secondary. However, when MIP was introduced in 2007, which aims to identify metaphorically used lexical units in natural discourses, metaphor researchers have developed a systematic and reliable methodology for identifying linguistic metaphor instead of working with intuition and subjective criteria, which enables them to focus their research on different levels-linguistic forms, conceptual structure and cognitive processing. As MIP requires metaphor analysts to work through five steps, in which they depend heavily on dictionaries to determine lexical units and specify the basic and contextual senses, the use of dictionaries becomes the critical element in MIP. The Pagglejazz Group chose *Macmillan English Dictionary for Advanced Learners* a reference, while MIPVU, the elaborated version of MIP, used *Longman Dictionary of Contemporary English* and *Oxford English Dictionary* apart from Macmillan dictionary. The author, by demonstrating the use of different types of dictionaries in MIP, tries to show that together with learners' dictionaries, historical dictionaries, collocation

dictionaries and specialized dictionaries can also be used for cross reference to guarantee the reliability of linguistic metaphor identification.

**Key words:** Metaphor identification; Dictionary; Linguistic metaphor; Sense

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### INTRODUCTION

Since Lakoff and Johnson published *Metaphors We Live By* in 1980, metaphor research has become the focus of cognitive linguistics, psycholinguistics, applied linguistics, and corpus linguistics. With the application of corpora, people begin to emphasize the difference between grammar and specific usage of a language in their research (Steen, 2007), and accordingly, large corpora are used to facilitate metaphor research related to specific contexts, in which metaphor identification becomes a pressing issue (Krennmayr, 2013). Metaphor research can be approached from two perspectives: Linguistic metaphor and conceptual metaphor, and since MIP was introduced in 2007 (metaphor identification procedure, Pragglejazz Group, 2007), the identification of linguistic metaphors has attracted more attention than ever before. In MIP, the most crucial part is the contrast between the basic meaning and contextual meaning of lexical units, and since "a meaning can not be more basic if it is not included in a contemporary users' dictionary" (Steen et al., 2010, p.35) and 99% metaphorical usages from native speakers can be found in dictionaries of contemporary English (Steen, 2011), using dictionaries, usually learners' dictionaries, becomes the key factor in metaphor identification based on MIP. The author, by demonstrating the use of dictionaries in MIP, tries to show that not only

learners' dictionaries, but also historical dictionaries, collocation dictionaries and specialized dictionaries will help researchers make relatively consistent and objective judgment in linguistic metaphor identification.

## 1. MIP: A BOTTOM-UP APPROACH IN METAPHOR IDENTIFICATION

Early in the metaphor study, metaphor identification usually relied on the researchers' intuition, such as Lakoff and Johnson's research (1980). Later on, the development of corpus linguistics enabled researchers to get rid of the dependence and search for a relatively unified and effective standard in metaphor identification. Presently, the metaphor identification mainly includes two kinds of approaches: top-down and bottom-up approaches. The former presets conceptual metaphors, then retrieves corresponding linguistic metaphors from the text, while in the latter no conceptual metaphors are presumed and researchers try to derive mappings from linguistic expressions which they identify as metaphorically used. The identification of metaphor based on the application of the basic principles and methods of corpus linguistics in essence can be categorized as the top-down approach, but in recent years, people come to realize the limitation of this deductive research method: There are no standard procedures to identify conceptual metaphors, and researchers have to rely on their intuition to a great extent. At present, more and more researchers prefer the bottom-up approach, and MIP and its upgrade MIPVU (Metaphor Identification Procedure at VU University level, Steen et al., 2010) are employed as a typical bottom-up approach (for convenience both are referred to as MIP). In MIP a language unit can be divided into metaphorical and non-metaphorical expressions, and once the semantic consistency is destroyed by introducing the conceptual meaning of a different domain, the language unit can be identified as a metaphorical expression.

