

Cognitive Analysis of Polysemy based on the Prototype Theory

-- Case Study of “Gua”

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Abstract

This paper mainly explored the polysemy of “gua” by employing the prototype theory. Through analyzing the semantic changes of “gua” and its new meanings, the author of this thesis finds that the prototype theory can better explain the relationships among its different meanings. According to the research of the author of this paper, among all of its meanings, the meaning of “hanging up” is the prototypical meaning, and other meanings are peripheral. What is more, they have different status, which means that some meanings are more closely related to the prototypical one, while some meanings are a little far away from the central meanings. However, each of these meanings has some relationships to some degree and there is no clear boundary among them. Besides, in terms of its meaning extension, there are two patterns, which are radiation and concatenation. These two patterns present metaphorical and metonymic mode of thinking respectively. However, by comparison, the extension of the meaning of “gua” mainly depends on the pattern of radiation or the device of metaphor.

Keywords

“Gua”; Polysemy; Prototype Theory; Metaphor; Metonymy.

1. Introduction

1.1. Background

Everything in the world is changing all the time, language is no exception. As an important part of language, the meaning of words also changes all the time. At the beginning, a signal word has only one meaning which is its basic or core meaning (Wei, 2008) With the rapid development of society, new things appear endlessly, the scope of people’s communication extends and their communicative competence strengthens. If one word or one expression only symbolizes one thing or one phenomenon, it is very hard to meet the demands of human beings because the storage capacity of the brain is limited, which needs that language can deliver the maximal information by using the minimal language symbols. Therefore, in order to reduce the heavy burden in memory, people spare no efforts to add new meanings to already existing words on the basis of the features of new things instead of coining new words or borrowing words from foreign languages for every newly emerged thing. As a result, a large number of new meanings will be extended from the original or the central meaning with the passage of time and the improvement of human cognitive ability. That is to say, one language symbol will always be endowed two or more than two meanings, which leads to the occurrence of polysemy, which is the natural result of the development of language as well as society.

So far, a lot of scholars at home and abroad have been studying the polysemy from to give a better explanation to the relationships among the various meanings of a polysemy. Since the

appearance of the cognitive linguistics, a great many scholars have turned their attention to the studies of semantics from the cognitive perspective. They held the idea that human cognition plays an important role in the process of semantic changes, such as the appearance of polysemy. According to cognitive linguistics, the meanings derived from the central meaning are extended by two types of ways, which are metaphor and metonymy. And the derived meanings are related to each other on the basis of family resemblances and take the central meaning or the prototypical meaning as the center. Nowadays, many scholars employ the cognitive approach to explain the semantic changes or the polysemy because of its scientificity and its strong explanatory power. Therefore, the author of this paper will carry out a comprehensive research on polysemy of the Chinese character “gua” within the framework of prototype theory which is an important theory of cognitive linguistics.

1.2. Significance

In terms of the importance of this paper, it lies in at least three points. Firstly, nowadays, with the development of the society, some new meanings of the Chinese character appear. It is desirable and interesting to explore the new meanings and the mechanism of the appearance of its new meanings. Secondly, as a scientific theory, the prototype theory can give a good explanation to the occurrence of the new meanings of “gua”. Thirdly, it can help the author herself to have a better understanding of the prototype theory, which is very critical and meaningful.

1.3. Structure

As for the structure of this paper, it will be divided into five parts. The first part is the introduction, which gives the research background, the significance and the whole structure of this paper. The second part is the literature review, which will give a brief reports about the previous studies of the meaning of the word “gua”, the definition of polysemy, the reasons of the appearance of polysemy, and the cognitive approach to polysemy. The third part is about the theoretical framework, which will give a brief introduction to cognitive linguistics, the background of the birth of prototype theory and some main concepts of the prototype theory. The fourth part is the analysis of the Chinese character “gua”, including the mechanism behind its various senses on the basis of the prototype theory. The fifth part is the conclusion, which will give the major finding and its limitations of this paper and the future exploration in this direction.

