RESEARCH ARTICLE

Exploring the Role of Part of Speech in the Formation of Conceptual Metaphors

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ABSTRACT
Most scholarly research on conceptual metaphor has been concerned with measuring the breadth with which a given conceptual metaphor is used in language, while there has been a lack of literature on how such metaphors are formulated in the first place or what parts of speech are typically involved in their construction. This paper aims to research the influence of word class on metaphor recognition and construction. Results of the study show that high-frequency noun keywords, especially those that denote abstract ideas and concepts, tend to be employed as major target domains for conceptual metaphors in discourse. In addition, they indicate that linguistic expressions of conceptual metaphors tend to take the form of verbs. They also prove that using a corpus-based approach offers a reliable means for determining what constitutes a conceptual metaphor.

KEYWORDS
Corpus approach, conceptual metaphor, lexis, discourse analysis

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1. Introduction
Conceptual metaphor is a pervasive phenomenon in daily life, which can be observed not only in the way people speak but also in the way they think and act. In their Metaphors We Live By (1980: 5), George Lakoff and Mark Johnson define conceptual metaphor as “understanding and experiencing one kind of thing in terms of another”. They use the terms target domain and source domain to distinguish two different semantic areas involved in conceptual metaphor. A target domain can thus be said to be that which is described or understood metaphorically in terms of another, conceptually different source domain. In the conceptual metaphor, MARRIAGE IS A BATTLEFIELD, the abstract notion of marriage is the target domain, whereas the non-abstract concept of the battlefield serves as the metaphor source domain.

Despite the plethora of research work devoted to conceptual metaphor, its identification in a discourse context remains a complex and challenging task. This is mainly due to the absence of a uniform method that can guide the fulfillment of such a task. Previous approaches to conceptual metaphor identification lacked specificity as they did not show exactly what counted as a target and a source domain in a conceptual metaphor. These are serious shortcomings in the existing body of literature on conceptual metaphors.

This research paper is, therefore, significant because it rectifies methodological gaps left open by prior studies in the field. It presents a systematic corpus-based approach that is designed to capture recurrent patterns of conceptual metaphors in a particular discourse. The value of the proposed approach lies in its ease of application as well as its potential to generate accurate and reliable results. In this approach, a combination of qualitative and quantitative methods is employed. Qualitative methods are needed to distinguish between literal and metaphorical uses of language in a corpus. Moreover, they are required to classify and label the diverse domains from which metaphors are sourced and, then, to reveal the conceptual bases that account for sets of related metaphors in a particular discourse. Quantitative methods, on the other hand, are needed to measure the salience of...
conceptual metaphors. They are also necessary to uncover the role of lexical words such as nouns, verbs, and adjectives in the formulation of these conceptual metaphors.

A corpus containing 11 American self-help books on marriage relationships has been compiled for this study. Such books make for an overall corpus size of 704,517 words—which is deemed sufficient both to identify the nature and role of conceptual metaphors in this type of discourse and, subsequently, to highlight the different functions underlying their use. Self-help books on marriage relationships are a recent addition to the genre of self-help. They made their first appearance only a few decades ago. Despite that, they have rapidly gained wide popular appeal both in the United States and around the world. John Gray’s *Men Are from Mars; Women Are from Venus* is an example of such a book. Since its publication in 1992, the book has gained massive worldwide popularity, selling over 50 million copies, and was translated into at least 42 languages, according to Barbara McMahon (2022). The advertised goal of this subgenre of self-help books is to provide advice to married couples on how to improve the quality of their marriages. It also gives counsel on a diversity of marriage-related problems, including marital distress, poor communication, verbal abuse, loud quarreling, jealousy, and lack of intimacy.

Fundamentally, there are two reasons for the choice to focus on self-help books addressing the topic of marriage relationships. The first is because of their appeal to readers both in America and throughout the world. This is evident in their impressive sales figures, which have been reported to reach millions of copies annually (Buzzard and Karen, 2002; Crawford, 2004; Hill, 2007; McMahon, 2022). Despite their popularity and mass appeal, there seems to have been no prior research devoted to analyzing the metaphoric content of self-help works on marriage relationships. Hence, a further reason for choosing to focus on such works is the scarcity of research in this area. That said, the present study seeks to answer the following three questions:

1. What kinds of conceptual metaphors characterize the American subgenre of self-help books on marriage relationships?
2. What role does part of speech play in the expression of conceptual metaphors?
3. What would a comprehensive, corpus-based approach to the study of conceptual metaphor look like?