MIPVU, a revised version of MIP, has made a further improvement in metaphor identification. It extends metaphors to similes and implicit metaphors so there are three types of metaphors in MIPVU: Indirect metaphors, direct metaphors and metaphor indicators, eg, in the sentence *the marriage is a trap*, "trap" is an indirect metaphor; *He eats like a pig*, "pig" an direct metaphor, while *like, as, compare*, etc. are metaphor indicators. Moreover, the lexical unit in MIPVU is refined to its part of speech rather than lemma in MIP. In addition to *Macmillan English Dictionary for Advanced Learners* (henceforth MED), the reference used in MIP, MIPVU also refers to *Longman Dictionary of Contemporary English* (henceforth LDOCE) and *Oxford English Dictionary* (henceforth OED) for help. Perhaps the biggest difference between MIPVU and MIP lies in the fact that in MIPVU it's not enough to make contrast between the basic meaning and context meaning to

identify metaphors, but the semantic references of the two concepts have to demonstrate similarity in the external or function. To a certain degree, MIPVU provides more comprehensive, objective criteria in metaphor identification than MIP.

The specific steps in MIP are as follows:

- a) Read the entire text—discourse to establish a general understanding of the meaning.
- b) Determine the lexical units in the text—discourse.
- c) i. 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.  
ii. 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.
- iii. 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.
- d) If yes, mark the lexical unit as metaphorical.

As is shown, MIP procedure can only identify linguistic metaphors, restraining from presuming conceptual metaphors. Unlike top-down approach, the five-step method of MIP, which restricts itself to dealing with comparing and contrasting meanings as defined in the dictionaries (Steen, 2007), helps researchers to get rid of dependence on their intuition with comparatively reliable basic meaning and contextual meaning of the lexical unit coded in dictionaries. Moreover, as the comparison between the basic meaning and contextual meaning strictly follows dictionary definitions to determine metaphorically used words, providing the basis on which cross-domain mappings are constructed, MIP, with its focus on linguistic metaphors, prevents researchers from "seeing concrete manifestations of conceptual metaphors everywhere" (Ibid., p.27).

## 2. THE USE OF DICTIONARIES IN MIP

MIP strictly adheres to standard English dictionaries to determine the lexical unit and compare and contrast its basic meaning and contextual meaning, so the importance of dictionaries can never be overestimated. As MIP is targeted on formal, contemporary, standard British English (Steen, 2007), dictionaries based on a large, general and contemporary English corpus are preferred, mainly learners' dictionaries, though not restrained to them.

## 2.1 Use of learners' Dictionaries in MIP

Pragglejaz Group chose learners' dictionaries for the following reasons: First of all, most contemporary English learners' dictionaries, with no exception, are compiled based on large corpora of contemporary English from different discourses: MED was compiled based on a systematic processed World English Corpus of 220 million words, large enough to provide a number of citations for all but the rarest words, and LDOCE, the Longman Corpus Network, a 330 million word database. Hence they are considered adequate for general language analysis and can fully satisfy the need for metaphor research (Pragglejaz Group, 2007). Secondly, unlike dictionaries compiled for native speakers, in learners' dictionaries special consideration is given to high-frequency words with exquisite sense divisions, precise definitions, typical examples and collocations. Words like *say*, *see*, *light* and *grasp* etc. create more difficulties for non-native speakers than for native speakers, and it is high-frequency words rather than difficult or rare words that pose serious problems when they try to differentiate the literal meaning from metaphorical meaning, hence the learners' dictionaries are heavily used in MIP, especially in step 3.

### 2.1.1 Definition

Sometimes not only sense division, but also definitions will help distinguish the basic meaning from contextual meaning of a lexical unit. In the following example, the first sense of "embrace" is related to body action, which is concrete, and the second sense, with abstract collocates "idea", "belief" and "opinion" etc. will make it a direct metaphorical sense.

[1] *Community standards may embrace moral principles or they may not.*<sup>1</sup>

#### embrace

MED: to completely accept something such as a new belief, idea, or a way of life [sense 2a]

LDOCE: to eagerly accept a new idea, opinion, religion etc. [sense 2]

### 2.1.2 Collocation Information

Most contemporary learners' dictionaries allocate considerable space to collocation information as it presents the way a word is used in specific context and with its collocates, we can decide on its meaning, especially when the definition is not sufficient to make a judgment.

