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小说《群山回唱》中隐喻的空间理据研究

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Thesis for the Degree of Master

An Approach to Spatial Motivation of Metaphors
in the Novel *And the Mountains Echoed*

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摘要

隐喻是人类认知世界的重要思维方式。近年来,隐喻在认知语言学领域的研究日趋丰富,越来越多的研究者参与到隐喻的研究当中;同时,隐喻研究也进入了多学科、多角度的发展阶段。学者们从不同的角度提出了隐喻的构建机制并认为隐喻对人们认识世界具有重要的作用。

隐喻作为人类常用的语言和言语工具,其使用具有广泛性、主观性、无意识性、跨感官性等特性。隐喻的理据,即隐喻得以生成和理解的依据,是人脑经外界刺激后,从隐喻的非言语感受阶段到言语表达阶段之间的全部过程的形成机制和推动因子。从语言学角度讲,该机制包括语言机制和非语言机制;从认知角度讲,该机制包括感觉机制和神经机制。目前比较有影响力的关于隐喻的发生机制主要有概念隐喻意象图式说和心理空间整合说。二者的共同点是认知的具身性和心理的客观现实性。

关于隐喻理据的研究少见关于隐喻本身的研究,多数学者认为隐喻理据不言自明,以文学语篇为语料的相关研究则更加稀少。本研究基于概念隐喻理论和心理空间等比较成熟的理论,从隐喻的构建和生成出发,以小说文本为语料,结合心理学和神经语言学等相关学科的实证研究结论,对文学作品中隐喻的理据进行深入分析,探索隐喻理据的空间相关性。

本文对小说《群山回唱》的文本进行研究,从词、句、语篇和语境等角度对小说中的隐喻进行分析和提取,将提取出的隐喻进行分类,再将已归类的隐喻进行理据分析。本文将隐喻置于多重空间进行分析,从语言表达式所代表的物理空间、心理空间和社会空间中剖析隐喻的空间理据。本文认为,隐喻的心理展现和语言展现均具有空间相关性,因此具有空间理据;同时隐喻的理据也与空间概念密切相关,空间标记存在于语言表达式的各个层次。

本次研究兼有理论价值和实践价值。在理论角度,本文将概念隐喻和心理空间应用于以往较少研究的语篇隐喻中,为今后的相关研究提供基础性结论和支撑;同时,本研究通过借鉴多学科知识和实证结论,既能进一步扩充理论研究的多样化,又能为理论研究提供实证角度的佐证,还能为语篇角度的语料研究提供额外的视角。在实践角度,本研究通过借助语料库语言学的相关研究方法,能够提高语篇研究的效率和质量,也为语言学学科内的跨领域研究提供了一个理论角度;同时,对语篇层次的隐喻研究,也能够为语言教学提供适当的指导,为隐喻的创造性表达提供学科层次的帮助,还能够为隐喻修辞的语用失误提供诊断依据,从而提高教学效果。

关键词: 隐喻; 理据; 空间; 语篇

Abstract

Metaphor is a mode of thinking and is very important for human's construal of the world. In recent years, metaphor study is growing in cognitive linguistic studies and more scholars began to join the research. At the same period, metaphor studies are stepping into a stage of multi-disciplinary work and multiple-viewpoint studies. Researchers raised the construction mechanism of metaphors from various viewpoints and reached a consensus that metaphor plays a magnificent role in human cognition of life.

Metaphor as a tool of langue and parole is frequently used by human beings and it is featured by universality, subjectivity, involuntariness, cross-sensuality, etc. The motivation of metaphor, with which metaphor can be constructed and construed, is the mechanism or any agent that pushes the whole construction process which starts from non-verbal sense level to verbal presentation after the external stimulation of the brain cells. In a linguistic viewpoint, this mechanism can be verbal or non-verbal while in a cognitive viewpoint it can be sensory or neural. Currently, the most commonly accepted theories on metaphor studies are image schema of conceptual metaphor and blending theory of mental spaces. They share two facts: the embodiment of human cognition and objective existence of the human mind.

Studies on the motivation of metaphor are less seen than that of metaphors because most scholars see it as self-evident, and studies with literature text as a corpus are even fewer. Based on the relatively mature theories such as conceptual metaphor and mental space, etc., the thesis employs corpus analysis and conclusions of empirical studies from psychology, neural linguistics and other relevant disciplines to make a deep analysis of metaphor's motivation and to dig the spatial relevance of it.

The thesis takes the text of *And the Mountains Echoed* as study object. From different levels such as word, sentence, discourse and text, etc., the metaphors in the novel text are to be identified and extracted. After that, they're to be sorted for motivational analysis. The thesis put the metaphors into different spaces and motivation of metaphors would be analyzed by physical space, mental space or social space which the linguistic expressions stand for. The argument of the thesis posits that the mental presentation and verbal representation are both

space related and hence have spatial motivation. Also, the motivations are closely related to space concepts and spatial markers exist on each and every level of linguistic expressions.

The thesis can be valuable both theoretically and practically. In theoretical viewpoint, the thesis puts both conceptual metaphor theory and mental space theory into discourse metaphor studies which were not given full attention traditionally. So, this study would provide a conclusion basis and support for future relevant studies. At the same time, through combination of multi-disciplinary knowledge and experiment conclusion, this study not only makes a contribution to the diversity of theoretical studies but also supplies theoretical studies with evidence from empirical studies and supplies corpus studies on discourse level with extra viewpoints. In a practical viewpoint, through methodologies employed from corpus linguistics, efficiency and quality in discourse analysis can be improved. Also, a theoretical view point is provided to cross-domain studies within linguistics. Moreover, metaphor studies on the discourse level can offer proper instructions to language teachings and offer help to creative production of metaphors on a subject level; it can also provide diagnostic basis for pragmatic failures so as to improve teaching effects.

Key Words: Metaphor; Motivation; Space; Context

Contents

| | |
|----------------------------------------------------------------|-----------|
| 摘要..... | I |
| Abstract..... | II |
| Contents | IV |
| 1 Introduction | 1 |
| 1.1 Background of the Study..... | 1 |
| 1.2 Purpose and Significance of the Study..... | 2 |
| 1.3 Layout of the Thesis..... | 3 |
| 2 Literature Review..... | 5 |
| 2.1 Foreign Studies on Metaphor..... | 5 |
| 2.2 Domestic Studies on Metaphor | 7 |
| 2.3 Studies on Motivation | 9 |
| 2.4 Summary | 10 |
| 3 Theoretical Framework..... | 11 |
| 3.1 Metaphor and Metaphorical Expressions..... | 11 |
| 3.1.1 Embodied Visual Experience | 13 |
| 3.1.2 The Importance of Context to Visual Experience..... | 15 |
| 3.2 Linguistic Motivation and Construction | 16 |
| 3.2.1 Linguistic Motivation..... | 16 |
| 3.2.2 The Difference Between Construction and Motivation | 17 |
| 3.3 Visual Experience in Different Spaces..... | 18 |
| 3.3.1 Visual Experience of Mental Space | 18 |
| 3.3.2 Visual Experience of Space Mapping | 20 |
| 3.3.3 Visual Experience of Space Blending..... | 21 |
| 3.4 Summary | 22 |
| 4 Analysis of Spatial Motivation of Metaphors | 24 |
| 4.1 Spatial Motivation from Cognitive Space Perspective | 24 |
| 4.1.1 Physical Space..... | 24 |
| 4.1.2 Mental Space..... | 26 |
| 4.1.3 Social Space | 27 |
| 4.2 Spatial Motivation from Construction Perspective | 28 |
| 4.2.1 Stimulation | 28 |
| 4.2.2 Conceptualization..... | 29 |
| 4.2.3 Abstraction | 29 |

| | |
|---------------------------------------------------------------------|-----------|
| 4.2.4 Emergence | 31 |
| 4.2.5 Selection | 32 |
| 4.2.6 Representation | 33 |
| 4.3 Spatial Motivation from Linguistic Expression Perspective | 34 |
| 4.3.1 Anchor | 34 |
| 4.3.2 Fictive Motion | 36 |
| 4.3.3 Pointer | 37 |
| 4.4 Spatial Motivation from Context Perspective | 38 |
| 4.4.1 The Metaphor of “Mountains” | 39 |
| 4.4.2 The Metaphor of “Eyes” | 41 |
| 4.5 Summary | 42 |
| Conclusion | 43 |
| Bibliography | 48 |
| Publications during M.A. Study | 51 |
| Acknowledgements | 52 |

1 Introduction

Metaphor study has always been a popular subject and many studies have been done since linguistics became a multi-disciplinary subject. However, the motivation of metaphor has not been deeply studied because metaphor seems to be a born ability and everyone can use it without awareness. However, what linguistics does is to find out the rationales and rules that lie in the language.

1.1 Background of the Study

As a brain mechanism for the human being, language is more than a tool for communication and a carrier of meaning. By analyzing discourses in the written form, linguists in the 1980s (such as Lakoff and Johnson) have raised the idea that metaphor is “what we live by”, and many researchers now accept that idea; in addition, after image schema has become a mature theory, researchers proved that languages other than English have metaphorical expressions in discourses.

After about thirty years’ development since the 1980s, linguistics has become a multi-disciplinary realm of humane studies. Up to now, it has stretched into a wide variety of disciplines, such as cognition, neuro science, behavior science, philosophy, etc. Inspired by the methodologies in these disciplines, metaphor study has gradually become an independent field of cognitive linguistics and has developed its own theories and research methods.

However, until the last century, studies on metaphor have been focused on destruction and description, and many researchers focus on the analysis of sentence structure and try to find out different types of metaphor. For example, Lakoff (1980) defines six different types of metaphor, and Halliday (1994) defines grammatical metaphor, and so on. These studies partially extrapolate what metaphor is and how metaphor can be construed. But, there are other works researchers didn’t make clear, for example, the motivation of metaphor, quantification of metaphorical context, etc.

Then, for the recent ten to fifteen years, with the development of linguistic theories and new methodologies, such as space grammar, eye-movement experiment, and so on, more studies on the construction and formation of metaphor are made. Also, the debate on thought and metaphorical meaning aroused much concern during the multi-disciplinary era.

To get a deeper understanding of metaphorical meaning, it is necessary to make research on the motivation of metaphor and groundwork has to be done. First, the theories on metaphor should be compared to distinguish their differences, for example, conceptual metaphor focuses on categorization while mental space focuses on the construing process. Second, plausible rule

or scheme should be explored to explicate the mechanism of language and metaphor. Third, similarities of the present theories on metaphor should be linked so that they can improve the understanding of metaphor as well as understanding of languages.

Now linguists have developed some theories to interpret metaphor, such as image schema of conceptual metaphor and conceptual blending theory. Each of these theories works on the mechanism of metaphor specifically, however, they don't extrapolate metaphor on context level efficiently. For example, conceptual blending theory can work on discourses in which metaphor is in one of the sentences; However, when metaphor is constructed throughout whole text, such as the "mountain" in the novel *And the Mountains Echoed* in which "mountains" appear frequently in the novel and construct a metaphor of home country, the home villages of the war-suffering Afghan people, the blending theory is not so efficient in explication. That theory can't give one proper value to each "mountains" unless the reader finishes the novel and reconstructs the novel's world in the mental space.

To solve the valuation problem, it's necessary to find out the motivation of metaphor, the triggers that change literal meaning into metaphorical meaning.

1.2 Purpose and Significance of the Study

The purpose of the study is to make an approach to the spatial motivation of metaphors in the novel *And the Mountains Echoed* and to extrapolate that motivation in a cognitive linguistics way. In order to do that, the construction process of metaphor should be identified and the way language constructs meaning should be made clear.

A complete construction process of metaphor should include stimulation, conceptualization, abstraction, emergence, selection and representation. Stimulation happens in the sense level; conceptualization, abstraction and emergence happen in the concept level; matching and representation happen in the language level. These six steps are in one continuous mental process. And there is no study on whether people is aware of the six steps when he/she is using metaphor in discourse.

The mental process above is compatible with present theories of metaphor. For example: relevance theory, image schema of conceptual metaphor and the conceptual blending theory, etc.

After recollecting the theories, motivation should be discussed. In the book *Studies in Linguistic Motivations*, the editor and authors raised mainly four types of linguistic motivations named ecological, genetic, experiential and cognitive motivation respectively. The thesis looks briefly into these theories and posits that all these motivations are relevant to space. As space cognition is one type of embodied cognition, it should be one of the basic motivations.