**2. Metaphor in self-help literature**

Even though metaphor plays a considerable role in the popularization and advancement of this relatively new but increasingly influential mainstream discourse, it has received scant attention from metaphor theorists and analysts alike. Only recently has its value begun to be remarked upon. An early contribution in this regard was made by Micki McGee (2005), who drew attention to the major role played by metaphorical analogies in the creation of the self-help discourse, noting that they are more profusely used than any of the other traditionally recognized figures of speech. McGee’s main concern was to trace the shift in the metaphorical constructs that were invoked by the authors of this discourse to represent human life. She found that metaphors depicting life as “a battle, a game, or a sport; a journey or adventure; or a business enterprise” were dominant during the nineteenth and most of the twentieth centuries (2005: 50). She considered such metaphors to have been addressed to men, who were, in turn, conceptualized as “combatants, contestants, or players; travelers or explorers; and entrepreneurs, salespersons, or managers” (2005: 50). For her, the reason they did not apply to women was because of the traditional gender roles that tended to place them in a subordinate position to that of men.

McGee (2005) zeroed in on the metaphor of life as a journey which, she claimed, had a strong presence in early works of self-help such as *The Road Less Traveled* (Peck, 1978). In this work (1978), human life was portrayed in terms of a journey through which people could either choose to continue to travel very far—regardless of the hardships they might encounter along the path to their ultimate goals—or they could stop short of their destination in order to avoid the discomfort of long-distance travel.

The portrayal of life in terms of a work of art was also identified as another metaphor central to the self-help discourse of the late twentieth century. McGee (2005) argued that, unlike the earlier ‘masculine’ metaphor of life as a journey, this metaphorical notion of living the creative life was initially addressed to women to empower them and inspire them with a new vision for life before becoming directed toward both sexes afterwards. The last reported shift was the introduction of the metaphor of the human brain as a computer. This metaphor, too, was said to figure prominently in the literature of that period, most notably in Robbins’ work *Unlimited Power* (1986).

Mercè Effing (2011) reviewed how authors of self-help works tended to resort to different metaphorical constructs as a means to communicate their ideas as well as their sensations more vividly to their readers. He gave examples evincing the forcefulness of metaphorical language in prompting self-help readers to transform the way they think about and respond to the problems of their daily lives. The following analogical comparison between life problems and flowering plants served as a case in point.

> Every single problem that you have in your life is the seed of an opportunity for some greater benefit. (Chopra, 1994: 89)
The metaphorical image evoked above is that of the seed which—notwithstanding its outwardly pale and lifeless appearance at first—will continue to sprout and grow until it eventually bears fruit; in the same way, these seemingly unfortunate life events or circumstances that arise from time to time not only will fade away but will also turn out to be blessings in disguise. This example shows the potential of self-help metaphors to convince, motivate, and influence the audience of the discourse.

In 2013, Zoe McCaw conducted a more focused corpus study to investigate the functional role of metaphor in a selected sample of self-help texts. The main finding of the study revealed that metaphor was frequently employed by self-help authors to promote three distinct conceptions of selfhood: the rational, sovereign, and liberal selves (McCaw, 2013: 16). It was also discovered that there were two rhetorical functions performed by metaphor in the discourse of self-help literature: reinforcement and persuasion. In support of this finding, the study adduced several metaphorical expressions, all of which were extracted from self-help publications. One such expression is McKenna’s depiction below of the human mind as an information-processing device capable of automatically analyzing thoughts and regulating behaviors.