2. Literature Review

2.1. An Introduction to Polysemy

2.1.1. The Definition of Polysemy

It was Michel Bréal, a French semanticist, who first put forward the terminology “polysemy” in 1960s and then it gained a popularity among different scholars. Bréal studied this phenomenon from the diachronic semantic perspective and pointed out that with the development of the society, people give the already existing words new meanings, and these new meanings as well as old meanings co-exist with each other (ibid, 2017). After that, scholars studied polysemy from different points of view, such as the extension of meanings, the development of polysemy, the features of polysemic paradigms, category theory, family resemblance and prototype theory and so on (ibid, 2008) What is more, scholars at home and abroad give definitions to polysemy and different scholars give different definitions from different angles. But so far, there is not an unified definition. According to Bréal, polysemy refers to the phenomenon that one word has two or more than two closely related meanings (Taylor, 1995). According to Heine, polysemy should be defined by a set of three criteria. Firstly, there are two or more different but related meanings. Secondly, these meanings are associated with one linguistic form only. Thirdly, the

linguistic form belongs to one and the same morphosyntactic category in its uses (ibid, 2017). According to Zhao Yanfang, polysemy is defined as “an entity which involves several related meanings including different meanings and different parts of speech” (Zhao, 2000). According to Ren Junhong, polysemy is defined the language phenomenon that a single language form bears two or more meanings and each of them is closely related (Ren, 2010). According to Wen Xu and Yang Kun, polysemy can be defined as “having or characterized by many meanings; the existence of several meanings for a single word or phrase.” (Wen & Yang, 2015). To sum up, polysemy is a word with two or more than two closely related senses.

2.1.2. The Reasons of the Appearance of Polysemy

According to Li Ying and Wen Xun, polysemy is one of the most popular and common phenomenon in language and it is an inevitable outcome of social development (Li & Wen, 2006). The reasons of the appearance of polysemy can be explained from two perspectives. Firstly, it can be explained from the perspective of social linguistics. It is universally known that society and language are closely related. With the development of society and technology, people become more familiar with some technological terms. Gradually, the specific meaning of the term fades away and it becomes a common word and is widely used in daily life. At this time, the meanings of the term will be extended. On the other hand, when a new thing or a new phenomenon appears, it is always difficult for people to describe it by using a new word and it is also impossible for one word to symbolize only one thing or one phenomenon; otherwise, the number of the vocabularies will be very huge, which will be a great burden for people to memorize. Therefore, when there is no corresponding words to describe the new thing or new phenomenon, people tend to borrow the already existing word to describe the new thing or new phenomenon, which will endow the old form with new meanings. Secondly, it can be explained from the perspective of cognitive linguistics. The objective things are complicated. In order to know them better, people tend to classify the objective things on the basis of their similarities, which is called category. It is the basis of concepts and is presented by means of language symbols and reflects the meanings of them. The basis of categorization is the similarities among the members in one category and one polysemy is a category (Zheng, 2014) The phenomenon of polysemy reflects the economy, flexibility and creativity of language, which caters for the law of human cognition.

2.2. Previous Studies of “Gua”

The studies of “gua” are relatively few. Scholars’ attention is mainly focused on the development of the new meanings of it. For example, Zhao Xiaochi explored the new meanings of “gua” in 2006, Guo Xiaoying discussed the development of the meanings of “gua” in 2014 and Bian Wei discussed the appearance of the new meanings of “gua” from the perspective of semantic changes in 2016. As a whole, so far, only a few scholars have paid their attention to the Chinese polysemy “gua”, which is a research gap and is desirable to be explored.

3. Theoretical Framework

3.1. The Background of the Appearance of Prototype Theory

The prototype theory appeared on the basis of the classical theory which was put forward by Aristotle and which had dominated human thinking over two thousand years. According to the classical theory, a category is defined in terms of a set of properties, or features, and an entity is a member of the category if it exhibits each of the features. Each of the features is necessary, and jointly they are sufficient. The classical theory captures the ‘essence’ of a category in contrast to the ‘accidental’ properties of category members. The theory entails that categories have clear-cut boundaries and that all members, in their status as category members, have equal status within the category (Taylor, 2011). However, just as what Maienborn, von