The thesis deals with spatial motivation of metaphor by analyzing the text of a novel from reader's (listener's) perspective as well as from speaker's. The difference lies in the emergence (or simulation) step and whether there is more or less internal stimulation.

The thesis chooses *And the Mountains Echoed* for the following reasons: (1) each chapter of the novel has a storyteller and tells one story in a relatively small scene, so the reader can be a listener standing by; (2) the metaphors and metaphorical expressions in this novel is presented on word level and sentence level, and further extended to text level and context level. And the novel context plays a metaphorical function as well; (3) the novel text is changed into a corpus so that specific metaphors could be selected by keywords and the number of metaphors could be quantified for analysis.

The thesis aims to find out the trigger that transcribes the feeling of embodied experience into human language and into metaphor. The mental process of emergence argued in Fauconnier's book (1997) can work on many language phenomena, including written form, discourse form (and metaphor as well). In addition, all human feelings have emergence process. The difference between human language and animal sound is that human language is based on three levels of cognition (sense level, concept level and language level) whereas animal sound is based on sense level only, because they can't transcribe sense into language by the use of concept and symbol. The emergence mechanism is built in all animals' feelings. So, emergence can be treated as motivation as it's a common process in the process chain.

Through the analysis of the text and context of the novel *And the Mountains Echoed*, the detail construction process of language and metaphor could be identified so that spatial motivation of metaphor could be clear. In the thesis, two aspects of motivation are to be discussed: (1) why certain linguistic expression can be encoded into specific metaphor; (2) why specific metaphor can be decoded into certain linguistic expression. It aims that the analysis of metaphor by novel text can enlighten further studies on literature.

1.3 Layout of the Thesis

Five chapters are set for the thesis. Each chapter ends with a summary.

Chapter One is the first part and the thesis' introduction in which the writer first introduces the background study of motivation of metaphor and draws a conclusion that motivation study is not yet mature; then the purpose of the study posits that a complete language construction process should include six steps which will be further discussed in chapter five; then the significance of the thesis was stated in short.

Chapter Two reviews the study of metaphor and motivation respectively. The metaphor study is a hot topic and is merging into multi-disciplinary empirical study, but the motivation

of it has not yet come to a consensus and the debate on thought and meaning has aroused more concern than the 1950s.

Chapter Three is a detailed description of and commentary on the main theories related to metaphor construal and interpretation. It argues that all human activities are based on 3D vision and have spatial basis; and the embodiment of human cognition is based on activities in spaces (physical space, mental space and social space). Then, the mental representation of language in addition with the importance of context in language construal and metaphor understanding are discussed. Later in this chapter, some disadvantages of present theories on metaphor are discussed and comments on them are given at the end.

Chapter Three also centers on distinction of the important notions in the thesis and serves for groundwork of the analysis to be done in chapter four. Metaphor and metaphorical expressions are distinguished and a brief comparison is made. In the later part, construction and motivation are distinguished as well.

Chapter Four analyzes spatial motivation of metaphors from four different perspectives: cognitive space perspective, construction perspective, linguistic expression perspective and context perspective. Each perspective could be spatial motivation of metaphors, and examples based on the novel are employed to explicate the arguments.

The last chapter is the conclusion. This chapter reviews briefly what methods are used in the thesis and what works have been done. The main findings and the limitations of the thesis are illustrated and suggestions of further researches are made at the ending.

Through the whole thesis, the novel text is used as an intermediary for the purpose of smooth and clear analysis of spatial motivation of metaphor. So the text serves as a generalized example, not a specialized one.

2 Literature Review

The study of metaphor and its motivation are hot topics in linguistics and psychology, but they are not commonly seen in the same work. Moreover, theories on metaphor are a lot more than that on motivation. In the following part of the thesis, both review and comment would be given.

2.1 Foreign Studies on Metaphor

Metaphor has long been a rhetoric. Studies on it are focused on how to construe literature and poem. From the 1920s to the 1940s, linguistic study centered mainly on mind and reality and their relationship to language. In this period, linguistics gradually became a serious science subject. Language relativism (or language relativity) was posited in these years. At the time around 1980s linguistics came to bloom and metaphor study became a hot topic.

In 1980, *Metaphors We Live By* was published and it marked the first step in theoretical metaphor study. Grice's Relevance Theory was posited several years earlier, but linguists didn't take it into metaphor study until late 1990s. At the same period, psychology, neural science and computer science began to take big steps and more or less influenced metaphor studies theoretically and empirically. When the time came to around 2000, these subjects were introduced to China; and in the recent ten years, empirical studies on metaphor began to appear in domestic colleges and universities. In *Metaphors We Live By*, Lakoff (1980/2003:57) and Johnson distinguished different metaphors, and further they discussed internal and external experience in lives.

Metaphor is using one experience to describe or express another experience. In his book, Lakoff (1980:5) argues that "The essence of metaphor is understanding and experiencing one kind of thing in terms of another." He uses the words "understand" and "experience". The difference between Lakoff and this thesis lies in whether metaphor is how we experience the world or how we express or explain feelings.

In the same period, methodologies were applied in physiology and neurophysiology, and approaches were made to mechanism of the brain, trying to find out how language (and metaphor) works in the two hemispheres. Furthermore, influenced by the boom of computer science, some linguists sought to uncover how the mind "computes" language.

Conceptual metaphor is kind of construing metaphor in a generalized way and conceptual blending theory tends to interpret metaphor in a theoretical way. Linguists and researchers no matter what they are doing with metaphor study, center their focuses mostly on mapping or projection, which are two different terms but share some common features. For example, they

both employ the notion “mental structure”. On the one hand, the debate over how metaphor works in the human mind continues; on the other hand, ordinary people use metaphor without awareness.

After conceptual metaphor became widely accepted by linguists both home and abroad, more and more researchers came to work on it, and they introduced this theory to different countries and did more research to enrich it and to prove it. This made metaphor a hot topic and enlightened other approaches to it. Then, there came different theories such as grammatical metaphor and blending space theory. Later, metaphor study began to merge to multi-disciplinary research as linguistics became an interdisciplinary subject.

Both conceptual metaphor theory and mental space are proposed for better construing metaphors. They are theories most widely accepted by scholars and researchers around the world. In the thesis, the two theories will serve for the theoretical framework together, taking into account that conceptual metaphor doesn't limit the boundary of the mental space and makes a vague sorting of metaphor explanations while the mental space theory discusses what emerges from the mental space without sorting.

The two theories focus on different aspects of metaphor construal, but they are compatible with each other and can be used in a complimentary way.

The time of the 1990s is a period of empirical studies in which multi-disciplinary methods were employed to study more languages. Over the same years, metaphor study was introduced to domestic scholars. Through the 1990s, many outstanding works were translated into Chinese and that made a good foundation for Chinese language study.

Andrew Goatly (1997:301) made an approach to context and metaphor interpretation in his book *The Language of Metaphors*. He integrated Hallidayan socio-linguistics and the relevance theory and illustrated how contextual variables act on metaphor interpretation.

In recent twenty years, new techniques on neurophysiology have been developed and employed. For example, ERPs (event-related brain potentials) which provide an online index of brain activity related to language comprehension, have been used to test various models of metaphor comprehension (Gibbs, 2008:179). In experiments, scientists use ERPs to address hypotheses of real-time metaphor comprehension by testing three different models: the standard model, the parallel hypothesis and the context-dependent hypothesis. The result shows that in familiar metaphors, people can either access literal meaning before metaphorical meaning or vice versa; people can process literal meaning and metaphorical meaning at the same time; whether literal meaning and metaphorical meaning are processed earlier can be determined by the given context rather than the familiarity of the metaphor.

In other methodologies employed by scientists abroad, right hemisphere (RH) is studied in relation to metaphor comprehension, and positive evidences have been collected in research to

RHD (right hemisphere damage) patients. In some tests, RHD patients always choose words by literal meaning. However, with further research done, scientists found that RHD patients may understand metaphorical meaning but failed to imply semantic strategy so that they choose the wrong words. In some other tests, the results indicated that working memory may also affect RHD metaphor comprehension.

Although new technologies achieved so much evidence, one thing should be noticed: they can only detect which part of the brain is at work when metaphor is being construed, but not what really is happening in the brain; in other words, it can make sure “what”, but can’t give “how” and “why”.

Moreover, the tools of neuroscience can only give us relatively crude accounts of , for instance, where in the brain some particular aspect of processing takes place, the fact that certain neurons fire in response to very particular stimuli (Gibbs, 2008), the timing of certain signals of brain activity, the cognitive consequences of various lesions, and the overall character of massively parallel interaction at every scale from the smallest neural assemblies to the entire nervous system.

2.2 Domestic Studies on Metaphor

As for domestic studies of metaphor comprehension, we have seen great progress made by scholars since metaphor study was introduced to China. Most scholars are greatly influenced by the two famous theories: conceptual metaphor theory and conceptual blending theory. They contribute to the further exploration and extension of the two theories. Other scholars who employ cognitive semantics, functional grammar and Hallidayan Grammar also made their approach to metaphor.

Metaphor can be represented by prepositions like *on*, *over*, *up*, *down*, etc. Lan Chun (1999) studied spatial metaphor in the Chinese language from a cognitive perspective and put the importance on two space concepts: *up* and *down*. In her self-made corpus, she retrieved all “ups” and “downs” and made some calculation and analysis. She pointed out that the concepts of “up” and “down” have extended widely from the foremost space meaning. Her methodology is based on the framework of conceptual metaphor. By analyzing the two concepts, she tried to reveal the experiential grounding and realization of metaphorical extension and provide an operable model for further corpus analysis.

Ren Shaozeng (2006) distinguished metaphor from metaphorical expression. He argues that metaphor is cross-domain mapping in the conceptual system while metaphorical expression is linguistic expression, which is surface realization of cross-domain mapping. In his view, conceptual metaphor always concerns source domain and target domain, whereas

metaphorical expression doesn't; furthermore, metaphor is generalization on the concept level and metaphorical expression is individual linguistic expression on the language level.

Wei Zaijiang (2006) stated his view on the discourse function of metaphor in an article. He stressed on coherence and cohesion, arguing that it is the role metaphor plays in a discourse. At this point, he didn't analyze how metaphor is constructed in detail. In another article (2008), he pointed out that in literature works, metaphor is frequent tool used in framework construction. So, metaphor is a tool of rhetoric, and more of a feature of style. Metaphor also opens a way to better understanding the author and analyzing metaphor at a discourse level can provide a new field in text analysis.

Zhao Xia (2008) pointed out the importance of cognitive context in metaphor construal. She further stated three restrictive roles that the dynamic cognitive context plays: the subject's perspective choice, construal process and construal effect. She thought that dynamic cognitive context is better than other theories in construing metaphor.

Shu Dingfang introduced five methods in cognitive linguistic studies: introspection, corpus aided analysis, multimodal analysis, behavioral research and neural experiment (2013:54-56). Of the five methods, the most commonly employed ones are introspection and behavioral research and the other three methods are all emerging methods in the recent years.

Chen Hongjun (2011) made a study using Chinese metaphor process ERP experiment "to see if Chinese metaphor processing has its unique lateralization, to compare the results with findings home and abroad, to study semantics representations in Chinese and English bilingual brains". The experiments provide statistical evidence to show that "the neural correlates of Chinese metaphor processing are generally consistent with the findings made by Western metaphor studies". The study also finds that "Chinese metaphor processing activates unique brain areas in that parietal lobe area is significantly involved in Chinese metaphor comprehension."

Xu Shenghuan (2015) made an approach from the mental-physical supervenience point of view. He argues that "metaphor demonstrate a salient feature of both similarity and difference between the tenor (T) and the vehicle (V), with the similarity being that the phenomenal characters and qualitative contents of the events represented by T and V share some sameness in certain aspects, and the difference, being their words and the concepts are by no means the same. This shows that the application of metaphors is to use a false appearance provided by V to substitute the actual state of T." He further stated that "There are two variations in a metaphor, the physical and the mental. To approach metaphors from the point of view of mental-physical supervenience is to explain how metaphors work according to the mental-physical supervenience: the mental relies on the physical on the one hand, and it has its own free will on the other."

We know that from a long time ago linguists tend to do linguistic research by employing ideas from computer scientists. However, we should notice that, the best and fastest computer in the world now cannot compete with human in all fields, those powerful CPUs can only outstand human brain in certain fields, and all they can do relates to algorithm. As to creation, they cannot even beat a small child.

