

## *Original Paper*

# Textual Metaphor Generative Mechanism and Identification in the view of Cognitive Linguistics

Haoyuan Cui<sup>1\*</sup>

<sup>1</sup> School of Foreign Languages and Cultures, Chongqing University, Chongqing 400000, China

\* Haoyuan Cui, School of Foreign Languages and Cultures, Chongqing University, Chongqing 400000, China

Received: August 5, 2024

Accepted: August 20, 2024

Online Published: September 5, 2024

doi:10.22158/sll.v8n4p1

URL: <http://dx.doi.org/10.22158/sll.v8n4p1>

### ***Abstract***

*Textual metaphor serves as a main feature of discourse analysis and is existed in the whole text, which can be understood and analyzed as megametaphor. Megametaphor refers to a metaphor with only one nounmenon and many metaphorical objects modifying it. Our research will analyze the generative mechanism of megametaphor in three stages including concept, root metaphor and construction process, thus revealing the formation of textual metaphor in the view of cognitive linguistics. Our research also gives some corpus-based methods that can be used in identifying textual metaphors.*

### ***Keywords***

*textual metaphor, megametaphor, corpus, cognitive linguistics*

## **1. Introduction**

Regarding its pervasiveness in our daily lives, metaphors have received wide focus from linguistics. The long history of metaphor research led to rich results. With the development of relevant research, scholars has shifted their attention onto metaphors in discourse.

Since “textual metaphor” has been established as a concept by Martin (1992) and Sampson (1980), Werth (1999) and Kövecses (2002) start their research on the semantic meaning of metaphors. Werth (1994) proposed a term “megametaphor” which, based on his explanation, is a kind of metaphor running through all the discourse and causing complicated metaphorical results. Megametaphor, also named as extended metaphor or sustained metaphor, serves as an effective entry point into textual metaphor. Freeman (1993) researched the megametaphors in *Macbeth* and Lezzenberg (2001) utilized megametaphor to discuss the metaphor chain and its internal referential relationship. Shu (2000) discussed the inter-sentence metaphor and textual metaphor, which triggered Zeng (2014) to analyzed

in detail the cognitive process of three common textual metaphors in “I Have a Dream” of Martin Luther King. In his research, Zeng (2014) pointed out the characteristics of textual metaphors and their functions like coherence, emphasis and persuasion.

Even though researchers have conducted their researches with respect to semantics, pragmatics, cognition and schema, it can be said that the cognitive process and identification of textual metaphor is very ambiguous and ineffective. Therefore, our research will discuss these two aspects in a systematic way.

## **2. Cognitive Process of Textual Metaphor**

### *2.1 Concept and Concept Deviance*

Concepts refer to the use of language symbols to refer to objects in the real world or abstract feelings and connections (Leezenberg, 2001). Its usage is closely related to real situations. As some concepts are used more frequently in certain situations, they are fixed and reserved to represent these special meaning, which is the prototypes of concepts. However, due to the difference of human’s experience and knowledge and the change of environment, the basic meaning of concept changes. This phenomena is the extension of meaning, leading to the deviance and marginalization of concept, which remains as a main reason of the metaphor occurrence. Concept construction based on prototype theory are also widely used by cognitive linguistics to combat with traditional categorization method proposed by Aristotle.

The ambiguous borders of categories in prototype theory cause uncertainty in concept, which diverges the original meaning of concept and causes metaphor. Deviance or divergence is a betrayal to common linguistic code and its elimination is the process of understanding metaphor in human brains (Shu, 2000).

Our research analyses the mobile understanding process of metaphor and reaches the following conclusion:

Concept cognition—Prototypical meaning of concept—Extended meaning of concept—Concept deviance—Metaphor occurrence.