Heusinger and Portner said, although the classical theory is attractive in several aspects, such as its neat explanation in the relation of entailment, the distinction between analytic and synthetic statements and the reasons that some expressions are contradictions, here are many problems associated with the classical theory (ibid, 2011) For example, necessary conditions are inadequate, which means that the idea of necessary and sufficient conditions is rarely if ever met in categories of naturally occurring things or in humans' categorization of experiences. Secondly, there are degrees of membership. Thirdly, boundaries between categories are not clear cut (ibid, 2015). In the mid-1950s, Ludwig Wittgenstein, a great philosopher who suspected the rationality of classical categories, raised the principle of family resemblance in categorization by exploring the classification of "game" (Liu, 2005). Then, around ten years after family resemblance was put forward, a great changes had taken place in people's cognition about categories. Berlin and Kay studied the classification of color, finding that the classification of color is on the basis of focal colors. In 1970s, the famous American psychologist Eleanor Rosch conducted a lot of experiments on the basis of Berlin and Kay's experiment and studied the categories of bird, vegetables, fruits and so on, finding the prototype effects of categories. Finally, on the basis of other scholars' findings, Rosch put forward the prototype theory (Wu & Dai, 2014). On the basis of the researches of Rosch and other scholars, there are four tenets in prototype theory. Firstly, there is not a single set of criteria which is required to be confirmed. That is to say, categories are not defined by the sufficient and necessary features. Secondly, all the members of a category are connected by family resemblances, namely, each member is linked together through an overlapping network of similarities. Categories are radical, organized around prototypes. Thirdly, the boundary among the category members is not clear but fuzzy. Finally, not all members of a category have the same status within a category, which vary according to their prototypicality. That is to say, there are prototypical members and peripheral members in a category. Obviously, the prototypical members possess the most salient properties in the whole members, while other fringe members possess the minor attributes (Wen, 2012, Xiao, 2017).

In terms of the prototype theory, there are several advantages. Firstly, it is useful for explaining how people deal with atypical examples of a category. Secondly, it can explain how people deal with damaged examples. Thirdly, it can work for actions as well as objects (Liu & Wen, 2006). Therefore, after the theory was put forward, more and more linguists, psychologists, anthropologists and scholars in other fields devoted themselves to the establishment of prototype theory and its application to cognitive and linguistic studies.

3.2. Main Concepts of Prototype Theory

3.2.1. Category

According to cognitive linguistics, people begin to know the objective world with the help of classification and orientation. In terms of Wang Yin in 2007, the classification of categories, in nature, refers to the process of concept formation, and each concept has a corresponding category. Ugnere & Schmid in 2008 defined the mental classification as categorization and its product as the cognitive categories. Category consists of the same kind of objects which, to our minds, are interrelated. It can be seen that category is closely related to human generic classification, which involves human cognition (ibid, 2017).

In terms of category, there are three levels, which are the superordinate level, basic level and subordinate level. The superordinate level means higher level or more general level; subordinate level means lower level or more specific category; basic level are more specific but not too specific. Basic level is basic in three aspects, including perception, communication and knowledge organization (ibid, 2006).

3.2.2. Prototype

The term 'prototype', in everyday discourse, refers to an engineer's model which, after testing and possible improvement, may then go into mass production. In linguistics and in cognitive science more generally, the term has acquired a specialized sense, although the idea of a basic unit, from which other examples can be derived, may still be discerned. The term, namely, refers to the best, most typical, or most central member of category. Things belong in the category in virtue of their sharing of commonalities with the prototype. Prototype theory refers to this view on the nature of categories (ibid, 2011). In a series of experiments and papers, Rosch brought into prominence the role of prototypes in various and classification tasks and defined the prototype as the most central instance of any given category (as cited in Liu, 2005). Each category is structured in terms of a prototype, and members of the category are related with each other by virtue of the family resemblances they bear to the prototype.

3.2.3. Prototype Theory and Polysemy

Prototype theory provides new insights into the structure of polysemy (Hua & Xiang, 2018). The prototype concept was eagerly taken up by a number of linguists in the late 1980's and early 1990's, especially for its relevance to lexical semantics and meaning change (ibid, 2011). In 1961, Austin applied the analysis of categories to the studies of semantic meaning. In his paper, *The Meaning of a Word*, Austin put forward the idea that the different meanings of a word belongs to semantic category and the different meanings of a word are the different members of the category and they have different features but are related with each other by virtue of family resemblance. For example, the word "healthy" in such phrases as "healthy body", "healthy exercise", "healthy complexion", has different meanings, but these meanings are related. The meaning of "healthy" in the phrase "healthy body" is the central meaning which is called "primary nuclear sense" by Austin. And the other meanings of healthy are the extended meanings (Zhao & Zhou, 2000). What is more, Wang Yin also put forward that a polysemy can be seen as a category. According to the family resemblance, the different meanings have some similar attributes which are the basis of categorization (ibid, 2007). In other words, the meanings of a polysemy, which can be regarded as a category, are chained together by family resemblance. The meanings of the polysemy form a family resemblance network in the category (Zhang, 2008). Just as there are prototypical members and peripheral members in a category, among the different meanings of a polysemy, some of them are prototypical and some of them are peripheral and they have different status (Zhang, 2017). The prototypical meaning is the most typical and representative one and people always remember it firstly; the peripheral meanings are extended from the prototypical meaning through two patterns which are radiation and concatenation (ibid, 2010). In the process of meaning extension, the pattern of radiation presents the cognitive way of metaphor and the pattern of concatenation presents the cognitive way of metonymy. Both of these two mechanism play an important role in semantic changes (ibid, 2006).