Humans and computers have different ways of dealing with missions, and we designed computers in one way of the thought and we call it logic. But human thought is not all logical and most of the time we do things by a sense of habit and motivation. The computers or robots do things by orders, which should not stop unless program down or lack of power.

2.3 Studies on Motivation

Motivation is what triggers mental process and body behavior and it's a hot topic ever since. However, books on motivation don't come as many as those on metaphor and there is not a common accepted agreement or theory about it. Most linguists and other interdisciplinary researchers just see it as self-evident and use it as granted.

Thought and meaning is always a debating topic for linguistics. Some linguists take the conflict between them as the motivation. Among the most discussed topics, one seemingly self-evident mental reality is conceptual structure and many linguists studying cognitive linguistics put the notion in the first chapters in their work.

In the recent 20 years, researchers began to notice the presentation of metaphor. It can either be an image in the mental space or be written words, or just logical structures in the mind, etc. No matter in which way metaphor presents, it is studied in relation to space both theoretically and practically.

In addition, the notion metalanguage is employed to define motivation. Metalanguage is a notion designed to describe the semantic units and rules of all languages. And an ideal metalanguage would be neutral in respect to any natural languages, i.e. it should not be unconsciously biased towards English, French, etc. (John Saeed, 1997/2004:7) So, metalanguage was studied by some scholars as motivation.

Metaphor in the human brain is constructed by the encoding and decoding process of the characters and words of one specific language, and by the image of the things referred to, and the image is structured by human's five senses combined together, including seeing (for the most of the time), listening, touching, tasting and smelling, etc. And the brain power such as neuro stimulation and activation is also important factor in the process. Metaphor also has its own spatial motivation, which means every metaphor is more or less based on the 3-dimensional material world human beings live in.

Books on linguistic motivation are not many both at home and abroad, and the books with motivation discussion are not focused on linguistic motivation specifically.

In *Cognitive Pragmatics*, motivation is considered as “a generator of intentions – a mechanism, that is, which, once activated by a series of necessary conditions, generates adequate intentions”. Furthermore, motivation is considered as “a threshold structure”, which means that not all the preconditions need to be present. “It is sufficient for those that are active to be strong enough to reach the minimum threshold activation level.” (Bruno Bara, 2010:167)

Gunter Radden and Klaus Panter (2004) made an approach to studies of linguistic motivation and focused on the analysis of grammar and experience. For example, comparative studies in grammaticalization suggest that it is possible to reconstruct some of the motivations underlying the creation of grammatical categories.

In *Motivation, Emotion, and Cognition* (2004), David Yun Dai and Robert J. Sternberg made an approach to motivation in a psychology viewpoint and the section authors each gave a different evidence, such as emotion, intelligence, attention, etc. Later in *Handbook of Motivation Science* published in 2008, motivation is fully discussed through analysis of human behavior and action; also, in the book, the authors made research on how motivation affect everyday life and what are the determinants in motivation system.

2.4 Summary

Metaphor is an important way of communicating between people. Both domestic and foreign researchers have paid a great deal of energy and time on it and have made productive achievements. But, as we can see that before corpus put into use, much of the data was analyzed by sentences or words, not analyzed by, or in whole passages. For example, researchers get pragmatic or semantic meanings by analyzing short discourses without the concern of the background or the context. In this condition, both the context and the meaning are variates, which are crucial to the final construal. This can turn out advantages with deeper analysis of the limited data, and also turn out disadvantages as a failed conversation in real life, because people are not sure to do the possible acts every time.

Although many fruits on metaphor studies are made, they are mostly based on the English Language and based on western methodology. We need a more plausible methodology (such as linguistic philosophy) to reinterpret language phenomena for the reason that language is not only created but also creative.

3 Theoretical Framework

When looking into conceptual metaphor theory and mental space theory, we seldom compare the two in one same topic and ignore that they analyze language on discourse level. One focuses on the form and the other on the process. In this chapter, a comparison is made and a conclusion is drawn with the help of the novel text and with the embodied visual view as the cognitive basis.

Before the motivation of metaphors to be analyzed, distinctions between metaphor and metaphorical expressions have to be made; also, motivation has to be defined as well so as to identify the spatial motivation of metaphors and metaphorical expressions.

3.1 Metaphor and Metaphorical Expressions

Human cognition is metaphorical, because the human mind doesn't reflect the world directly, but by five basic sense of feelings including touch, gustation, vision, hearing and smell. In addition, there are other feelings such as pain, sense of space and time. All these feelings are embodied in the human body and are born abilities; and all these feelings are transmitted and reflected by the brain through nerve cells and stems. So, construing the world is not the function of the brain, but is interpreting the transmitted neural signals. In this sense, all human cognition is metaphorical and is realized by metaphor.

However, the physical world exists if there isn't human brain or human being, so do other living things keep alive without the dependence of human cognition. In this sense, the objective world is made of non-metaphorical facts. So, at this point cognition is metaphorical, behavior is non-metaphorical.

Nevertheless, behavior can also be metaphorical. As Lakoff put the stress on the coherence of different experience, metaphor can be ubiquitous. As long as different behaviors arouse the same experience or feeling, we can say it's a metaphor from one behavior to the other.

Metaphor may be on either of the three levels of cognition: sense level, concept level and language level. Among the three levels, every latter level is more abstract than its corresponding former level and contains less information. Moreover, metaphor can also be on the behavior level. However, metaphor expressions (or representations) is on the language level only.

e.g. (1) "and the one of which Pari was proudest, an iridescent green peacock feather with a beautiful large eye at the tip." (Hosseini, 2013)

(2) “Abdullah's gaze darted left, then right, but his eyes could penetrate nothing in the dark, at once vast and smothering.” (Hosseini, 2013)

In (1), the reader can easily image a feather with an eye shape in the mental space. In this “eye” metaphor, the source domain is Pari's peacock feather, the target domain is whatever shape that looks like an eye. In the mental space, the feather is interpreted into an eye directly without language participation so that the “eye” in (1) is both source domain and target domain and the “eye” metaphor is on the sense level and concept level.

However, there is no strict line between the three levels and metaphors can happen on every one of them. Take (1) for example, as long as one person is not born blind, he/she must have seen an eye. Even though he/she don't know the word “eye”, he/she can perceive that the shape of a real eye takes a similar look with the shape on the feature. Furthermore, a child on his/her first stages of language acquisition, when he/she can only say two or three words at one time, after learning the word “eye”, can gain the concept of *eye* and speak the word “eye”; this is *eye* on the language level and here it plays a metaphorical expression.

In (2), the metaphor can't be interpreted directly unless the reader knows what is a “dart” and what features a dart shares with gaze from the “eye”. So, in (2), the metaphor can only be construed after one can interpret the metaphor expression; and to do that, one has to gain the concepts of “gaze” and “dart” beforehand.

So, metaphors are expressed by metaphorical expressions and metaphorical expressions can be construed into metaphors.

Conceptual metaphor was first raised by Lakoff and Johnson in *Metaphors We Live By*, arguing that “Most of our fundamental concepts are organized in terms of one or more spatialization metaphor” (Lakoff, 1980:18). Based on embodied cognition, Lakoff in his book posited six different types of metaphors (namely orientational metaphor, ontological metaphor, container metaphor, personification, metonymy and synesthesia) which we now know as Image Schema.

In *Glossary of Cognitive Linguistics*, the editors argued “Although there are a number of different motivations for, and kinds of, metaphors, Conceptual Metaphor Theory emphasizes the experiential basis of many of the metaphors described. In other words, conceptual metaphors are often grounded in the nature of human interaction with the socio-physical world of embodied experience.” (Vyvyan Evans, 2007:137)

In the thesis, the argument is that the construction process of metaphors could be “seen” in the mental space and its visual representation comes up at the same time.

3.1.1 Embodied Visual Experience

Embodied cognition, as psychology and cognition science agree, is to embody the semantic meaning of a linguistic expression in senses of the body. While embodiment refers to the experience of the body, embodied cognition put stress on the dependence of the body.

The first body sense by which humans start learning the world is the visual sense, which let us know the world inside and outside the human mind is three-dimensional, so that image schema with which we use to construe metaphor should be 3D. When we are reading or making a discourse, a dynamic cognitive context is being built. What's happening in the mental space and the whole process of it are dynamic. During the construction process, both abstract and concrete efforts are being made by thought, and the expression of the non-abstract process is presented by eye-movement of the hearer who is listening to the sequential description of speaker (Paradis et al., 2013:17). These studies provide us with much evidence in construing the mechanism of metaphor, proving that the construal of metaphor, like human cognition, is a continuous process, not a step by step one, because people get the sense of the entire environment at one time, not by adding one object once a time. Besides, on the efficiency of cognition, people behave differently when in different mood.

When we are conscious with eyes closed or opening, we can see a scene beyond the sunlight stimulation. The scene is in a borderless mental space (e.g. a standard cube), and we can rotate it or reshape it at will according to the embodied experience. Generally, this mental space is not the space we live in, it is in a visual sense. The two spaces conflate with each other, and people can see the sunlit world and the mental world at one time.

Although both can be seen in front of the eyes, they are not at the same image resolution (highlighting and hiding). This can also be explicated by Visual Awareness. "Human vision gives rise to subjective experience of the external world. Vision depends on signals and processing within the central nervous system, yet it is apparent that not all activity associated with vision reaches awareness. For example, the state of a single photoreceptor in the retina cannot be directly reported, even though that receptor processes sensory information that contributes to perception. Processing of visual signals can therefore occur in the absence of awareness, and a central question in the neurobiology of consciousness is which neural signals and psychological processes in the brain are correlated with visual awareness and which remain unconscious." (Gazzaniga, 2009:1151) When the mind is dedicated to thinking, the physical space is in the background and the mental space is in the foreground; the foreground is more visible than the background. When the mind is dedicated to seeing, the physical space is in the foreground and the mental space is in the background; this time the physical space becomes more visible than the mental space. So, which space is more visible depends on the

distribution of attention, and the two spaces always coexist with each other for the embodiment of human experience.

e.g. (3) “Uncle Nabi pulled up to a driveway decked by a row of neatly trimmed bushes. Beyond the driveway, the white-walled, two-story home loomed impossibly large.” (Hosseini, 2013)

When reading the example, a moving picture will emerge from in the mental space, the detail would become clearer as the reading process goes on and finally be consistent with what describes in the novel text. In an eye-movement experiment (Paradis et al., 2013:15), when the text is read to participants, their eyes move as if they see what the text narrates.

The brain can construct images in the mental space and operate on them, such as rotate, resize, reshape, cut or conflate, etc. This is in accordance with the human experience, and the mind can do far more than that. Despite the actual operation one can do to the objects in the mental space is different, one thing can be sure, that the mental space is infinite and borderless.

e.g. (4) But for the moment Pari sits. She shuts her eyes, as the coffeemaker begins to gurgle, and she finds behind her eyelids *hills* that stand soft and a sky that stands high and blue, and the sun setting behind a windmill, and always, always hazy strings of mountains that fall and fall away on the horizon. (Hosseini, 2013)

The example above is from the novel text, and things alike happen in our daily life. People can see what has been seen. In psychology, it is called reconstruction. In the reconstruction process, people can see or even change the image, for example: people can add something into or remove something from the image, and when something is removed, it can be removed without trace (forget in the memory) or it is replaced by something else or blurred (fade in the memory).

Similarly, there are other images not from the physical world but can be reflected by the brain, such as display devices (like computer, cellphone), VR (virtual reality). Limited by technology, VR in the last several years didn't provide a comfortable experience and there still be obvious feeling of dialogues between man and machine. However, with the development of display techniques in the recent years, man would see a “real” virtual world.

Though visual sense can be operated by the brain without the participant of language, people are used to thinking with a specific language (not limited to mother tongue) and put the visual signal into concept with its help. And with the language in the process, there must be a context.

3.1.2 The Importance of Context to Visual Experience

The mental space and the physical space exist simultaneously and are both visible to human eyes, and different people see the two spaces differently according to their different distribution of attention. There are mainly two conditions: one is that readers get the meaning through reading the text (such as a novel); the other is through making a discourse. Of the former, readers see the written text, and images emerge from mental space; of the latter, hearers hear what the speaker says and see images emerging from the mental space (based on cognitive prototype). The difference in the dynamic process lies in “see” and “hear”, and the similarity lies in the visual output of the reader and the hearer.

Prototype is whatever one can see in the mental space (not limited to abstract information), where people can see images, moving scenes, signals and symbols, etc. And operations can be made to all these information without language participation. However, it’s an input and production process, not an output process. So, language used in the output process is necessarily to be studied.