Your mind is like a computer—it has its own software, which helps you to organize your thinking and behaviour. If you have a behavior you want to change, it’s just a matter of conditioning or programming...I have learned that almost all problems stem from the same cause—negative programmes running in the unconscious mind. (McKenna, 2006: 40)

McCaw (2013) regarded McKenna’s use of the above metaphor as a basis for explaining how the mind seemed to work to have been intended for reinforcing the idea that forming new beliefs is a straightforward matter akin to that of programming a computer. Apart from its use for purposes of emphasis, McCaw found evidence in her sample corpus of metaphors acting as a persuasive tool to exhort readers to adopt a certain frame of mind or pursue a specific course of action. The following excerpt was quoted as an example wherein readers were encouraged to conceive of their lives as a garden and of themselves as a gardener who took responsibility for watering and fertilizing their plants while plucking out harmful weeds.

Think of your life as a garden. Unhealthy, rigid ways of thinking and corresponding behaviors like avoidance, rituals, safety strategies, perfectionism and trying too hard to please (to name but a few) are the weeds in your garden. The flowers consist of your healthy, flexible thinking. You need to continuously water and feed the flowers and uproot the weeds to keep your garden healthy. (Wilson and Branch, 2010: 264)

McCaw saw Willson and Branch’s explicit likening of one’s life to a garden not only as a lucid and visually expressive way of conveying a somewhat abstract notion to their audience but rather as a persuasive tool for exhorting them to take charge of their own lives and to deliberately replace damaging thoughts with productive and beneficial ones.

3. Research methods

The methodology employed to find, classify, and analyze the data is informed by two empirically different but apparently efficient methods—namely Charteris-Black’s (2004) method and Philip’s (2012) method. A key aspect of this methodology is that it integrates automated with manual procedures. Automated procedures are necessary for the quick detection and retrieval of metaphor-related lexis. Manual procedures are then necessary for the reliable interpretation of such lexis.

Additionally, the adopted methodology presents a new classification system for distinguishing between three forms of metaphor source domains on the basis of their definability: context-defined (when they are available in the context), predefined (when they have previously been identified in relevant literature), and undefined (when they are neither recognized from the context nor disclosed by previous researchers in the field). The classification system suggested here is not only precise and clear-cut but also has the potential for application to different types of discourse, given its usefulness in facilitating the recognition of the embodied source domains in conceptual metaphors.

For application purposes, this methodology can be envisaged as essentially a three-phase process. It comprises, first, the extraction of the 50 most significant keywords from the target corpus collected for the study, which is a straightforward procedure that can be executed automatically by means of any corpus analysis software (e.g., AntConc, Wordsmith Tools, or Wmatrix). The rationale for the exclusive focus on these words is grounded in the empirical assumption that such words can provide a shortcut to acquiring knowledge of the topical concerns of the corpus, hence circumventing the need for a careful reading of either the full corpus or selected sample texts. Another reason for the focus is to determine the kinds of concepts that are especially pertinent to the discourse in question rather than to the language in general.

As a result of this procedure, words with high occurrence rates in the corpus are expected to appear at the top of the generated list. Among them, there are those which are of no significant value for the analysis of metaphors. Determiners (e.g., the, a, an,
some), pronouns (e.g., he, it, you, we), and prepositions (e.g., of, in, for, with) are all examples of such words which should be filtered out manually to leave only content vocabulary—words used for expressing thematic, rather than grammatical, information such as nouns, verbs, and adjectives. The top 50 keywords remaining after the elimination of the non-content lexis exemplified above are then lemmatized, meaning that lexical items appearing in different grammatical forms, such as love (noun), loved (verb), and loving (adjective), are conflated into the same entry ‘love’ for ease of analysis.

The next phase consists in carrying out sample concordance analyses on the keywords contained in the lemmatized list. This is a manual procedure that aims to explore to what extent these keywords can be viewed as target domains for conceptual metaphors within the context of the examined discourse. A keyword is only deemed to be a prospective target domain when it is both semantically meaningful and has as its basic referent an abstract idea or concept. These two combined represent the fundamental line of reasoning that is adopted here for testing the probability of a given lexical keyword operating as a target domain for conceptual metaphors. Target domains thus established are subjected to full-scale concordance analyses for the purpose of identifying all metaphoric uses pertaining to these domains. The criterion applied for this purpose is the presence of semantic tension between a word’s literal sense and its contextual meaning that justifies classifying it as a metaphor.