Based on above process, we can find that the five stages of cognition are linked with each other tightly in a flowing way. Concept cognition is the foundation of prototypical meaning of concept. However, people often hold different feelings and cognition to same thing because they have differentiated knowledge structure and experience. The same part of their cognition accumulates to be prototypical meaning of concept while the different apart serves as extended meaning. Extended meaning has the function of making prototypical meaning uncertain. This uncertainty sometimes causes the birth of new prototypical and sometimes make concept deviance because of three following reasons: The over obvious extended meaning can reduce the core position of prototypical meaning; the development of

human feelings and cognition; and environmental variation brings new meaning into a concept. The occurrence and pervasive usage of metaphor originates mainly from concept deviance.

## 2.2 Root Metaphor

Considering that root metaphor is the premise of metaphor, we will introduce plain cognitive view, interactive view and conceptual metaphor theory to discuss it.

The earliest cognitive view of metaphor can be traced on Plato. He proposed “sun structure” with respect to metaphor structure, in which a basic concept, just as sun shining light all around, can derive many sub-concept based on its prototypical meaning. The same situation is true for root metaphor, which can also derive many sub-metaphors (Lu, 1996). Systematical characteristics of metaphor found by Plato is identical to megametaphor theory established by Werth and Conceptual Metaphor Theory proposed by Lakoff. Plato’s view of metaphor was based on the comparison of similarity, which is the plain cognitive view. He only compared two things on lexical level, which is very superficial. Metaphor is not only related to the similarity of different things, but also, as a means of representing human experience and knowledge, reaches to deeper domains of them. Therefore, concept formation and concept occurrence are not simply existed in lexical level, but in semantics.

Richards (1936) emphasized that metaphor is the production under the mutual influence of noumenon and metaphorical object. Metaphorical object plays a role of modifying and interacting with noumenon. At the same time when metaphorical object modifying noumenon, noumenon also add its elements into it. In the process of interaction, a new meaning which doesn’t belong to noumenon neither to metaphorical object emerges. Richards is the first researcher who proposed the concept of noumenon and metaphorical concept and argued that the interaction between them can produce a new meaning. His theory underpins the foundation for following cognitive research of metaphor.

Cognitive semantics relates metaphor with cognition, thoughts and behaviors on the basis of philosophy. Lakoff and Johnson (1980) argued that metaphors are previous in our daily life, including numerous aspects like language, mind and behavior, and advocated that abstract concept are explained and structured by metaphor, which is the core of Conceptual Metaphor Theory. Therefore, Lakoff and Johnson based on empirical philosophy to deny the transcendentalism. They compared conscious mind with iceberg tip, so a large amount of unconscious mind are the part deeply covered by sea, which is the part that decides the existence and behavior of conscious mind. Unconscious mind is huge and complicated, including our automatic recognition and other invisible knowledge. Metaphor, consisting of abstract concepts, is a kind of invisible knowledge, so it is a part of unconscious mind. Its formation can be divided into four stages including mapping, deducing, producing and summarizing. Metaphor production in our mind is dependent on brain activity in which individual encyclopedic knowledge provides specific models for new metaphor on the road and creates new features for it on the basis of relevant characteristics of inserted metaphorical object. After the creation of new metaphor, it will be

stored in unconscious mind to be part of personal encyclopedic knowledge, which can be used as foundation again.

### *2.3 Construction of Textual Metaphor*

Megametaphor has main characteristics of textual metaphor like close coherence and consistent meaning, thus becoming the main method to research it. Megametaphor can be also viewed as representative of textual metaphor (Wei, 2006).

In ancient Greek philosophy, if an entity only receives changes in quantity but remains its own quality uninfluenced, the change won't exercise effect on people's cognition to it. Just like a heap of wheat, in which a limited raise or reduction on its volume will not change the fact that it is still a heap.