Language has a basic function of communication, without which the input and production stage is enough. However, humans are social animals. Due to the need of living in social communities, there comes the need of communication. So, language is forced to evolve to the output stage. Language can provide image with context, and let reader or hearer perceive the meaning of writer or speaker by prototype without seeing the real object in the physical space.

Human don’t construe the written form of language directly, they transfer the language code into images first, and this process is triggered by spatial motivation. The conceptual blending theory discussed the mechanism of metaphor production, not metaphor output, which is representation. The conceptual metaphor theory indicates that metaphor is mapping between domains which share common features, whereas this thesis argues that the production process of metaphor should be described as spatial representation. Also, in *Metaphors We Live By*, Lakoff raised the notion of ontological metaphor by which metaphorical meanings can be encoded to entity in the conceptualizer’s mind. However, Ray Jackendoff (2012) argued in his book *A User’s Guide to Thought and Meaning* that “Meanings can’t be visual images.” In his view, objects simulated in a person’s mind is not precise enough and details (such as an angle of a triangular) could be cut and the shape is not what it meant to be. He overstated the importance of difference rather than similarity and didn’t take the context into account. He also confused language level with concept level of the human mind in which different level plays different functions. Human communication in whatever form (discourse, conversation, reading, etc.) depends on the context in which the persons involved and only with context the words or sentences can be construed with specific meanings.

Furthermore, with the inaccuracy of the human mind and memory, the emergence structure (as Fauconnier raised the notion) can be formed and the thought can be creative as it is.

3.2 Linguistic Motivation and Construction

Motivation serves for the trigger that transcribes thought into linguistic expression and vice versa.

Motivation can be diachronic and synchronic. Being diachronic, it is deeply rooted in the linguistic expressions; being synchronic, new meaning can be created, used and spread to different people.

Motivation can be internal or external. Being internal, it can be a person's internal emotions and represent as love of the home country, miss of the dispersed families, etc. People in the world of war fares experience more pain than those who live in the peace, and they are more sensitive to image schema of war and love. Those who were forced to flee Afghanistan resonate to mountains when the novel text has many of them. Being external, it can also be external stimulation, such as two things that share the same prototype.

The motivation of metaphor is: (1) why a specific metaphor in a given language or culture can be constructed or construed into a specific meaning? (2) why a given linguistic expression in a given language can be coded into a specific metaphor? The two questions seem to be one process, but they are totally different.

3.2.1 Linguistic Motivation

Motivation is generally taken as another extreme of language to arbitrariness. De Saussure posited that arbitrariness is irrational and hence it has limitations in language study. He argued that language is neither totally arbitrary nor entirely rational; language is relatively motivated. "There is no language in which nothing is motivated, and our definition makes it impossible to conceive of a language in which everything is motivated. Between the two extremes-- a minimum of organization and a minimum of arbitrariness-- we find all possible varieties." (Radden, 2008:1). He postulated that motivation is a cognitive principle by which rationality counterbalance arbitrariness. Lakoff posited that motivation is a link between two things that "make sense".

However, the term "motivation" is not frequently seen in modern cognitive linguistic studies. Scholars generally take motivation as the opposite of arbitrariness when linguistic expressions are used in a meaningful way.

Now, there is no consensus on the definition of motivation in language, and linguists and scholars use the notion in their own ways. For instance, Radden (2004:223) defined linguistic

motivation as “the extent to which a linguistic form or set of linguistic forms makes sense or is explainable within a language or across multiple languages.” According to him, “motivation encompasses a range of influences on the way language is used and the way it is structured. It includes external influences, such as culture and social context, as well as internal influences, such as perception and higher level cognitive processes (e.g., categorization)” But, the definitions have something in common: non-arbitrary relationships between form and meaning, and iconicity and explanation.

However, psychologists seem to have reached a consensus that “motivation is an internal state or condition (sometimes described as a need, desire, or want) that serves to activate or energize behavior and give it direction” (Radden, 2008:3).

In the book *Studies in Linguistic Motivation*, the authors raised different views on Motivation: “ecological motivation, genetic motivation, experiential motivation and cognitive motivation.” (Radden, 2008)

Researchers such as Teenie Matlock, Talmy and Langacker focus on what the conceptualizers (language users) experience. This thesis focuses on what triggers the conceptualizers’ experience. The difference lies in whether the motion (fictive or concrete) happens or not. In their works, they investigated the effect which fictive (mentally simulated) motion has on the usage of motion verbs in sentences.

3.2.2 The Difference Between Construction and Motivation

Motivation refers to why a word or sentence is made, while construction refers to how they are made. So, there must be some grammar according to which different class of words are put in a plausible sequence to form a seemingly correct sentence. However, why a specific word is put in the sentence instead of other words depend on the motivation of the meanings to be expressed.

e.g. (5) “Something caught his eye,” (Hosseini, 2013)

The sentence in (5) is constructed by “S + V + O” which is typically a formal grammar structure. When either of the grammatical item is replaced by the same word class, the sentence could also be right both grammatically and semantically, because the grammar structure (or construction of the sentence) does not change. For example, “Lychee caught his eyes” or “A snake caught his ankles”.

However, if the words change, the sentence meaning changes. Then, the sentence would not suit the context and the novel any more. Furthermore, the sentence would lose its metaphorical meaning.

Moreover, the motivation of the metaphor in (5) would be the yellow feather which is lying on the ground and it's what gets Abdullah's attention. As the novel indicates that his sister Pari has a metal box filled with different feathers, Abdullah will always look for feathers for her so that whenever there is something alike, he will see to it. The feather is of a different kind and catches his attention. So, it is the motivation of the metaphor in (5).

(5) can be used to discuss the difference between construction of sentence and motivation of metaphor, and it can also be used to explicate metaphor construction and motivation.

In (5), the "eye" metaphor is constructed by the word "catch" and its object "eye". We know that "catch" is a literal verb which stands for a concrete motion; and no one can catch an eye without hurting the eye's owner. So, in the sentence, the motion can't be concrete but be fictive. Then, the verb "catch" is transcribed into fictive motion and hence is added to a metaphorical meaning.

3.3 Visual Experience in Different Spaces

Mental space is a notion first introduced by Fauconnier in his book *Mental Spaces* and was seen as the beginning of mental space theory. It "constructs distinct from linguistic structures but built up in any discourse according to guidelines provided by the linguistic expressions" (Fauconnier, 1998:16). Years later, he further developed his theory, "Language, as we know it, is a superficial manifestation of hidden, highly abstract, cognitive constructions. Essential to such construction is the operation of structure projection between domains. Mental spaces are the domains that discourse builds up to provide a cognitive substrate for reasoning and for interfacing with the world." (Fauconnier, 1997:34)

3.3.1 Visual Experience of Mental Space

The mind is traditionally understood as the seat of consciousness and volition; the "mind - body problem" concerns the relations of consciousness and volition to the physical world. Since at least Freud, we have also become accustomed to speak of the "unconscious mind". Common parlance, following Freud, takes the unconscious mind to be just like the conscious mind except that we aren't aware of it. Hence it is taken to be full of thoughts, images, and so forth that are at least in principle available to conscious introspection. (Jackendoff, 2003)

This notion of the unconscious is then often taken to be as far as one can go in describing phenomena as "mental".

Mental space is related to the reality space (or the physical space) that we live in. In Fauconnier's theory, language is space builders that speaker and hearer use to build an

invisible structure with which one can construe the meanings and further understand the feelings.

In *A Glossary of Cognitive Linguistics*, “Mental Spaces are regions of conceptual space that contain specific kinds of information. They are constructed on the basis of generalized linguistic, pragmatic and cultural strategies for recruiting information.” (Vyvyan Evans, 2007:134)

e.g. (6) “A few years ago, Idris had discovered that Nahil was supporting a Colombian kid named Miguel. The letter had been translated from Spanish by a nun. There was a picture too, of a tall, wiry boy standing outside a straw hut, cradling a soccer ball, nothing behind him but gaunt-looking cows and green hills.” (Hosseini, 2013)

Upon reading the example above, the reader would simulate a space in the mental space in which people, things and events would be added as the reading process goes along. The reader would create four people in the mental space (Idris, Nahil, Miguel and a nun in sequence of reading). However, the four characters don’t have enough features for the reader. So, they only take a placeholder and are represented by symbols or pictures (or something else whatever the reader would create in the mind). Like a math function, the “kid symbol” would not be given a value until the reader know the boy’s name. The reader would not know the boy’s stature until the narration follows. At last, the four people in the reader’s mind would be clearer by the extent of what the novel’s writer tells. This process is self-evident (embodied cognition) and can be proved to have a positive correlation according to the eye-movement experiment. (Paradis et al., 2013:15)

As discussed above, metaphors when construed can be seen in the mental space. However, Ray Jackendoff in his book *A User’s Guide to Thought and Meaning* argued that the evidence for image presentation in the mind is not enough because mental representation of prototypes is not precise but rather blur, or confuse the objective meaning with something else. (Jackendoff, 2012:51) Then he further postulated that words don’t serve a qualified carrier of meaning in the same book and discussed thought and concept in a cognitive view. As we know, Jackendoff is in support of linguistic relativism and he (as most of researchers agree with him) sees culture as a determinant in thought and language.

So, if all the language phenomena can be represented in the mental space, Jackendoff’s view that words can’t be images is doubtful. Furthermore, the mental space can be compatible with Jackendoff’s theory of thought and meaning, for it can handle abstract meanings effectively.

3.3.2 Visual Experience of Space Mapping

Space mapping is a notion used to show relationships between, or features of linguistic expressions. The object of linguistic expressions is in the input space and the value of them is in the generic space. Mapping between the two spaces could happen if there are common features in the two spaces.

Mapping from physical space to mental space refers to physical objects in space *a* and space *b*, and each space has different objects. For example, a mountain in the novel maps a real mountain in the reality.

e.g. (7) “He sighed happily, and listened to the wind sweeping down from the mountains, to the chirping of night birds.” (Hosseini, 2013)

In the text above, we can see that after drinking the *div*’s liquid, Baba Ayub returned home and forgot everything about his little son. Sometimes he can’t sleep well, he walked to his field, but he didn’t remember anything, only sat in the dark. The “mountains” here refer to a physical mountain without any adjunct meaning. They are the mountains around the little village Maidan Sabz, just like any other villages in Afghanistan. From a cognitive perspective, they would lay in readers’ mental space a landmark, which would be activated when the readers see the “mountains” elsewhere in the novel.

In Fauconnier’s mental space theory, there is a “the mountains” in the reader’s mental space without mapping, the input space *a* and the input space *b* both value the same “the mountains”, and there is no need for generic space or blending space in this analysis. However, readers get more than concepts in the mental space, they get images, and what images they have in mind depends on what they know of real “mountains” in the physical world. Readers may either have a clear or obscure view of “mountains” in mind and this is the cognitive process people experience.

If the mapping theory is applied, there would be two “mountains”, the first one is the word in front of the reader’s eyes and becomes a landmark in the reader’s mind; the other is what emerges from the reader’s mind in the form of prototype, that is what the reader thinks the mountain in the novel is like. If readers live in, or have ever been to Afghanistan, they may get better ideas of what the writer’s “mountains” are.

e.g. (8) “Some nights he dreamed that he was in the desert again, alone, surrounded by the mountains, and in the distance a single tiny glint of light flickering on, off, on, off, like a message.” (Hosseini, 2013)

(9) “He would picture the feather coming loose from the bird, up in the clouds, half a mile above the world, twirling and spinning in violent currents, hurled by gusts of blustering wind across miles and miles of desert and mountains, to finally land, of all places and against all odds, at the foot of that one boulder for his sister to find.” (Hosseini, 2013)

In the construction of the context above, there is a change from the father’s story to the real life. Abdullah saw his sister (Pari) be sold to a rich family but can’t offer help, leaving himself in grief and agony. Here in the novel, the writer had already constructed a metaphor: the earlier life of Pari is just like the one of Qais the little son in the *div* story. The trajectory is father Saboor and landmark is Baba Ayub, while the other trajectory is Pari and the other landmark is Qais. The “mountains” in and out of the *div* story is the physical barrier (not merely as a long distance) that lay between Saboor and Pari, and between Baba Ayub and Qais. So, the “mountain” here is a metaphor. The input space *a* has the “mountains” and the input space *b* has “barrier”, they share the feature of insurmountable obstacle in the generic space.