[2] *He turned round and directed a torrent of abuse at me.*

The word "torrent" in MED has two meanings: The first, related to water flow, can be taken as the basic meaning, and the second referring to "a large amount of something, especially something unpleasant" may or may not be

deemed to be abstract as "something" is ambiguous though the word "unpleasant" may, to a certain extent, indicate its abstractness. However, if we turn to the highlighted collocation pattern "of a torrent of abuse/words/criticism" in MED for its second sense, we can be fairly assured that "something" is abstract and "torrent" in the second sense most probably relates to contextual meaning.

## 2.2 Use of Historical Dictionaries

The core issue in using MIP to identify metaphor is and above all whether the two senses are listed as two separate, numbered sense descriptions in the dictionary. Though it's believed "the overwhelming majority of cases can be solved by using the Macmillan dictionary, and the Longman dictionary as a second opinion when it is needed" (Krennmayr, 2008, p.107), it is not rare at all that information provided in learners' dictionaries is insufficient for researchers to determine the basic meaning and contextual meaning. For pedagogical purposes, in learners' dictionaries senses are sometimes collapsed and subtle meanings are ignored (Steen, 2007; Deignan, 2005). And to make things worse, for the target readers, the most frequently used sense of a word would appear as the first sense while its historical development is usually disregarded, which will attribute to the disagreement among researchers concerning the basic sense. Should it occur, information provided in learners' dictionaries will not be sufficient for researchers to make an objective judgment, especially when two meanings are subsumed into one sense description or one of the senses is missing in the dictionaries.

### 2.2.1 Sense Conflation

Here are some examples:

[3] *It would use new methods to teach traditional academic subjects and equip young people with technical skills.*

Our intuition tells us that "use" in "use a method" is different from the one in "use a tool". However, if we consult learners' dictionaries, we will find:

#### use v.

MED: To do something using a machine, tool, skill and method etc in order to do a job or to achieve a result [sense1]

LDOCE: If you use a particular tool, method, and the service, ability etc, you do something with that tool, by means of that method etc, for a particular purpose [sense 1]

We will fail to make a distinction between the basic sense and contextual sense as the literal sense and abstract sense are conflated in the definitions, so if we adhere to MIP the word is not metaphorically used, which is against our intuition. Nevertheless, if we turn to OED, a historical dictionary, we will see:

<sup>1</sup> All examples are from BNC Corpus in this paper.

#### use v.

OED:II. To put to practical or effective use; to make use of, employ, esp. habitually. From the 20<sup>th</sup> cent. some senses in Branches I and III. (e.g. senses 3c, 6, and 16) have increasingly been understood *instrumentally* as implying particular ends or purposes, even when there is no explicit context of that kind; as a result these uses have converged on the senses in this branch (highlighted by the author)

a) To put (an instrument, implement, etc.) to practical use; *esp.* to make use of (a device designed for the purpose) in accomplishing a task. [sense 8a]

b) To make use or take advantage of (a quality, condition, idea, or other immaterial thing) as a means of accomplishing or achieving something. †Formerly also *intr.* with *of*, (occas.) *with*. [sense 10]

OED makes a segment between “use” related to material things and immaterial things, but the information given in OED show that the two different usages occurred nearly at the same time in middle English (about c1300, c=circa) so the concrete usage is not historically older, neither can the semantic relationship be found between the two. If we apply the criterion of MIP, “use” in the example [3] is not metaphorically used.