Kohler (Kohler, 1929) thought "gestalt" as a kind of substantive meaning that can exist independently and hold unique and special meaning. Literarily speaking, "gestalt" refers to completion, which is the production of its structure. The internal principle of "gestalt" stipulates what is happening in it. Metaphor formation is a specific process in which "gestalt" plays its role. For example, a metaphor is produced by mapping between two concepts and finally stored in human's unconscious mind. However, when people need to express their ideas, it can be used as root metaphor and derive numerous sub-metaphors which extends endlessly in a text, thus creating a large number of molecular and atomic propositions and becoming textual metaphors. Propositions here are basic sentences that represent semantics (Werth, 1999). When philosophical propositions extended from sentence to sentence and became compound proposition, Russell deemed them as molecular and atomic propositions in which metaphor proposition is included (Russell, 1945). Based on metaphor proposition, the narration of root metaphor, megametaphor gradually extends from a single sentence to the whole text, thus becoming an atomic and molecular proposition and finally a complicated metaphor proposition. From theoretical perspective, when megametaphor is shaped, quantitative changes won't influence its nature, just as we have described the wheat heap. However, it is only applicable in theoretical field, and "extending endlessly" is limited in practice. For example, poet wants to extend megametaphor as long as possible, but due to the length and rhythm of poet, he has to appropriately use megametaphor so as to reach the result of "completion".

Single metaphor is to construct one noumenon with one or many metaphorical objects, but megametaphor relates to a collocation of concepts. Compared with individual concept, blended metaphor has its own way to integrate. Fauconnier and Turner (Fauconnier & Turner, 2002) proposed that a blended metaphor is constructed in four metal spaces, including two input spaces, a generic space and a blended space. However, different from blended metaphor, megametaphor is more general. It's a mode where metal spaces can work repeatedly and dynamically and which can be used as an input to participate the next round of blending. In other words, multiple blending network has many categories, conducting the blending mainly based on parallel and extended mapping and this blending can be input into the following new blending. Specifically speaking, parallel and extended megametaphor are on the

generic filed, so their concept network consists of multiple blending concepts. Their producing methods are different: parallel megametaphor are blended with concept in target domain to shape new concept network after parallel mapping, while extended megametaphor shows hierarchy, the corresponding concept metaphor consisting of a main concept and derived sub-concepts after multiple mapping into the mind.

Lakoff and Johnson (1989) believed that our mind uses poetic mind like extension, narration, questioning and blending to enhance the function of concept in metaphor. Extension is a main method of metaphor running through the whole text, actually it being an extension to common metaphor. We can see it in detail as follows.

Common Metaphor: DEATH IS SLEEP

Extension: To sleep? Perchance to dream! Ay, there's the rub. For in that sleep of death what dreams may come?

The metaphor "DEATH IS SLEEP" doesn't map all aspects about sleep onto death, but only a few features like motionlessness and unconsciousness. Shakespeare thought common metaphor related to death in *Hamlet* as sleep, then extended to the possibility of dreaming in death. This kind of extension, in essence, is a process of narration: metaphorical object in one sentence is extended to textual level, maps onto noumenon in a comprehensive way, maps onto the surrounding space of noumenon.

From common language to metaphorical language then to megametaphorical language, this process represents development and link. The three stages are foundations of each other and the latter often transcends the result of the former Lakoff and Johnson (1980) argued that there is little linguistic expression without any metaphor. The basis of metaphor is those metaphorical expression, with the most obvious one relating to space and language. Overlapping frames mix to become concept space, any one of which is a model of people's empirical experience. Lakoff and Johnson (1980) testified that metaphors beyond these frames can be used in one single sentence but also linked with a series of empirical fields. In other words, metaphor is not single and individual but systematic and related as we can see in Table 1.

**Table 1. Metaphors Related to Root Metaphor "LIFE IS PATH"**

Root Metaphor	LIFE IS PATH
Prosaic life	A smooth path
Obstacles in life	A rocky way
Meaningless life	Having lost in one's way
Do a new job	A change of direction
Do the old job	Back tracking
Temporary problems	Leaving the rails
Death	Passing away or going over to other side

Root metaphor “LIFE IS PATH” leads to a series of sub-metaphors with respect to different stages and aspects of life, thus rendering the root metaphor a certain amount of systematicity and organization. Lakoff and Johnson (1980) thought target domain LIFE is mapped onto source domain PATH. The logic of root metaphor is the starting point, goal, linear advance and obstacles of life. Detail information are given in Table 2.