Furthermore, in the examples above, first there is “mountains” in Abdullah’s mind, then there is “mountains” in the readers’ mind. The mountains are real to Abdullah but are fictive to the reader. So, mapping can be “real” objects in the mental space and fictive objects in the mental space as well.

3.3.3 Visual Experience of Space Blending

The blending theory was posited by Fauconnier and was further developed by Turner and other linguists in the late 1990s. It was first seen in the book *Mappings in Thought and Language* (Fauconnier, 1997).

“Conceptual integration – “blending” – is a general cognitive operation on a par with analogy, recursion, mental modeling, conceptual categorization, and framing. It serves a variety of cognitive purposes. It is dynamic, supple, and active in the moment of thinking. It yields products that frequently become entrenched in conceptual structure and grammar, and it often performs new work on its previously entrenched products as inputs. Blending is easy to detect in spectacular cases but it is for the most part a routine, workaday process that escapes detection except on technical analysis. It is not reserved for special purposes, and is not costly.” (Fauconnier and Turner, 1998)

“In blending, structure from input mental spaces is projected to a separate, ‘blended’ mental space. The projection is selective. Through completion and elaboration, the blend develops structure not provided by the inputs. Inferences, arguments and ideas developed in the blend can have effect in cognition, leading us to modify the initial inputs and change our view of the corresponding situations.” (Fauconnier and Turner, 1998)

To give a visual description, the theory was presented by circles and lines which stand for spaces and conceptual relations. The theory can be applied to sentence analysis and discourse analysis. However, the analyzing process could become burdensome as the discourse becomes longer. The figure of space relations and the valuation of concepts would be limited to paper's boundary. So, it has reliability but lacks validity. Moreover, for the reason that context is always dynamic, the blending theory is not effective for real time construal.

Although blending theory has obvious disadvantages, it is a well-posed theory for easier construal of metaphors' implicative meanings.

Blending space is an important notion in the blending system and it stands for space in the mind as well. As discussed above, mental space can be visible. So, blending space can be construed by mental space.

e.g. (10) "Abdullah's gaze darted left, then right, but his eyes could penetrate nothing in the dark, at once vast and smothering." (Hosseini, 2013)

We can see that Abdullah's eyesight is like a dart that can be thrown at his will. In the readers' perspective, the brain would first picture a boy Abdullah (a landmark or anchor with all the information already given in the text) and then picture the boy's sharp eyes. The boy might not be clear enough in stature, but his eyes would be brought to the foreground of the readers' vision. Then the readers' brain would simulate a dart in front of his eyes pointing into the darkness.

The construction process of the blending theory is kind of the like, it is abstracted from embodied cognition and uses one simulated concept to take place of an existing concept; if the two concepts share a common feature, there would be metaphorical meaning created; if the two concepts conflict with each other, the latter would take the place of the former and becomes a metaphor as well.

3.4 Summary

Conceptual metaphor interprets metaphor as an experiential and cultural phenomenon, in which some concepts are built-in features that can be activated when they are put in discourse.

Mental space is a way of construing metaphor, not a process of metaphor construction. We can see that Fauconnier's mental space theory can build many spaces, they can be connected or combined. However, as it's a common sense of feeling shared among all humans, and human feelings are featured by embodiment, those spaces are on not so complicated as he described. In psychology, mental space is somewhere in which we put imagery or somewhere in the working memory that we can operate on memory clips.

Conceptual metaphor and mental space theory each provides us with a visual explanation in their way of construing metaphor and they can be compatible for most of the times.

In this chapter, metaphor and metaphorical expression are distinguished, arguing that the former can happen on every level of the cognitive structure while the latter happens only on the language level. Then, motivation was defined and was given a short review of the notion's history. At last, differences between construction of metaphor and motivation of metaphor are clarified so that the spatial motivation of metaphors could be analyzed smoothly in the next chapter.

4 Analysis of Spatial Motivation of Metaphors

Humans are born into the three-dimensional space and they depend largely on visual ability when they are construing the world. However, “human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood but are very much the medium of expression for the society. It is quite an illusion to imagine that language is merely an incidental means of solving specific problems of communication or reflection. The fact of the matter is that the ‘real world’ is to a large extent unconsciously built up on the language habits of the group... We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation.” (Whorf, 1956/1978:143) In this process, metaphor plays an important role and the motivation of metaphors is mostly spatial.

The spatial motivation of metaphors is not sorted into one specific category and can be analyzed in different points of view. The followings are some perspectives dedicated to it.

4.1 Spatial Motivation from Cognitive Space Perspective

The idea that space is a fundamental intuition built into our nature goes back at least to 1768, and the idea that our apperception of space is governed by cognitive universals informs much current cognitive science (Levinson, 2006:1) According to different sorting standards, there are at least three types of space in the cognitive structure: the physical space, the mental space and the social space.

4.1.1 Physical Space

Physical space is where humans are born into and where people grow up and no one can get rid of physical laws. Physical space is vacuum filled by objects and time is objects moving in this space. Physics tells us that motion is eternal and static condition is relative. If there exists one object that is absolutely static, it is in motion to other objects, so that itself is in relative motion.

In the novel *And the Mountains Echoed*, there is also a physical space, or the physical world as we usually talk about. The world in the novel, which is fictive, corresponds with the real world we live in and there is also a country named Afghanistan which is suffering from war as well.

We know that Afghanistan has a mountainous geography and many villages are surrounded by mountains and part of their culture is related to mountains. As in Saboor’s story, Baba Ayub lives in a small village called Maiden Sabz which is surrounded by mountains. The

writer Khaled Hosseini created the novel and there are mountains and hills throughout all his three novels. Moreover, the writer himself was raised in the mountainous country Afghanistan. We know that culture has effect on the way a person is cultivated. So, a person's thought can be influenced by how he/she is raised.

In other words, the novel's fictive world maps the real world. Whatever in the real world exists, there is a "copy" in the novel. The difference lies that the characters in the novel don't really exist, they are created by the writer with prototypes from the real world.

Although there would be a one-to-one mapping from the real world to the novel's world and it seems that time and space tend to emerge into being the same one, they are still two different worlds, because whoever is and whatever happens in the novel are based on prototypes. In this sense, the novel's world is a metaphor of the real world people actually live in.

The mappings of physical world to physical world refers to the case discussed above in which the trajectory in the source domain and landmark in the target domain are both entities (such as people, mountain, etc.). So, the two mountains from in and out of the novel share one same name.

e.g. (11) "Mother and I took a trip to the Santa Cruz Mountains and stayed in a hotel for the weekend." (Hosseini, 2013)

In (11), the real "Santa Cruz Mountains" locates in the USA while the "Santa Cruz Mountains" in the novel locates in the fictive USA. In addition, the fictive USA is in the readers' mental space.

e.g. (12) "He sighed happily, and listened to the wind sweeping down from the mountains, to the chirping of night birds." (Hosseini, 2013)

When the sentence (12) is presented with no extra information, we don't know it refers to a real person who did a real thing in a real scene, or it can be a homework of making sentences. However, this is what happens in the novel, mentioning the mental state of Baba Ayub after he went back from the *div's* hiding mountain. Here, the "mountains" refers to fictive mountains in the story told by the fictive person Saboor in the novel who stands for a prototype of the many diasporas who are suffering from the Afghan War in the Middle East in the physical world.

The geography is the spatial motivation of Afghan culture while Afghan culture is the social motivation of people's lifestyle. Mountains and hills around the village would be motivation of the geographical dialect. The "mountains" in the novel can construct metaphor

such as home country and kinship, so the “mountains” can be the spatial motivation of metaphors in the novel.

4.1.2 Mental Space

Mental space was briefly explained in the former chapter (see 3.3.1). In short, mental space is another physical space created in the human mind. But there are differences: there are both entities and abstract concepts in the mental space while there are only entities in the physical space.

In mappings pointing to mental space, the source domain can either be entities in the real world or concepts referring to a specific meaning; and the target domain is corresponding entities or concepts in mental space. The eye-movement gives out a positive conclusion on entities (Paradis, 2013) indicating that people can actually see the scene described by other people in the mental space.

e.g. (13) “He sighed happily, and listened to the wind sweeping down from the mountains, to the chirping of night birds.” (Hosseini, 2013)

The “mountains” in (13) not only make a sense of insurmountable barrier between Baba Ayub and his son Qais but also map the barriers between Saboor and his daughter Pari. As the *div* story tells: “a finger has to be cut to save the hand”, the same thing happened to Saboor. He had to sell her daughter to the rich Wahdati’s family to keep his family away from hunger. He must do that for the reason that he is in stark poorness and for the fact that Pari could be better raised in another family. All these make the distance and the mountains between Shadbagh and Kabul a physical barrier and a spirit barrier for Saboor. So, in (13), the “mountains” is a metaphor that maps two landmarks in the target domain: the physical barrier between Baba Ayub and Qais and the spirit and physical dual-barrier between Saboor and Pari.

e.g. (14) “But for the moment Pari sits. She shuts her eyes, as the coffeemaker begins to gurgle, and she finds behind her eyelids hills that stand soft and a sky that stands high and blue, and the sun setting behind a windmill, and always, always hazy strings of mountains that fall and fall away on the horizon.” (Hosseini, 2013)

Pari is Six-one. Fifty-five years have gone since she was taken to Paris to live with her mama Nila. Her memory of Shadbagh might fail her because she was only three when she was sold to the Wahdati’s. After hearing Nabi’s last letter, her memory was reactivated and her brother and the sad little fairy song began to emerge in her mental space. The “mountains” in

(14) are entities in her mental space, and they are not limited to literal meanings and they stand for blood relationship that cannot be lost.

4.1.3 Social Space

Social space refers to the phenomena or relationships in a certain group people among whom most people agree and obey rules automatically. Jackendoff argues that social cognition is an important domain of cognitive capacity and it helps people “understand and engage in social interactions in the context of culture and social institutions” (Jackendoff, 2007:145). He further stated that “The essence of social cognition lies in the interaction of abstract (i.e. non-perceptual) concepts such as beliefs and intentions, values, reputations, rights and obligations, and group membership. All these are in turn rooted in the concept of a person, itself an abstract concept, in that a person is conceptualized as something over and above his or her body. Social/cultural behavior therefore must involve linking these abstract concepts to perceptible objects and actions, which are thereby accorded a social meaning.” (Jackendoff, 2007:359)

Social space can be found in many parts of the novel text.

e.g. (15) “Adel thought he would stand there a while in the field, watching the hills and the mountains looming over New Shadbagh.” (Hosseini, 2013)

Adel was born in new Shadbagh (the old village of Shadbagh village became now town of New Shadbagh) and his family live nearby the old oak tree where only a stump is left. His family house is the infamous “Narco palace” and his father is actually a warmonger instead of the hero who helps people in distress. In another village, “cotton” (poppy, actually) is planted on the farmland for food instead...

Upon here, time has passed for more than fifty years and most people and things are not what they were. There only left the mountains surrounding Shadbagh in the looming distance. The looming mountains here has a metaphorical meaning after many times of appearance in the novel. Here the mountains stand for family, homeland or blood relationship, and they serve for spiritual ballast of the diasporas who are scattered to different countries and cultures around the world.

We can see that mountains are where all the stories began: Afghan War, broken families, etc. The village of Shadbagh and Kabul is the epitome of Afghanistan and the mountains map the broken mother country of Afghan people. Although in the novel there seems nothing happened in the sight of the distant mountains, the people are living their life harder than ever; however, in the mean time, the warlords are taking their country’s disaster as a time to make

money. Different readers may see different “mountains”, but the “mountains” in (15) share the same meanings: a broken homeland.

The people of New Shadbagh in the novel formed a social space which later constructed a metaphor. The social space here is how and why the story of New Shadbagh begins. So, social space is the motivation of that metaphor. Furthermore, the social space has a physical foundation and the “mountains” is important in the context, so the motivation is a kind of spatial motivation.

4.2 Spatial Motivation from Construction Perspective

Based on mental space theory and embodied cognition, the thesis posits that there are six steps in the construction process of metaphor: stimulation, conceptualization, abstraction, emergence, selection and representation. These steps don't work on metaphors separately, and they can overlap one another and make a continuous whole process together. Each of them can be spatial motivations of metaphor in the construction process of metaphor for the reason that they construct metaphor on different levels of language production and transcribe words into metaphors.