Lastly, confirmed cases of metaphor are split up into groups based on the source domain from which they are derived. The resulting groups of related metaphors are labeled using Lakoff and Johnson’s format of ‘TARGET DOMAIN IS SOURCE DOMAIN’. Given the huge amounts of conceptual metaphors expected to be located within the corpus, the present study uses a frequency threshold of at least 20 occurrences for any given conceptual metaphor to be deemed characteristic of the discourse under consideration. From a practical standpoint, such a threshold is found to be very helpful in reducing the number of conceptual metaphors to only those that are particularly salient in the discourse.

4. Results
According to the results of the concordance data analyses, there are five lexical keywords that have been found to be frequently used as target domains for metaphors within the examined corpus of self-help texts on marriage relationships. They are, in order of frequency: relationship (24 percent), love (22 percent), feeling (20 percent), time (19 percent), and marriage (16 percent)—see Figure 1 below. The majority of metaphors belonging to these five key concepts are drawn from source domains that are either made explicit in the context itself (e.g., investment, project, and battlefield) or have been discovered in previous research (e.g., journey, building, and money). The fact that most of the source domains are either context-defined or predefined makes the task of linking them with their relevant target domains proceed at a quicker pace, as it requires no lengthy efforts to substantiate their existence in the corpus.

There exist a number of source domains that are neither contextually specified nor formerly designated. One proposed strategy for dealing with such cases of undefined source domains is to draw on background knowledge of word meanings to match the metaphorically used lexis in question with the overarching semantic field to which it typically corresponds. The matching task can alternatively be carried out with the aid of any standard dictionary in the absence of complete word knowledge or for a better degree of accuracy. Close analysis of relevant textual content is sometimes necessary, especially in metaphorical cases (like the ones given below) whose sources are not derivable by such knowledge alone. A crucial advantage of this analysis is that it provides further cues to help facilitate the detection of lexically ambiguous or obscure source domains. Nourishment, concealment, language, and business venture are all examples of undefined source domains that have not been clearly specified within the metaphorical expressions or recognized by previous research on conceptual metaphors. Their usage is inferred via the application of the strategy described above.
The full-scale concordance analyses of the relevant five target domains have resulted in the identification of 24 different kinds of conceptual metaphors, all of which have been found to meet the threshold requirement of at least 20 occurrences. Such metaphors are arranged by the keyword with which they are associated as follows.

**TABLE 1 Central conceptual metaphors in the corpus, arranged by target domain**

<table>
<thead>
<tr>
<th>Target domain</th>
<th>Conceptual metaphors</th>
<th>No. of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td>RELATIONSHIP IS AN INVESTMENT&lt;br&gt;RELATIONSHIP IS A JOURNEY&lt;br&gt;RELATIONSHIP IS A PROJECT&lt;br&gt;RELATIONSHIP IS A BUILDING&lt;br&gt;RELATIONSHIP IS A HUMAN BODY&lt;br&gt;RELATIONSHIP IS ARTWORK&lt;br&gt;RELATIONSHIP IS A PLANT</td>
<td>36&lt;br&gt;25&lt;br&gt;24&lt;br&gt;22&lt;br&gt;21&lt;br&gt;20&lt;br&gt;20</td>
</tr>
<tr>
<td>Love</td>
<td>LOVE IS A CONTAINER&lt;br&gt;LOVE IS AN ORGANISM&lt;br&gt;LOVE IS A LIQUID&lt;br&gt;LOVE IS NOURISHMENT</td>
<td>80&lt;br&gt;29&lt;br&gt;24&lt;br&gt;20</td>
</tr>
<tr>
<td>Feeling</td>
<td>FEELING IS A PHYSICAL FORCE&lt;br&gt;FEELING IS A CONCEALED ENTITY&lt;br&gt;FEELING IS A PERSON&lt;br&gt;FEELING IS A LANGUAGE</td>
<td>42&lt;br&gt;40&lt;br&gt;25&lt;br&gt;23</td>
</tr>
<tr>
<td>Time</td>
<td>TIME IS A LIMITED RESOURCE&lt;br&gt;TIME IS MONEY&lt;br&gt;TIME IS SPACE&lt;br&gt;TIME IS MOTION&lt;br&gt;TIME IS A VALUABLE COMMODITY</td>
<td>40&lt;br&gt;26&lt;br&gt;21&lt;br&gt;21&lt;br&gt;20</td>
</tr>
<tr>
<td>Marriage</td>
<td>MARRIAGE IS A PATIENT&lt;br&gt;MARRIAGE IS A LOCATION&lt;br&gt;MARRIAGE IS A BUSINESS VENTURE&lt;br&gt;MARRIAGE IS A BATTLEFIELD</td>
<td>31&lt;br&gt;26&lt;br&gt;24&lt;br&gt;22</td>
</tr>
</tbody>
</table>