3.3. Two Mechanisms of Semantic Changes

Traditionally, linguistics regraded metaphor and metonymy as two types of figures of speech; now, however, according to cognitive linguistic linguistics, metaphor and metonymy are two important mode of cognitive thinking. Ullmann divided the semantic evidence into metaphorical and metonymic one respectively (Lu, 2010). Lakoff states, "Polysemy arises from the fact that there are systematic relationships between different cognitive models and between elements of the same model." Polysemy possesses hypostatic connection with cognitive metaphor and metonymy. Therefore, both metaphor and metonymy play an important role in polysemy or meaning extension.

3.3.1. Metaphor

According to cognitive linguistics, metaphor is regarded as a mapping process from the target domain to the source domain. It takes root in human's language, perception, and the culture. Metaphor is omnipresent in people's everyday lives. They also claim that metaphor satisfy mankind's needs to cognize new things and categorize new concepts at the same time. The nature of metaphor is to understand and experience one entity in terms of another so that it enables people to recognize, classify and categorize abstract entities by means of concrete ones. In light of the studies of cognitive linguists, polysemy is the result of metaphorical thinking and it is realized by cognitive thinking models such as metaphor (Wang, 2012). What is more, according to Alice Deignan (1999), 'Work by Lakoff and Johnson (1980) and their followers has argued for a cognitive view of metaphor and for its central role in thought and language. A fundamental tenet of the cognitive view is that metaphorical connections exist between conceptual domains at the level of thought. Metaphors appearing in the language are realizations of these conceptual metaphorical mappings. Each significant conceptual mapping will be lexicalized by at least several, and possibly many, linguistic metaphors, meaning that a number of linguistic expressions that are used to talk about the source domain will also be used to talk about the target domain. This leads to the existence of polysemous lexemes, which have a literal sense in the source domain and a metaphorical sense in the target domain. Over time, frequently-used metaphors tend to become conventional, and unmarked for speakers. Many established senses of polysemous lexemes were originally metaphorical extensions of an older sense.' Therefore, metaphor is an important device of meaning extension. When the meanings of one word are extended by means of metaphorical mode of thinking, the different meanings has some similar characteristics but do not have much relationship. However, all of them are related to the central meaning or the prototypical meaning (ibid, 2010).

3.3.2. Metonymy

Metonymy, like metaphor, is also quite pervasive in language and cognition. From the perspective of cognitive linguistics, metonymy refers to the mapping taking place in the same domain. By virtue of emphasizing salience of the source domain, the conceptual structure is mapped onto the target domain (ibid, 2012). Just as Lakoff claims that "metonymic concepts are part of the ordinary, everyday way we think and act". Radden and Kovencses point out that "Metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same idealized cognitive model". Lakoff and Johnson reckoned that people always use metonymy to think or to express unconsciously and metonymy is the most basic process of meaning extension. When meanings are extended by means of metonymic mode of thinking, the different meanings have the characteristics of contiguity or neighborhood and prominence or salience (Sun & Yao, 2013). Ma Chenting also put forward that metonymy which possesses such traits as contiguity, prominence and cognitive accessibility and so on provides the extension of lexical meanings with motivation (Ma, 2013).

4. The Analysis of the Chinese Character "Gua"

In this section, a detail analysis of the meaning of "Gua" will be discussed on the basis of the prototype theory and the two important mechanism of its meaning extension also will be explored.