4.2.1 Stimulation

Stimulation is the process that a stimulant taking effect on an object. Stimulant here refers to anything what the human brain treats as information, or a signal which is received from inside or outside of the human body and is reflected by the brain after transferring through nerve cells. As for language, a stimulant can be any word, a noun, a verb, an adjective, etc. Further, it can be a symbol, icon and so on.

Language dates to the time when there was no written form of language and only sound is a tool for communication so that sound was a stimulant since then. After human have evolved a tongue flexible enough, people began to encode meaning into voice which is the update version of sound. The advantage of voice to light/written signal is that the meaning can be recreated anywhere and anytime.

Sound signal and written signal both are the stimulant which compose the first step of language cognition.

e.g. (16) “Violent gusts of wind nearly tore him from the side of the mountain.” (Hosseini, 2013)

(17) “But in public, every stranger's eye was a mirror. There was no escape.” (Hosseini, 2013)

In the two metaphors, all the words in the sentence are stimulants that carry meaning, but not all would be remembered by readers. For example, “the mountain” in (16) would be stored into the memory while the public and stranger may be not. So, there are effective stimulants and ineffective stimulants. Effective ones such as “mountain” which appears frequently in the novel would be taken into long-term memory and would be an anchor in the readers’ mental space. The anchor could be activated when another “mountain” appears and additional meanings would be added to it. Ineffective ones such as “But” and “There was” which serve for cohesion and coherence also carry meaning but leave no anchor in the readers’ mind.

4.2.2 Conceptualization

Conceptualization refers to the process of decoding the stimulant into meaning in the mind, so this step is on the concept level. It happens right after stimulation and the two steps could coexist when a sentence is long enough.

In the same two metaphors (16) and (17), readers know that the mountain refers to the place where the *div* hides itself and the mirror refers to Parwana’s more beautiful sister. They are based on conceptualization of the meaning which the words “mountain” and “mirror” carry. Here, the readers conceptualize the meaning of the two words from the prototype according to their former experience, then they get extra meanings from the given context. The readers conceptualize “the mountain” as evil and dangerous and conceptualize the mirror as embarrassment and shame as well as the literal meanings the two words stand for.

e.g. (18) “and the one of which Pari was proudest, an iridescent green peacock feather with a beautiful large *eye* at the tip.” (Hosseini, 2013)

This metaphor is constructed by the word “eye” alone. It starts in the sense level and imposes the metaphorical meaning on concept level and language level. The metaphor is motivated by the shape (an anchor in the mental space) and a fictive motion is created from the shape on the feather to an animal’s eye in the mind.

4.2.3 Abstraction

Commonly, concepts are sorted into concrete ones and abstract ones, and we take them for granted. But, people don’t always realize that concrete concepts are not concrete itself, the meaning which the concept indicate is concrete. Moreover, a concrete concept can be truly concrete because a concept may take a specific word in a specific language. In this viewpoint, an abstract concept can also be concrete because it could be an entity metaphor. So, meaning and concept are two definitions of one same object.

e.g. (19) “Mother and I took a trip to the Santa Cruz Mountains and stayed in a hotel for the weekend.” (Hosseini, 2013)

In (19), “Santa Cruz Mountains” are mountains in the USA. It means the real mountains located in the State California, not the words “Santa Cruz Mountains” locate in there. People can climb real mountains rather than climb the three English words. So, “Santa Cruz Mountains” are concrete and the concept of “Santa Cruz Mountains” is abstract; and the words of “Santa Cruz Mountains” are concrete so that on reading the words we acquired the knowledge without really having been there.

Furthermore, the “Santa Cruz Mountains” could also be abstract for the reason that they are mountains in a novel, but not in a documentary tourist handbook. Then it shares the same name with the mountains in the real world but stands for fictive mountains created by the novel’s writer.

In any one of these conditions, the readers (have and have not really been to Santa Cruz Mountains) who are reading the example sentence don’t see the mountains directly. They see the words on paper or screen and imagine an image of “mountain” in the mental space and the mental space is large enough to hold the mountains.

e.g. (20) Something caught his eye, off to his right, on the ground. (Hosseini, 2013)

In (20), before readers read the following text, they wouldn’t know what “something” is. They can only imagine it with the mind. So, “something” here is a token or placeholder without value. Besides, (20) can’t be realized by real action, and readers would construe the sentence by imagination.

So, here are two types of abstraction. One is imagination, the other is simulation. Linguists in 1980s first employed “simulation” from computer science, together with the concept “mind calculation”. In the same period, scientists began to construct models for the mind for quantitative research. For example, Aaron Sloman (1978) designed models in computer science; Michael S. Gazzaniga (1984) designed models in neuroscience, and Ray S. Jackendoff (2000) designed models in cognitive semantics, etc.

Imagination and simulation share some features: they are both conjured by the mind. But the former conjures by what the mind conceives while the latter by what the mind perceives. For example, a novelist writes a novel with imagination and the readers read the novel with simulation. In another way, the former is realized by original imagination and the latter is realized by reproductive imagination.

On reading the novel, the abstraction step is purely mental and is realized by simulation of the mind. If the readers close their eyes, they can “see” villages, mountains or people, etc.

They can visually scan from one object to another, or “walk” from one part of a house to another. They are “constructing a spatial mental model from their memory of a place that shares certain attributes” (Gibbs, 2008:163). In (19), the readers can simulate a same trip in their mental space as if they are with the characters in the novel. So, readers can understand why the writer describe the scene with those words in the novel.

4.2.4 Emergence

Emergence refers to information which are stored in the long-term memory and which could be extracted into the working memory when the brain is working. It happens instantly after abstraction. During the abstraction step, more common features are revealed to the working memory. We know that memory has feature: it is always ready to be extracted, and sometimes it may fail to do that. After abstraction, the memory would immediately extract prototypes or concepts that relates to the abstracted thought. Fauconnier’s emergence structure is something like that.

e.g. (21) “Mother and I took a trip to the Santa Cruz Mountains and stayed in a hotel for the weekend.” (Hosseini, 2013)

In (21), after readers got the abstract image of “Santa Cruz Mountains”, the two persons and the hotel, this information would be stored in working memory and be further processed. During this process, more images of the same information would emerge from the memory. It is because the novel is fictive and the readers have to imagine the meanings by their own experience.

e.g. (22) For the first time, Parwana saw herself through her sister's eyes. (Hosseini, 2013)

In (22), readers would first simulate a fictive person named Parwana in the mind, then the information of Parwana would emerge from the long-term memory to the working memory, and the token “Parwana” would be valued by all the information emerged. In addition, other information in this sentence (such as the first time, her sister’s eyes) would also emerge from the mental space when readers see these words.

Humans are living in a 3D space. Both thought and practice are based on the exploration of this space. The space is not concrete but filled by concrete things. Mental space is also not concrete, and it is filled by what the thought puts in it. As people can make changes to the material world, the thought can make changes to the mental space. For example, the thought needs a pen to write with, then the mental space comes with a pen, then the thought can further

change the pen's size, shape, color, and the color of the ink in it. The pen can rotate or be reshaped or write something or change it into an animal, etc.

4.2.5 Selection

Selection refers to the selection of the most proper words or concepts from the available information in the working memory so that one can encode them into linguistic expressions. It happens after the concepts or features emerged from the mental space. In Fauconnier's blending theory, this step corresponds with elaboration. When the mind is conscious, selection aims at a final target, which is language production.

In metaphor construal, selection is like aiming at a target and the purpose is to find the right target. In conceptual metaphor, the stimulant is in the source domain, and the target is in the target domain. The source domain might be single each time, while the target domain could be many, because many different things can share some common features in a given culture or population.

So, what a person does during this process is to choose the right word or expression that emerges from the mental space and make it correspond to the target grammar or culture.

"Linguistic coding is highly selective. Typically, a conceived event comprises an intricate web of interactions involving numerous entities with the potential to be construed as participants, yet only a few of these interactions and participants are made explicit, and fewer still are rendered prominent." (Langacker, 1991:214)

e.g. (23) He was dark-skinned and had a hard face, angular and bony, nose curved like a desert hawk's beak, eyes set deep in his skull. (Hosseini, 2013)

Consider the types of selection involved in constructing this sentence. First, many aspects of the father Saboor are excluded from the scope of prediction: the situation of his family, the lack of food or money to his children, etc. Next, within the chosen scope of predication there are various options for profiling. The writer of the novel selects the features of the father from the character settings and tell the readers about them. Then the readers get the image of the character from the selected words told by the writer.

e.g. (24) Nila, wide-eyed... (Hosseini, 2013)

In (24), Nila's eyes were mentioned several times before this sentence, and readers would have imaged different types of eyes in their mental space. Until (24), the readers would select the feature "wide" and value it to the imagined person Nila.

By construing the emerged concepts of the selected text, the readers will get the meaning of the novel. Also, the readers get their own understanding of the novel by the selected concepts in their working memories.

4.2.6 Representation

Representation refers to the linguistic expression that is shown to the reader or listener. It happens on the language level and carries the least information of the three cognitive levels.

For instance, we don't have to know the names of different spider species and we can distinguish them. In the author's senior high school campus, there were trees around the playground, and there were at least eleven different species of spiders.

Of course, we can distinguish them and can tell the differences just by seeing them. However, if we put into words, we can't tell all the differences between them.

Language representation can only be part of the thought, and the more words and ways of expressions we invent, the more we can describe the reality. Scholars like Jackendoff (2007:5) argue that people have "mental structures" and grammars or syntactic trees are structures that represent themselves when a person puts the thought into words and meanings. However, more details are unknown. Difference between species can be presented in front of eyes and the eyes can see more detail than the words' description. People invent names for different species, but don't invent the species, because the species evolve on themselves.

Moreover, if we want to tell other people that we found a new species of spider, we can tell them what the main difference is, such as the color, size, or length of the legs, etc.

Furthermore, the representation of metaphors is more complex than literal representations. The speaker/writer doesn't put into words or expressions by what emerges in the mind; they transcribe the concept into expressions with metaphorical meanings. This has something to do with the culture in which he/she is cultivated or the culture in which he/she is living. Doing this, it also requires enough information or prototype in the emergence step which determines how many available blocks of words he/she can choose from.

Representation can be the spatial motivation of metaphors for the reason that: the word that carries the meaning is represented by sound or character which is spatial signal; the object that a person wants to express, no matter concrete or abstract, takes a spatial token in his/her mind or mental space before he/she actually expresses it.

4.3 Spatial Motivation from Linguistic Expression Perspective

According to Levinson's study, scientists agree that spatial cognition is "a fundamental design requirement for every mobile species with a fixed territory or home base" (Levinson, 2006).

In addition, psycholinguistic studies have been undergone to test people's spatial understanding of non-metaphorical language (Carita, 2003:46). In their studies, the researchers took a simulation view and posited that some abstract concepts are recognized through embodied metaphors such as time, spatial orientation, emotions, etc.

Spatial concepts can be understood directly, because human live on this planet and bear gravity ever since prenatal age. The origin of space cognition is embodied cognition and it is influenced by the upright or lie down state of the body.

Spatial Markers can be the spatial motivation of metaphorical expressions; they are the triggers that lead to the encoding and decoding of metaphorical expressions.

Spatial markers can be any word of any class: they can be nouns or pronouns that play the role of **anchor** in the mind by which a person can retrieve key information; they can be verbs which could create an event in the mental space and turn into a **fictive motion**; they could also be transcribed as **pointer** (space pointer) that leads the direction of the fictive motion.

Although different word classes can play different roles, they are not limited to one role, for example, nouns can also initiate fictive motions in the mental space.

4.3.1 Anchor

When referring to something in the mental space, especially metaphorical objects, many scholars use landmark in their studies (Fauconnier, Lakoff, Turner, Jackendoff, etc.). However, in a dynamic context, people construe more than one concept or event at a time and relate the given context to the concept (or emotion, prototype, etc.) created in the mental space. Then, "anchor" would be a better notion for the reason that one landmark corresponds with one trajectory (or more) but upon the object word or sentence only and on discourse level at most, the matter is different for an anchor, because anchor is what's set in the reader's mind (or mental space) and when the same word or meaning reappears, it could be activated (see figure 5.3.1). So, the difference lies in whether the readers have to retrospect the former text.