**Table 2. The Performance of Root Metaphor**

The integration of LIFE and PATH	life is a path > a travel defines a path > a life defines a path
Sub-metaphorical object is mapped onto the target domain	the path of a travel is a surface > the path of a life is a surface
The dominant characteristics of sub-metaphor are selected as the characteristics of the target domain	the surface of a path is smooth, uneven or traveled on easily astray > the surface of a life is smooth, uneven or traveled on easily astray
The implication form of root metaphor	life is a path a travel defines a path therefore, a life defines a path
The implication form of sub-metaphor	life is a path the path of a travel is a surface therefore, the path of a travel is a surface
The implication form of feature mapping	life is a path the surface of a path is smooth, uneven or traveled on easily astray therefore, the surface of a life is smooth , uneven or traveled on easily astray

In the relationship of root metaphor and its derived sub-metaphors, root metaphor is like the trunk of a giant tree while sub-metaphors are branches. Sub-metaphors derive in extended and parallel way. Megametaphor chain can include the two ways because even a proposition of parallel metaphor can develop to molecular and atomic proposition. Textual metaphor, with its systematic and coherence with sub-metaphors, causes the megametaphor chain in a text and chain structure is the unique characteristic of textual metaphor.

Lakoff and Johnson (1989) also believed that the unique feature of metaphor lies on concept and language. In structure, concept is the field where meanings are blended and language is the field where metaphor is expressed. A coherent and complete megametaphor is to blend a series of meanings in conceptual field and shape paragraphs and text in language to express the former.

### **3. Identification of Textual Metaphor**

Since 1980s, cognitive metaphor research and corpus linguistics have developed together. Metaphor theory in cognitive linguistics calls for bottom-up scheme of using language, which needs a large amount of linguistic materials to testify, enrich and develop it. It's inevitable that metaphor research and corpus linguistics are combined together. Deignan (2005) and other pioneers made disperse but precious research. Musolff (2004) established a relevant corpus to research the relationship between metaphor and culture in political text. Koller (2007) researched the relationship between business text and metaphor. Therefore, we can narrate some corpus principles and methods that can be used in textual metaphor identification.

#### *3.1 Lemmatization*

Lemmatization is include all morphology of the same word to its etyma, for example, "work", "works", "worked" and "working" all deemed as "work". The word will be calculated to see its frequency in corpus. The appearance of words is limited by corpus, with the same word frequently appearing in some while infrequently in others. However, when corpus volume is large enough, this would be a stable frequency. At this time, the frequency of word can be seen as its probability in text. This method can be used to research highly frequent words.

#### *3.2 Tokens and Types*

In calculation, every morphology that appears at first time in corpus is a type. Its frequency in corpus is its tokens. In other words, tokens refer to the total number of words in a corpus while types refer to the number of morphologies. Metaphor keywords can be set as types, so as to better recognize them.

#### *3.3 Key Word Search*

The main function of corpus analysis tool is to search Key Word in Context, which can show the key word in the center of screen, surrounded by a certain number of other words.

However, corpus tool can't identify metaphors in a reliable way. Ortony (1993) thought that the main factor of metaphor is its expression is abnormal in semantics and context. This abnormality can be eliminated and the understanding of metaphor should be identical to the intention of speaker. Therefore, Charteris-Black (2004) proposed that any word can be a metaphor if context is appropriate and speaker has an intention. Since there must be the missing of information in coding-decoding process, metaphor sometimes can not be explained as its metaphorical meaning.