#### 2.2.2 Sense Omission

As mentioned in previous part, two separate sense descriptions for a lexical unit are considered as a precondition for contrast between the basic meaning and contextual meaning, however, due to the restricted space, it's quite possible that there will be only one sense, usually the most frequently used one listed in learners' dictionaries, while actually there are more than one. Let's see “fervent” and “ardent” in Example [4] and [5]:

[4] *There were **fervent** arguments both for and against gun control.*

[5] *Even his most **ardent** supporters disagreed with this move.*

In MED and LDOCE, both “fervent” and “ardent” have only one sense, which describes emotion, but in OED, besides the one associated with emotion, they both have meanings referring to temperature, with which we can feel confident about their metaphorical usage in the Example [4] and [5]:

**fervent**: Hot, burning, glowing, boiling[sense 1]

**ardent**: Burning, on fire, red-hot; fiery, hot, parching[sense 1]

Actually, apart from sense division, the etymological information provided in OED also helps us make judgment: It shows that both “fervent” and “ardent” have Latin origins when Latin “fervent” meant “boil”, “glow” and “ardere” meant “to burn”, which supports their metaphoricality.

As most learners' dictionaries are based on descriptivism and draw data from corpus, and little consideration is given to etymological information (though in CD-ROM etymology may be provided). On the other hand, in learners' dictionaries frequency is taken as priority in sense arrangement, and people tend to accept the most frequent sense, usually the first one as the basic one, even though it is not necessarily related to its basic meaning (Pragglejaz Group, 2007). To avoid the misjudgment, a historical dictionary becomes a valuable resource in MIP, especially in finding the basic sense:

[6] *I'll just leave the engine running while I go in.*

The highest frequency usage of “leave” is “to go away from a place or a person” (LDOCE sense 1), and most probably, it may be taken as the basic sense. But OED tells us that “leave” was originated from the Old English “bequeath”, meaning “allow to remain and leave in place”, and still earlier, from German “bleiben”, meaning “remain”, so, the basic meaning should be “to let something remain in a particular state, position, or condition” (LDOCE sense 5) rather than its first sense, and when we compare and contrast the basic meaning and contextual meaning in Example [6], the conclusion can be drawn that “leave” is not metaphorically used.

Moreover, etymological information is especially useful for determining the basic meaning of culture-loaded words:

[7] *The students' rooms are **spartan** but clean, with no carpets or central heating.*

#### **spartan**

MED: Very plain and simple, without the things that make life comfortable and pleasant

LDOCE: Spartan conditions or ways of living are simple and without any comfort

Only one sense can be found in MED and LDOCE for “spartan”, so if we use the criterion of MIP, “spartan” in [7] is not metaphorically used. However, as a culture-loaded word, its cultural connotation makes it a direct metaphor, and most researchers take the origin or cultural background information of culture-loaded words as their basic meanings (Dorst & Kaal, 2012; Schmitt, 2005). In this case, LDOCE in its CD-ROM provides the etymology information of “spartan” as follows: “Of Sparta (16-21 centuries) from Sparta city in ancient Greece whose people lived simply”, which is more than enough for researchers to decide on its metaphorical nature.

#### 2.3 Use of Collocation Dictionaries

Similar to learner's dictionaries, most contemporary collocation dictionaries are compiled on the basis of large, contemporary, general corpora, and *Macmillan Collocation Dictionary* (henceforth MCD), makes a good

choice for identifying metaphors. As one of the most distinguished collocation dictionaries with its unique structure, MCD chooses the high frequent collocations, often associated with the metaphorical meanings of headwords rather than their basic meanings, offering help to identify metaphors from following perspectives:

### 2.3.1 Selection of Headwords

Unlike learners' dictionaries, MCD only includes nouns, verbs and adjectives as headwords, among which, nouns account for 55%, verbs 21% and adjectives and 24% respectively (Coffery 2010). According to Pragglejaz Group (2007), one of the advantages of using dictionaries for metaphor identification is that dictionaries are especially useful for distinguishing metaphorical content words from non-metaphorical ones, and for functional words, researchers, to a great extent, have to rely on their intuition. Compared to other collocation dictionaries, eg, *Oxford Collocations Dictionary for Students of English* (henceforth OCD), which has a larger collection of entry words, especially functional words, the headwords included in MCD make it a more convenient means in metaphor identification.