Another result obtained relates to the predominant role played by lexical verbs in the formation of conceptual metaphors. As is shown in Figure 2 below, the proportion of verbs occurring in figurative senses is 57%, which is substantially higher than that of nouns (31%) and adjectives (12%). This makes them the prime donor of imagery in the corpus data and perhaps the language as a whole.

**Figure 2.** Frequency counts of grammatical forms of metaphors

5. **Discussion and findings**

It has become clear through detailed contextual analysis that such kinds of conceptual metaphors are designed to perform various rhetorical functions within the discourse, including explaining highly abstract notions, evoking desired responses, and encouraging
the adoption of certain outlooks or behaviors toward marriage-related issues. These are all reader-oriented functions that have been observed by studying the discourse contexts in which these metaphors are instantiated.

Evidence of the use of conceptual metaphor for explanatory purposes can be seen in the following examples, in which plant-related lexis (shown in italics) is figuratively employed to describe the inner workings of marital relationships, thus giving rise to the conceptual metaphor RELATIONSHIP IS A PLANT.

a. Your relationship has the chance to deepen and grow because both parties feel safe. (Carlson and Carlson, 2000: 15)
b. If you turn up the heat in this way, your relationship will blossom despite the fact that there are tiny flaws. (Carlson and Carlson, 2000: 19)
c. The fulfillment of these higher needs is the primary requirement for relationships to thrive today. (Gray, 2016: 46)

Here, the familiar image of a plant’s progressive growth is exploited by the authors of this discourse in order to explain the significance of the gradual change in the development of couple relationships. This demonstrates how conceptual metaphor can facilitate the understanding of abstruse ideas by representing them in the form of common tangible entities that readers encounter or experience on a day-to-day basis.

There is also evidence of the use of conceptual metaphor as a reformative technique in the discourse. As an illustration, consider the following excerpt in which the target concept of feelings is personified as victims in pain.

As adults, we generally try to control these negative emotions by avoiding them. **Our addictions can be used to silence the painful cries of our feelings and unfulfilled needs.** After a glass of wine, the pain is gone for a moment. But it will come back again and again. Ironically, the very act of avoiding our negative emotions gives them the power to control our lives. By learning to listen to and nurture our inner emotions, they gradually lose their grip. (Gray, 1992: 268)

Using the personification of feeling being the object of repeated physical abuse can thus be viewed as a means of directing attention to the need for immediate corrective action to remove the instigators of this abuse. A further related reason behind the use of this kind of figurative language (for instance: ‘the painful cries of our feelings’ above) is to generate a visual frame of reference for discussion that can then be put to work to elicit a sympathetic emotional response from the intended readership.

Another very noticeable function of conceptual metaphor is to foster active engagement of married couples in the task of handling their marital problems. This becomes evident when considering the following examples, in which the inanimate domain of marriage is spoken of in terms of a sick person that requires immediate attention to save their life.

a. There are many times when therapy can be enormously helpful and, in fact, can often save marriages or struggling relationships. (Carlson and Carlson, 2000: 125)
b. I have seen marriages rescued from the brink of divorce when couples make a choice to love. (Chapman, 1992: 195)
c. I’m afraid our marriage will get worse. (Gray, 1993: 174)

The figurative description above of marriage as a patient appears to serve the dual function of reshaping couples’ perceptions of their failing marriages as well as fostering in them a strong desire to take curative action. It does this by shifting their focus away from the appalling circumstances that have led to their marriages becoming diseased and placing it instead on the need for urgent treatment.