Therefore, to avoid the situations missing metaphors, we can divide two stages in metaphor identification. The first stage is to carefully read words we have extracted by corpus tool to choose

candidate and hypothetical metaphors. Three rules should be obeyed: semantics, pragmatics and cognition (Charteris-Black, 2004). The second stage is to conduct qualitative analysis of candidate and hypothetical metaphors in context to judge whether they convey metaphorical meaning or not. Generally speaking, corpus-based metaphor recognition need human labor to make a reference to context. Enough large number of corpus can provide detailed context, which is the foundation of judging semantic tension caused by metaphors.

#### 4. Conclusion

Our research discusses the generative mechanism in the view of cognitive linguistics. Based on concept deviance—basic metaphor—textual metaphor, we analyze the logics under mechanism. We pay our special attention on root metaphor, which serves as basic metaphor. It is demonstrated chronically in plain cognitive view, interactive view and Conceptual Metaphor Theory. Semantically, megametaphor can represent textual metaphor, surpassing syntactic level. Its formation is the result of the effective cooperation of many sub-metaphors. As a megametaphor, textual metaphor has autonomy in structure and expressive need in semantics. We also propose some corpus methods to identify textual metaphors like lemmatization, type-token ratio and Key Words in Context. These methods can help us better find the feature of textual metaphors. Identification of textual metaphor also provide a linguistic foundation for discourse analysis.

#### References

- Charteris-Black, J. (2004). *Corpus Approaches to Critical Metaphor Analysis*. New York: Palgrave Macmillan.
- Deignan, A. (2005). *Metaphor and Corpus Linguistics*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Fauconnier, G., & Turner, M. (2002). *The Way We Think: Conceptual Blending and The Mind's Hidden Complexities*. New York: Basic Books.
- Freeman, C. (1993). Accordig to my bond: king lear and recognition. *Language & literature*, 2(1), 1-18.
- Kohler, W. (1929). *Gestalt Psychology*. New York: Liveright.
- Koller, V. (2007). Of critical importance: Using electronic text corpora to study metaphor in business media discourse. *Trends in Linguistics Studies and Monographs*, 2006Koller, V. Of critical importance: Using electronic text corpora to study metaphor in business media discourse. In G. Stefanowitsch (Ed.), *Corpus-Based Approaches to Metaphor and Metonymy* (pp. 237-266). New York: De Gruyter Mouton.
- Kövecses, Z. (2002). *Metaphor: A Practical Introduction*. Oxford: University Press.
- Lakoff, G., & Johnson, M. (1980). *Metaphors We Live By*. Chicago: University Press.



- Lakoff, G., & Johnson, M. (1989). *More Than Cool Reason: A Field Guide to Poetic Metaphor*. Chicago: University of Chicago Press.
- Leezenberg, M. (2001). *Contexts of Metaphor*. Oxford: Elsevier.
- Lu, Y. (1996). *Derrida: Dimension of Deconstruction*. Wuhan: Central China Normal University Press.
- Martin, R. (1992). *English Text: System and Structure*. Philadelphia: John Benjamins.
- Musolff, A. (2004). Metaphor and political discourse: analogical reasoning in debates about Europe. *Palgrave Macmillan*.
- Ortony, A. (1993). *Metaphor and thought*. Cambridge: Cambridge University Press.
- Richards, A. (1936). *The Philosophy of Rhetoric*. New York: Oxford University Press.
- Russell, B. (1945). *A History of Western Philosophy*. New York: Simon and Schuster.
- Sampson, G. (1980). *Schools of Linguistics*. Stanford: Stanford University Press.
- Shu, D. (2000). *Studies in Metaphor*. Shanghai: Shanghai Foreign Languages Education Press.
- Wei, J. (2006). On the structural types and composition characteristics of metaphor in textual metaphor. *Foreign Language Teaching Abroad*, 1(1), 1-9.
- Werth, P. (1994). Extended metaphor—A text-world account. *Language & literature*, 3(2), 79-103.
- Werth, P. (1999). *Text World: Representing Conceptual Space in Discourse*. London: Pearson Educated Limited.
- Zeng, J. (2014). Cognitive approach to understanding three types of textual metaphors. *Foreign Language Research*, 27(5), 27-31.