### 2.3.2 Segmentation of Senses

One of the most distinguished features of MCD is that it highlights metaphorical meanings of lexical words, and in some cases, lists only high frequency metaphorical meanings. Take "cultivate" as an example: Both MED and LDOCE have four different senses, with the first two related to concrete senses and last two abstract senses. In OCD, a traditional collocation dictionary, the compilers provide "cultivate + adv" collocation patterns related to three semantic fields (a. land; b. crop; c. try to develop), while MCD only lists one metaphorical sense for collocations: "develop an attitude, ability, or relationship". Actually, in the entry list of MCD we can find a large quantity of headwords with only metaphorical sense, including "gulf", "ignite" and "veil" etc. and the heightened awareness on metaphor in MCD offers a direct help for researchers to determine the contextual meaning in MIP.

### 2.3.3 Choice of Collocates

MCD, with collocates based on semantic groups, can help researchers make decisions when use of learners' dictionaries leads to confusion:

[8] *I have to repay \$250 every month, and that's a big chunk of my salary.*

**chunk n.**

MED: a) A large, thick piece of something

b) A large amount of part of something

LDOCE: a) A large thick piece of something that does not have an even shape

b) A large part or amount of something

Both MED and LDOCE have two meanings, but the infinite pronoun "something", which either describes shape of an object in sense 1 or quantity of something in sense 2,

is not sufficient to make a judgment about its abstractness, therefore, provides few clues to its metaphorical feature. However, in MCD, the following collocates are listed:

**chunk n.**

MCD:

A large part or amount of something

• adj+N (omitted)

• N + of food **beef, bread, cheese, chicken, cucumber, lamb, meat, pineapple**

hard solid substance **antonym, ice, masonry, metal, rock, wood**

time or money **budget, day, money, salary, time**

Although in MCD "chunk" is also defined with "something", its collocates in different semantic groups clear up the confusion caused by the infinity of possibilities in "something", which may blur the distinction between its concrete and abstract senses, and consequently, lead to researchers' frustration in MIP.

### 2.4 Use of Specialized Dictionaries

As objectivity and precision are crucial in technical and scientific languages, figurative, vague and ambiguous expressions are, to a great extent, undesirable. What's more, unlike learners' dictionaries that follow descriptive principles, specialized dictionaries are in essence prescriptive. Meanwhile, in contrast to historical dictionaries, they are synchronic rather than chronic, and consequently, specialized dictionaries give little consideration to lexicalization process, in which metaphoricity plays an important part (Temmerman, 2000). However, as metaphor is an important vehicle for people to conceptualize the world, not only in daily life, but in all kind of activities, including science, business, and legal activities, etc., the language coded in specialized dictionaries cannot be reduced to literal level. Take for example, business language, by its very nature, is metaphorical (Koller, 2004; White, 2003), and figurative language will certainly make part of business dictionaries. For instance, data from corpora show that the word "bubble" collocates with words related to business in many cases, however, in MED and LDOCE neither "bubble" as noun or as a verb relates specifically to business, though we can find its connection to "emotion", "feeling", "activity" and "time" in the given definitions. If we turn to, in *Longman Business Dictionary* (henceforth LED), we will find:

**bubble n.**

LED : a) When a lot of people buy shares in a company that is financially weak, with the result that the price of the shares becomes much higher than their real value.

b) **The bubble bursts** if the bubble bursts in a particular area of business, a period of growth and success ends suddenly.

As we shall see, though there is only one sense listed in LED, it's just the metaphorical sense that helps determine contextual meaning more directly, hence more effectively for metaphor identification, especially when we consult LED for a cross reference.

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## CONCLUSION

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Metaphor research is heavily based on metaphor identification, in which MIP is widely applied as a tool. Though in MIP researchers mainly depend on learners' dictionaries to support their intuition, this will be well complemented with use of historical dictionaries, collocation dictionaries and specialized dictionaries for a cross reference. There is no denying that dictionary use in metaphor identification is time-consuming, especially with large amount of data for analysis, and it's less applicable when dealing with functional words, special terms and culture-loaded words, yet compared with alternative methods in metaphor identification, MIP is highly recommended to and universally applied by researchers in metaphor identification for the least dependence on intuition (Zhong & Chen, 2013), and it is the use of dictionaries that provides an objective basis for the reliability of the MIP.

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