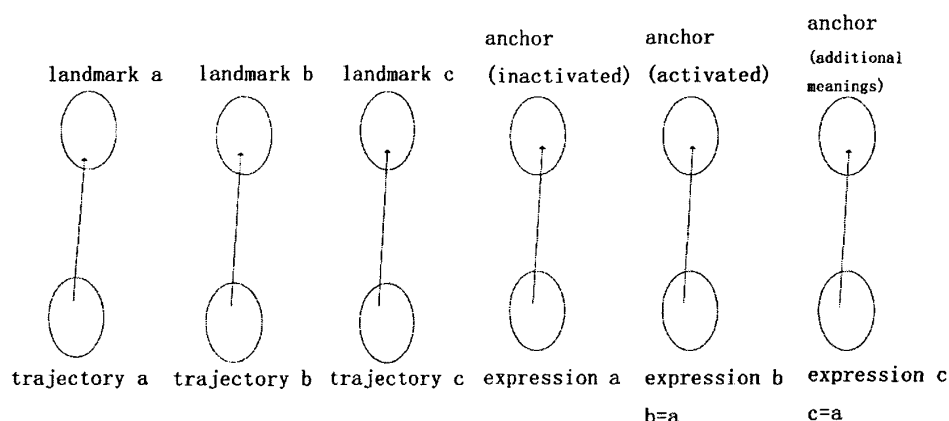


Figure 4.3.1

anchors can be set by the use of nouns, pronouns and NPs, etc.

e.g. (25) “It would be her secret, one she would share with the mountains only.” (Hosseini, 2013)

According to conceptual metaphor theory, the trajectory is “the mountains” and the corresponding landmark is someone that she could share her story. But, the theory can’t further explain who “she” is and why she wants to tell her story to “someone”.

As described in the novel text, the sentence in the example shows that Parwana is leaving her sister Masooma alone in the desert. Only the mountains “know” what she did to her sister and “see” how hard it was for her to do that.

So, in the thesis, “*the mountains*” here can be seen as an anchor, so is “she”. She is Parwana and the word “Parwana” bears all the information since it first appears in the novel so that readers could know what kind of person she is without misunderstanding. “The mountains” here not only stands for a metaphorical meaning of a listener but also suggests chains or barriers that locked Parwana for all of her life.

Moreover, with so many “mountains” in the novel, they could all be anchors to be activated whenever the readers meet a new one. So, the “mountains” no longer bears the literal meaning, but are added to meanings such as “homeland”, “country”, “barrier”, “witness”, etc.

e.g. (26) “It sat in a flat, dusty plain ringed by a chain of craggy mountains.” (Hosseini, 2013)

(27) “In this way, he traveled across deserts and valleys and mountains.” (Hosseini, 2013)

In (26), the “mountains” is not a metaphor and has literal meaning, but it sets an anchor in the readers’ mind. From (26) to (27), “mountain” appeared six times in the novel text and the anchor is activated and the “mountains” can be interpreted as physical barriers that lies between Baba Ayub and his little son Qais. Further in the novel text, there will be more “mountains” and the anchor would be reactivated and further imply the barriers between Saboor and his daughter Pari.

All the anchors stand for objects in the space (physical or fictive) and serve for spatial motivation of metaphors. If the anchors are removed, there would be no object in a metaphor and metaphors can’t be constructed.

4.3.2 Fictive Motion

Fictive motion is another spatial marker that serves for the spatial motivation of metaphorical expression. The notion refers to the motion that can be seen in one’s mind.

Fictive motion, as linguists have paid attention to its study, is mentally simulated and may be motivation of motion verb usage. For example, Fauconnier (1997:177) made an overview of studies on fictive motion, pointing out that Talmy, Langacker, and Matsumoto have studied fictive (or abstract, or subjective) motion phenomena. Beginning with Talmy’s work in the late 1970’s and early 1980’s, cognitive linguists have argued that fictive motion - roughly, mentally simulated motion along a path or linear configuration - motivates the use and structure of a class of figurative uses of motion verbs. Motion verb, in their view, is to describe a static scene, but evokes images of “movement” or “scanning” in the mental space, as in “The road runs along the coast or A trail goes through the desert”. The fictive motion is highly subjective and helps the people construe the meaning. The imagery is believed to be subjective in that the conceptualizer enacts the movement or scanning, and its purpose is believed to be functional - allegedly, simulating motion allows the language user to infer or convey information about the physical layout of a scene, especially the configuration and position of the path or trajectory (e.g., road).

Fictive motion can be realized by verbs. “When used literally, a motion verb describes how an agent changes position in physical space; When used non-literally, a motion verb may have little or nothing to do with physical motion.” (Radden, 2004:222)

e.g. (28) “Baba Ayub’s eyes searched among the children and at last found what he was looking for.” (Hosseini, 2013)

In the sentence, there are three verbs: “search”, “find” and “look”. The last two words are used literally, but “search” is not what the brain can do. In interpreting (28), one might imagine Baba Ayub physically searched among the children or some similar scenario. So, it

has a metaphorical meaning presenting that the eyesight is working like hands searching for the object wanted. All the three words represent fictive motions in the mental space. The mind simulates a scene in which there are people (Baba Ayub, the div and many children in a magnificent hall) who are waiting for the signals to move (because that only after the reader reading on, can he/she know what would happen next). As discussed in 3.3.1, the mind can operate on whatever it is in the mental space, the reader upon reading the example sentence will “move” the characters after the writer’s “instruction”. Then, Baba Ayub’s eyes can make fictive motions as the three verbs indicated. Similar approaches are made by Grice and Searle in the late 1970’s assuming that people understand the metaphorical meanings by first analyzing the literal meaning of the word, finding it inappropriate in context, and then drawing an inference, such as a conversational implicature, to get its contextually appropriate metaphorical interpretation (Paradis, 2013:43).

Fictive motion can also be realized by adjectives or adverbs.

e.g. (29) “Uncle Nabi pulled up to a driveway decked by a row of neatly trimmed bushes. Beyond the driveway, the white-walled, two-story home loomed impossibly large.” (Hosseini, 2013)

Nabi’s movements were realized by “pull up”, “deck”. There is another motion in the same sentence: the “neatly trimmed bushes”. The bush here is a static object with no one around except Nabi. However, through the verb “trim”, readers know that there must be someone who was trimming the bushes. Furthermore, the fictive worker “trimmed” the bush and trimmed the bushes very carefully. The adverb “neatly” here shows the worker’s working state so that readers can simulate the motion with more details.

Fictive motion is important to spatial motivation of metaphorical expressions for that without them, and readers wouldn’t know whether the motion happens literally or metaphorically.

4.3.3 Pointer

Pointer (or space pointer) refers to the directions or paths in which the fictive motions go to; or they can make the metaphor happen by pointing a literal meaning into another one.

Pointers can be realized by prepositions such as *on*, *in*, *of*, etc. and be the spatial motivation of metaphorical expressions alone.

e.g. (30) “Baba has a wariness in his eyes,” (Hosseini, 2013)

In the example, wariness is originally an abstract meaning which stands for a kind of emotion. But, the expression indicates that “wariness” is a physical object and “eye” is a container. According to conceptual metaphor, this sentence is an ontological metaphor.

However, as the thesis aims at how spatial meanings are encoded to metaphorical expressions, “in” here refers to a space pointer. Here, “wariness” and “eyes” both have concrete meanings; without “in”, the two meanings cannot be linked and construed as a metaphor: “Baba has a wariness” and “Baba has something in his eyes”. Neither of the two sentence is a metaphorical expression without “in” as the intermediary.

Although pointers can take effect without fictive motion, the pointers which are realized by adverbs (such as left, right, back, etc.) usually come with verbs and seldom come alone in metaphorical expressions.

e.g. (31) “Abdullah's gaze darted left, then right, but his eyes could penetrate nothing in the dark, at once vast and smothering.” (Hosseini, 2013)

In this metaphorical expression, the metaphor is realized by the fictive motion “dart”. However, if there is no direction of the motion, it would seem that Abdullah is not so upset on his losing his beloved sister and the readers would not feel the same agony as Abdullah does.

Furthermore, as discussed above, pointers can indicate metaphorical meanings but not all of them always make a metaphorical sense. For the most of time, pointers are just space pointers and is the motivation of linguistic expressions.

e.g. (32) “Mother and I took a trip to the Santa Cruz Mountains and stayed in a hotel for the weekend.” (Hosseini, 2013)

In the sentence above, the space pointer “to” indicates a direction from home to the destination and is the spatial motivation of the relationships between place *a* and place *b*.

4.4 Spatial Motivation from Context Perspective

Words or expressions which appear frequently in the novel may play the spatial motivation of metaphors, because they carry feelings or can arouse feelings by the context. Those stories can add extra meanings to literal sentences and make the metaphors. Also, there are metaphors that can only be construed by the provided context, without which, the readers would be confused.

To study metaphors in the novel *And the Mountains Echoed*, the novel text is edited into a corpus and is retrieved by the key words “mountain”, “hill” and “eye” separately.

The reasons of choosing these words as key words are as follows: first, the novel is based on the background of Afghanistan and Afghan war; and mountains and hills are typical geographical features in that country. Second, the word “eye” appears frequently in the novel and eyes are taken as windows of the soul in many cultures of the world.

Table 4.4

| key words | number of sentences |
|-----------|---------------------|
| mountain | 37 |
| hill | 24 |
| eye | 258 |

Sixty-one “mountains” and “hills” were found in the text; apart from the two key words in the same sentence, there would be more than fifty independent sentences for analysis. Then, two hundred and fifty-eight “eyes” (with eyebrow and eyelid included) are retrieved in the novel.

More than three hundred sentences are collected and metaphors are to be checked in these sentences. Among all these sentences, they are to be sorted so that the ones with metaphorical meanings can be selected for analysis.

The three hundred sentences are sorted into different types: (1) the ones represent literal meanings; (2) the ones in which “mountain” or “eye” has metaphorical meaning; (3) the ones in which words other than “mountain” or “eye” constructs a metaphorical meaning, such as “glue” in “eyes glued to the ground”; (4) some “mountains” or “hills” or “eyes” don’t have metaphorical meanings but when the readers come to it, emotion can be roused. For example, after Abdullah’s sister (Pari) finally recalled the lost memory, she saw the mountains and windmill in her mental space; in this case, the “mountains” stand for literal meanings as well as the meaning of the homeland and blood relationship. So, (4) is a contextual metaphor.

4.4.1 The Metaphor of “Mountains”

The “mountain” metaphor can be realized by one word or one sentence, and it can also be realized by discourse or context.

There are around 60 “mountains” and “hills” in the novel and not all of them represent metaphorical meaning. Some of the “mountains” have literal meanings of mountain with no difference to the mountains in the objective world. Some of the “mountains” take metaphorical meanings of home village or home country and could evoke the feelings of homesick. Moreover, there is a special metaphor of the “mountains” and “hills” in the novel, that

together with the context they make a sense of a country, a kind of kinship and a feeling of loss.

e.g. (33) “It sat in a flat, dusty plain ringed by a chain of craggy *mountains*.” (Hosseini, 2013)

(33) is one of the sentences describing the Village Maiden Sabz, a village in a story of the novel. In mental space, the “mountains” here can be a landmark, or an anchor set in readers’ mind. This sentence is a literal description, and the “mountains” is what can be seen anywhere in the country Afghanistan. According to the Relevance Theory, the writer of the novel here provided enough information about the story’s background so that readers can read along with no obstacle. Also, we can simulate a mountain picture in the mental space and take it as if it really exists.

e.g. (34) “As it approached the village from the direction of the mountains, the earth shook with each of its footfalls.” (Hosseini, 2013)

Here is another “mountains” in the story, showing that the *div* is approaching to the village Maiden Sabz to get a child. The “mountains” here is surely fictive for the *div* can’t be a real creature. It is the same “mountains” referred in the former example. However, in the readers’ mind, there would arouse a change in the feature of image of the “mountains”. The former “mountains” is descriptive and literal, but the latter one is fictive and figurative. They can be one anchor with two images: the former can be any “mountains” in the world and it is not limited to Afghanistan, and the latter is an abstract symbol of mountain. Later in the novel there would be the *div*’s hiding mountains and those mountains can evoke fictive prototype in the reader’s mind and could have other features if the reader had read other fictive novels. None of the fictive prototype “mountains” is from real mountains in the objective world but it is created by the reader’s imagination. So, “mountains” here can bear a metaphorical meaning.

e.g. (35) “It’s built on these limestone peaks up in the Alpillles Mountains.” (Hosseini, 2013)

The “mountains” here can refer to any mountain in the world, but “Alpillles Mountains” refer to real mountains in the US. It can also refer to unknown mountains in the novel’s fictive world but shares a name with the mountains in the US. No matter the concept is fictive or concrete, as long as there’s real mountains called “Alpillles Mountains” in the physical world, it can evoke readers’ imagination as if it is the same mountains in the real world.