Finally, it is worth mentioning that using conceptual metaphors in this way does contribute to the overall didactic function of this discourse because it helps readers better understand the elusive and complex nature of married life. It also helps them develop a clearer picture of the impact their actions can have on their marriages. This is reflected in the authorial choice of highly familiar source domains—such as journey, building, human body, and plant—as a means for illustrating key concepts in the discourse that are of too abstract nature.

**6. Conclusion**

This paper researched the role of parts of speech in the construction of conceptual metaphors. The corpus data used for this purpose consisted of 11 American self-help books on marriage relationships. The research method adopted in identifying and
measuring the salience of conceptual metaphors in the corpus consisted of a combination of automated and manual procedures. Here follows a concise list of the steps undertaken in this respect.

1. Generate a list of the 50 top-ranked keywords in the corpus.
2. Flemmatize the generated keyword list.
3. Perform concordance analyses on the keywords contained in the Flemmatized keyword list.
   a. Collect a sample dataset of 200 example sentences for each keyword appearing in the Flemmatized list.
   b. Examine separately the sample datasets to detect potential target domains for conceptual metaphors.
   c. Conduct a full-scale concordance analysis for any keyword found to serve as a metaphor target domain.
   d. Apply the criterion of semantic tension to all instances of candidate metaphors identified through the said analyses.
   e. Classify as metaphors those capable of meeting the mentioned criterion.
   f. Group together the verified metaphors according to their source domains.
   g. Establish the conceptual bases underlying such groups of related metaphors.
   h. Determine, according to the designated threshold value of at least 20 occurrences, those kinds of conceptual metaphors that can justifiably be regarded as characteristic of the discourse in question.

The results reached by this study are of vital importance for identifying the nature and forms of conceptual metaphor in discourse. First, they revealed the extensive presence of conceptual metaphors in self-help books on marriage relationships. This has the implication that metaphor use is not confined to literary discourse alone but can be found in non-literary discourse too. The value of this implication is that it broadens the context within which metaphors should be investigated, as much of the previous research on the topic was informed by the traditional view, which restricted the use of metaphors to literary modes of discourse.

Secondly, they highlighted the strategic role of conceptual metaphor in the fulfillment of different authorial goals, which goes beyond a conventional way of thinking about and understanding the world, as initially construed by Lakoff and Johnson (1980). This finding is consistent with previous research on the topic (Charteris-Black, 2004, 2005; Deignan et al., 2013), which provided empirical evidence on the use of conceptual metaphors as a tool to realize specific discursive functions. It is therefore recommended that corpus studies of conceptual metaphor should be extended to include the pragmatic aspects motivating its use in different types of discourse.

Thirdly, these results offered further evidence affirming the claim that abstractness is a typical feature of target domain lexis, which, by implication, suggests that concrete noun keywords do not represent good starting points for detecting target domains of conceptual metaphors. They also presented statistical proof of the primacy of verbs, which were found to constitute the most productive source of metaphorical meanings in the discourse of self-help books on marriage relationships. Both findings imply a key role for word class in the process of formulating conceptual metaphors.

Clearly, there are limitations associated with this research work, including its exclusive focus on the kinds of conceptual metaphors with high usage rates in the corpus. It has thus not considered other kinds like a novel, mixed, or extended metaphors, which necessitate a different kind of methodology from the one proposed here in order to trace them. Given the limited scope of the present investigation, more extensive data may also be needed to increase the reliability and generalisability of the findings derived from this study.

This work paves the way for further exploration of the influence of word class in the formation and recognition of conceptual metaphors in other types of discourse. There is also the possibility of investigating the empirical value of applying the criteria of lexicality and abstractness to the task of identifying target domains of conceptual metaphors in a corpus of language. Issues such as these are vital for understanding how conceptual metaphors are created and hence deserve additional attention from researchers.

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