Furthermore, the mountains here is a tourist destination. In contrast with the mountains in the former text, which mostly come with sad stories, this “mountain” has a further meaning of untouchable peace.

e.g. (36) “and she finds behind her eyelids hills that stand soft and a sky that stands high and blue, and the sun setting behind a windmill, and always, always hazy strings of mountains that fall and fall away on the horizon.” (Hosseini, 2013)

In the novel, “mountains” have appeared for more than thirty times before the example above. Of all the “mountains” in the novel, there are mainly two types: the mountains in Saboor’s *div* story which surrounds the village of Maiden Sabz and the mountains in Saboor’s home village which is in the east of Shadbagh.

Each time the “mountains” appear in the text, the mind would set an anchor in the mental space. When the context is narrating and rousing painful memories or sad feelings, the anchor is triggered and sets a link from the “mountains” (source domain) to the sensations (target domain) in the mental space.

So, the spatial motivation of metaphor is the spatial environment which is influenced by the culture. This imposes a literal word with a specific meaning.

4.4.2 The Metaphor of “Eyes”

In the whole novel text, there are more than 250 “eyes” and more than 50 “gazes”. And in Hosseini’s another novel *A Thousand Splendid Suns*, there are more about 267 “eyes”. The “eyes” are very important elements for Hosseini that he puts so much spirit to the description of “eyes”.

e.g. (37) “Abdullah's gaze darted left, then right, but his eyes could penetrate nothing in the dark...” (Hosseini, 2013)

The metaphor can be construed directly without further context and readers can know briefly what is happening. However, the readers would know more and can get more of the feelings that the novel author wants to express if more context is given. In (37), Abdullah is in the desert and thinks that his father has abandoned him and his sister in the desert. He was so afraid that he saw into the dark as hard as he can but can’t see anything. The fear here is the motivation of Abdullah’s eye metaphor and the dark environment is the spatial motivation.

Although there are more than 250 “eyes” in the novel, many of the “eye” metaphors are constructed by other words in the sentences (metaphorical expressions).

e.g. (38) “Her eyes locked onto mine in the mirror and lingered there awhile” (Hosseini, 2013)

In (38), the metaphor is realized by the verb “lock” and “linger”. There are two metaphors in this sentence. One is ontological metaphor and the other is personification. The eyes cannot be a lock in the real world so that the reader can’t construe the metaphor directly through conceptual metaphor. According to the context, it’s Nabi and Nila in the car both looking into the rearview mirror. In the novel, Nabi likes Nila and would be embarrassed and get nervous when looking into Nila’s eyes directly. So, we can see that the spatial motivation of this “eye” metaphor is the nervousness posture of Nabi.

e.g. (39 a) “Knowing this, the villagers wisely kept their *eyes* glued to the ground.” (Hosseini, 2013)

(39 b) “Knowing this, the villagers wisely kept their *feet* glued to the ground.”

In the examples, (39 a) is from within the novel and (39 b) replaces “eyes” with “feet”; if we don’t count the context, we may guess that there was something on the ground so that the villagers look down to find it. However, readers know that they do so out of fear. According to Image Schema, it should be an ontological metaphor in which the fear of the *div* is glue (entity) and the eyesight of the villagers is physical object (also entity) so that the eyesight can be stuck to the ground. So, it’s the behavior out of fear that plays the spatial motivation of the metaphor above.

4.5 Summary

In this chapter, the spatial motivation of metaphors is discussed from four perspectives: cognitive space, construction of metaphor, linguistic expression and context. Among those perspectives, they are not independent of each other and can overlap with one another in certain conditions.

Conclusion

This thesis focuses on inductive and deductive analysis of spatial motivation of metaphors and metaphor expressions in the novel *And the Mountains Echoed*. The research of the thesis is based on embodied visual cognition of conceptual metaphor theory and mental space theory. Conceptual metaphor theory was raised by George Lakoff and Mark Johnson while the mental space theory was formed from the study of Gilles Fauconnier and was developed by linguists like Mark Turner and so on. The two theories are both widely accepted in linguistic studies. They are compatible with each other. In addition, they can complete with each other in text analysis.

In the thesis, all the examples are employed from the novel *And the Mountains Echoed* so that all the variables are from within the novel text and are controllable under analysis. Moreover, higher reliability can be guaranteed by this method.

The thesis chooses a novel text for analysis. It studies the mechanism of metaphor construction and centers on spatial motivation. The reasons are as follows: (1) the novel text provides a proper text and makes the variables stable and controllable; (2) the novel text is not collected randomly and would not be affected by the subjective interest of the collector; (3) the novel context creates a relatively stable and lasting stimulation for the reader so as to increase the validity of the thesis; (4) the novel *And the mountains Echoed* takes the real Afghan War as prototype. By analyzing metaphors in this novel, we can identify the mechanism behind the construction process and get a bit of Afghan life and Culture.

The metaphors can be sorted as following types: (1) word with metaphorical meanings; (2) sentence as metaphor expression; (3) contextual metaphor; (4) metaphor formed by reappearance of the same word in different part of the novel text.

In nature, the study of motivation of metaphors is to make an approach to relationships between thought and meaning as well as to find out and exemplify the spatial motivations of metaphors and metaphorical expressions selected from the novel text.

By analyzing the novel text, the following conclusions were drawn:

(1) Major Findings

The thesis identified spatial motivation of metaphor and found it nearly ubiquitous. Humans living in the 3D world can't avoid spatial influence and languages are forged with the help of spatial motivation.

Firstly, in the novel, metaphors exist on sentence level, word level and context level. There are hidden metaphors which can only be interpreted as metaphorical meanings after

reading the novel. Such metaphors are featured by the “mountain” metaphor and “eye” metaphor. The “mountain” metaphor can be construed as: (1) the country Afghanistan which is suffering war for many years; (2) the insuperable barrier through which the family can’t be complete and kinship were cut down; (3) home that can’t go back. The “eye” metaphor for most of the time are not achieved by the word “eye” but through spatial markers such as “gaze”, “dart” and so on.

Secondly, the spatial motivation of metaphors and metaphorical expressions can be various. From cognitive space perspective, the spatial motivation can be physical space, mental space and social space; from construction perspective, the spatial motivation can be six independent but continuous steps, without which metaphor, linguistic expressions can’t be formed with proper grammars; from linguistic expression perspective, the spatial motivation can be three different kinds of spatial markers with which a proper linguistic expression is formed and can be construed as metaphorical meanings; from context perspective, the spatial motivation can be the frequent reappearance of the same word or expression in different parts of the novel text, in which way the word or expression is added by further and deeper meanings and hence it can be interpreted to metaphors.

Thirdly, the novel itself is a metaphor, and it shares two common features with metaphor: (1) they are both prototypes abstracted from reality; (2) they use prototype as a symbol but not the prototype itself. On the one hand, the stories in the novel may be not real but true events like what is in the novel really exist and Afghan people in real life suffer from war, so the stories in the novel have prototypes in reality; and a metaphor that has prototype in real life is self-evident. On the other hand, both the novel and metaphor employ prototypes to express different feelings, not to express the prototypes.

Fourthly, metaphor plays an important part in coherence and cohesion in the construction of literature. A literature work is not only sentences or stories put together, it also serves for culture transmission and communication. A given culture could code its essence into specific metaphors and a metaphor could be construed into specific meanings in a specific culture as well. In this two-way process, both culture and literature are passed on beyond the limitation of language.

Fifthly, mental space, conceptual space and social space could all be the motivation of metaphor. However, for many times, man can’t separate reality from dream and virtual things or artificial illusions for the reason that the boundary between reality and fiction is not so clear. Being so, we should be aware that we humans are visual animals that our eyes transcribe different length of light wave into color and shape signals. The things out there is material and our feelings truly exist, but the feelings may not represent the reality, that is to say, the mind may not reflect the objective world as it is.

Lastly, the thesis makes it clear that metaphor can happen in each of the three levels of cognitive structure (sense level, concept level and language level) whereas metaphorical expressions happen on the language level only (at the selection step).

(2) Implications of the Thesis

The study identified spatial motivation of metaphor. Inductive and deductive analysis are used in the developing of the thesis. The main methodology in the thesis is logic deduction based on all existing theories and methodologies and they are not limited to linguistic domains. The thesis tries to find and define motivation in a multi-disciplinary view. The first thing to do is to redefine metaphor and take apart the construction process of metaphors. The aim is to find out the triggers in the whole process chain and point out the being of the trigger. Motivation could be internal and external and could be material and emotional.

The thesis makes a joint research of motivation in psychology and language mechanism in linguistics. From a theoretical point, the thesis further explained metaphor construction mechanism upon text that based on the existing theories; from a practical point, the thesis set long text as research object; it's a further application of Conceptual Metaphor and the Mental Space Theory.

Theoretically, the thesis made an approach to metaphor study in a motivational viewpoint. This would give linguistic studies another link to psychology and hence behavior science. Practically, through a visual viewpoint, the two metaphor theories will be easier to understand and hence make theoretical studies less tiring.

The thesis put both conceptual metaphor theory and mental space theory into discourse metaphor and contextual metaphor studies which were not given full attention traditionally. So, this study would provide a conclusion basis and support for future relevant studies. At the same time, through combination of multi-disciplinary knowledge and experiment conclusion, this study makes contribution to the diversity of theoretical studies, supplies theoretical studies with evidence from empirical studies and supplies corpus studies on discourse level with extra viewpoints.

Practically, through methodologies employed from corpus linguistics, efficiency and quality in discourse analysis can be improved; also, a theoretical view point is provided to cross-domain studies within linguistics.

Moreover, metaphor studies on the discourse level can offer proper instructions to language teachings and offer help to creative production of metaphors on a subject level. We know that English learners suffer a pragmatic failure problem and most of them are in their

college stage so that it can also provide diagnostic basis for pragmatic failures so as to improve teaching effects.

Globalization also include language globalization. The study on metaphors in English linguistics should have positive effects on the study of Chinese and the domestic studies can be improved with the help of foreign studies.

(3) Limitations of the Thesis

Firstly, the thesis applies theoretical analysis and the method of deduction as the main methodology in metaphor analysis. However, it is a qualitative theoretical study that lacks data analysis. The theory posited in this approach may conform to this study and this novel specifically, further studies on other corpora is to be done.

Secondly, the metaphors analysis in the thesis are mainly “mountain” metaphors and “eye” metaphors so that not all the metaphors are studied. There might be other types of metaphors in the novel.

Thirdly, the sample of the study is not big enough. Although there are many “mountains” and “eyes” in the novel text (together for at least 300 times), many of them have literal meanings only. As the object of this study is metaphors in the novel, a small sample cannot fully meet with the need of efficient study for the reason that the samples extracted are not sufficient enough.

Fourthly, researchers traditionally see motivation a self-explanatory notion. Until the thesis, books or journals on motivation research can’t meet theoretical studies of motivation itself, let alone motivational studies of metaphor.

Fifthly, other relevant theories that can help metaphor studies are not employed in the thesis and most of the work is done by theoretical analysis rather than empirical studies. This is partly because empirical studies require work relating to different apartments of the college corporation and another reason is that empirical studies require large investment on instrument which is mainly available by importing from other countries.

(4) Recommendations for Further Studies

First, more samples are needed; the bigger the sample is, the more samples can be extracted so that the more reliability can be achieved. In this way, more solid and persuasive conclusions can be drawn to support future studies. The thesis only covers one novel, so that the corpus is not big enough for deeper analysis. Also, different novels may be written in different styles so that different kind of metaphors may be employed by different authors. The more data analyzed, the more progress in context study would be achieved.

Second, other theories are recommended. Although conceptual metaphor and blending theory are widely accepted, there still need to be more approaches to metaphor studies. There are many other approaches to metaphor studies, such as cognitive semantics, neurophysiology, neural linguistics, etc. With these approaches, metaphor studies have already become a multi-disciplinary study.

Moreover, cross-cultural studies are strongly recommended for the reason that different cultures have different explanations to their native languages and language failure may develop from second-language learning students. So, it's very important to improve foreign language teachings and to do that, metaphor studies must take an important place, because most language failure happens not in literal meaning of linguistic expressions but happens in metaphorical meaning.

Finally, there's another important job for scholars and researchers to do: to identify and clarify the questions of language research and investigation; at the same time, effective and reliable methodologies should be developed and applied at the background of multi-disciplinary trend of linguistic studies.

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