4.1. The Meanings of "Gua"

In this part, the semantic changes, the modern meanings of "Gua" and its new meanings will be introduced simply. "Gua" is a verb widely used by people in China. Its meanings which are used now have experienced a long process of evolution. "Gua" in Shuowen Jiezi is a verb which means

“differentiate and distinguish”. This meaning originally appeared in the Book of Changes which is a literature in the Western Zhou Dynasty. For example:

(1) “分而为二以象两，挂一以象三。”

In terms of this sentence, Duan Yucai gave the explanation that in the ancient time, people always drew pictures; therefore, “Gua” here means drawing something respectively. Lu Deyun said directly that “Gua” means “differentiate”. Therefore, the original meaning is “differentiate or distinguish” (Guo, 2014).

Afterwards, people always drew a lot of pictures and they needed to hang them up; therefore, the meaning of “Gua” was extended to “hang up” (ibid, 2014). This indicates that the original meaning and the basic meaning of “Gua” are different; however, both of these two meanings are related to each other because people tend to put or hang things up in different places so as to differentiate or distinguish them clearly (Bian, 2016).

In pre-Qin period, the meaning of “hang up” had appeared. It is in this period that the senses of “Gua” experienced a primary development, among which the meaning of “hang up” was the important extended meaning. For example:

(2) 主人左执角，再拜稽首受，复位；诗怀之，实于左袂，挂季指；卒角拜。（《仪礼注疏·卷四十五·特牲馈食礼第十五》）

(3) 砥室翠翘，挂曲琼些。（《楚辞·招魂》）

In the first example, the Chinese character “Gua” means “hang up, suspend”. “挂季指” means that people use their fingers to hook the wine glass so as to prevent it from falling off. In the second sentence, the Chinese character of “Gua” means “hang up” (ibid, 2014).

After Han Dynasty, the meaning of “hang up” was used more frequently. For example:

(4) 徘徊庭树下，自挂东南枝（汉乐府《孔雀东南飞》）

(5) 长风破浪会有时，直挂云帆济沧海。（李白《行路难》）

Both of the meanings of “Gua” in these two sentences means “hang up” (ibid, 2016). Besides, after Han Dynasty, the development of the meaning of “Gua” was very prosperous and many meanings which were extended from the meaning of “hang up” appeared. For example:

(6) 禹之趋时也，履遗而弗取，冠挂而弗顾，非争其先也。（《淮南子》）

(7) 佛言：夫为道者，譬如一人与万人战，挂铠出门。（《佛经·佛说四十二章经》）

(8) 尝胆濡足，是其分愿，分心挂腹，实亦私苦。（《全刘宋文》）

(9) 标半落而飞空，香随风而远度。挂靡靡之游丝，杂霏霏之晨雾。（《全梁文》）

In the fifth example, “冠挂” refers to hanging up the Mandarin, which means that the official in ancient time resigned in return. This meaning was extended from the “hang up”. In the sixth example, “挂铠” means carrying armors or fixing armors in people’s bodies. The armors in people’s bodies were just like something hanging up. The meaning of attachment or fixation appeared. In the seventh example, “gua” means “caring” and “worrying about”. In the eighth example, “gua” refers to the status of “running over with”.

Then, the meanings of “hanging up or suspending in mid-air” and “fixation or attachment” extended many related senses, which can be classified into five types.

Firstly, “gua” means “wearing clothes”. For example:

(10) 长女适彭城刘师穆，次女适范阳卢霄翹，一女落发披缁，小女才挂丧服。（《唐代墓志汇编续集》）

(11) 一日，偶出中堂，忽见一人穿麻挂孝而入。（《三国演义（下）》）

Secondly, “gua” means “worrying about” and “caring”. For example:

(12) 一住寒山万事休，更无杂念挂心头。（《寒山诗·一住寒山》）

(13) 既解情中无境像，应难闲事挂心头。（《敦煌变文集新书》）

Thirdly, “gua” means “anger”. For example:

(14) 大家这一交头接耳，林士佩的脸上不挂，羞恼变成怒。（《三侠剑（下）》）

(15) 这件事情，连老头秋田都有点挂劲了，心说：侯振远你们办的这叫什么事啊！（《雍正剑侠图（中）》）

Fourthly, “gua” means “mention”. For example:

(16) 此皆往事，不必挂齿。（《西厢记杂剧》）

Fifthly, “gua” means “finishing”. For example:

(17) 归休之请，将从挂冕之游；优贤之诏，更锡悬车之礼。（《唐代墓志汇编续集》）

Besides, with the meaning eclipses of “gua”, some other meanings appeared. For example:

(18) 事不关己，高高挂起。（毛泽东《反对自由主义》）

(19) 一个看门的小和尚把武杰挡住说：“如进里面看病必须挂号。”（贪梦道人《彭公案》）

In the first sentences, “gua” means “putting things aside”. In the second sentence, “挂号” is used to register numbers in order to determine the sequence or to be reserved for receipt of important things; therefore, “gua” is the meaning of registration. With the appearance of telephone, “gua” has the meaning of “ringing off” or “getting through”. For example:

(20) 曲络绎爽快地说：“好，那你别挂电话。”（李可《杜拉拉升职记》）

(21) 邓大姐很担心他的身体，多次挂电话询问是否吃饭，是否睡觉。（《作家文摘》）

In the first sentence, “gua” refers to “ringing off” which depends on the meaning of “hanging up or suspending”, while the second sentence, “gua” refers to “getting through” which depends on the meaning of “fixation or attachment”. With time going by, some meanings of “gua” disappear. In Modern Chinese Dictionary, “gua” is a polysemy and it has nine meanings, which are “hanging up”, “putting things (especially problems) aside”, “ringing off”, “getting through”, “hooking”, “worrying about”, “registration”, “covering” and “a bunch of something” respectively. What is more, with the development of the internet and society, the new things or new phenomena appear continuously, which needs people to extend the meanings of the already existing words so as to cater for their communicative needs. Accordingly, some new meanings of “gua” appear. Here are some examples which are retrieved from BCC.

(22) 刀子透胸而出，头一歪，就挂了。（历史穿越小说《铁翼鹰扬》）

(23) 解释一下，昨天电脑下午挂了，我郁闷得要死。（武侠小说《命运天盘》）

(24) 怎么办，连英语也挂了！伤心到没心情了。（微博）

(25) 汉室已经不止名义上亡国了，而是彻底的挂了。（历史穿越《吕布新传》）

(26) 流量啊，QQ 都不敢挂了。（微博）

(27) 我的第二个网游在诞生之初就挂了！以后我不玩了！（微博）

In these six sentences, “gua” means “death”, “breaking down of computers”, “the failure of English examination”, “going offline” and “the failure of games” respectively.

All of these meanings appear in recent years. Generally speaking, the new meanings of “gua” can be summarized as “failure”, “going offline” and “death” (ibid, 2016).

4.2. The Prototype Theory and the Polysemy of “Gua”

On the basis of the previous part, it can be summarized that there are nine meanings which are commonly used by people and three new meanings. As a polysemy, the prototype theory can give a good explanation to the relationships among its various meanings.

As has mentioned above, a polysemy constructs a category and the different meanings of the polysemy are the category members. And the central member is called prototype, which is the

best example of the category. In terms of “gua”, it is a category, and the different meanings of “gua” are the category members of it. The basic meaning of “hanging up” which is at the center of all the meanings of “gua” is the prototypical meaning. Because all of the extended meanings are derived from the basic one, they share some similarities and are related by virtue of family resemblance to some degree. Besides, since the members of a category have different status, the extended meanings of “gua” are unequal in status. In other words, some meanings are more closely related to the prototypical meaning and some meanings are far away from the prototypical meaning which seems that these meanings have a little relationship with the prototypical one. For example, “suspending something or putting something aside” is relatively close to the prototypical meaning but the meaning of “registration or covering” seems to have nothing relationship with the prototypical one. But all of them are related to the central meaning because they all derive from it. What is more, the boundaries among these meanings are fuzzy and there is not a clear-cut. That is to say, people cannot say that such meanings as “hanging up”, “suspending something or putting things (especially problems) aside”, “ringing off”, “getting through”, “hooking”, “worrying about”, “registration”, “covering” and so on are totally unrelated because there is always some overlapping parts in terms of their meanings. For example, when people hang some problems up or suspend some problems, people put these problems aside; when people hang their feelings up, they feel unpeaceful and begin to worry about something. In terms of the pattern of extension, the author of this paper thinks that both the concatenation and radiation, especially the pattern of radiation, play an important role. And the pattern of the extension of the meaning of “gua” can be presented as follows:

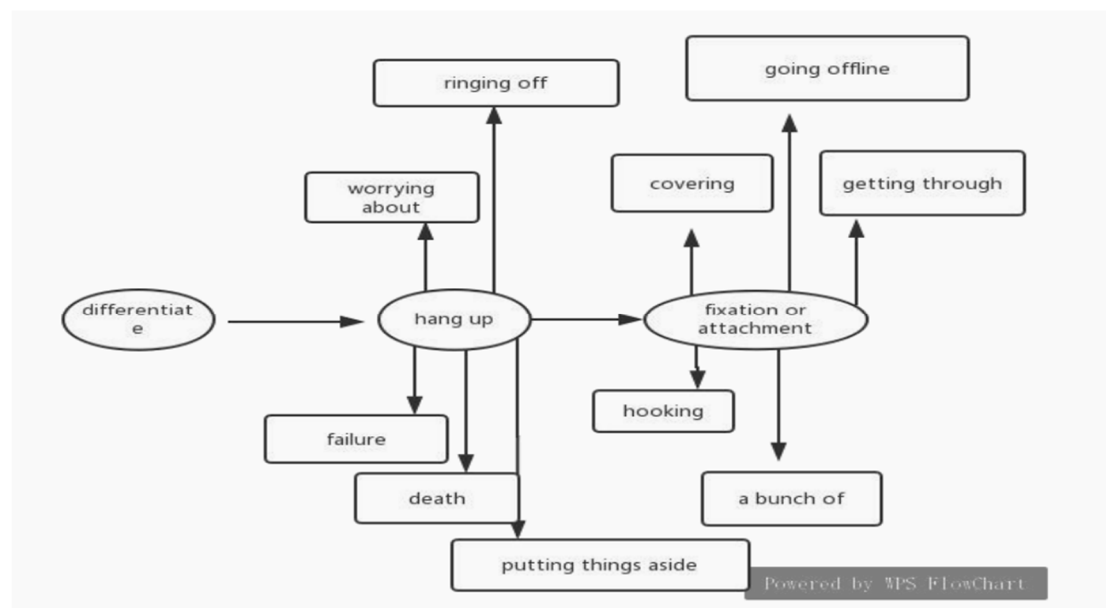


Figure 1. The pattern of the extension of the meaning of “gua”

From this flow chart, it can be seen that most meanings are extended by means of radiation and only two meanings are extended by means of concatenation.

4.3. The Mechanism of the Polysemy of “Gua”

As have been mentioned before, in the process of meaning extension, the pattern of radiation presents the cognitive way of metaphor and the pattern of concatenation presents the cognitive way of metonymy; therefore, the different meanings of “gua” presents both metaphorical and metonymic modes of thinking which are two important mechanisms behind a polysemy.

As have been said before, metaphor refers to the mapping process from the target domain to the source domain and these two domains are different and metaphorical mapping is mainly

based on the similarities between the source domain and target domain. Since most meanings of “gua” are extended from the pattern of radiation, the metaphorical mode of thinking or the metaphor plays the most important part in the appearance of new meanings. From the flow chart, it can be seen that the meanings of “death”, “worrying about”, “failure”, “going offline” and “ring off” are extended from the meaning of “hanging up” through the pattern of radiation. The meanings of “getting through”, “covering”, “hooking”, and “a bunch of” are extended from the meaning of “fixation or attachment”. These meanings are obtained by metaphorical way. For example, the metaphorical meaning extension from “hang up” to “worrying about” is on the basis of the similar feelings between the target domain and the source domain. When people’s feelings hang up, they feel unpeaceful; therefore, they worry about something. The metaphorical meaning extension from “hang up” to “failure”, “ringing off” and “death” is on the basis of result similarity between the target domain and the source domain. For example, when people put the telephone receiver down or hang it up, it shows the result that people ring off. Therefore, gradually, the meaning of “ring off” is extended from the meaning of “hang up”. The metaphorical meaning extension from “fixation or attachment” to “getting through”, “covering” “hooking” and “a bunch of” is also on the basis of the result similarity between the target domain and the source domain. For example, when people say that an object is covered by something, it indicates the result that something is attached to an object. When many objects are attached together, people tend to say that there is a bunch of something. When people get through to somebody, the telephone receiver is always attached to people’s ears.

Conceptual metonymy, from the cognitive perspective, is a mapping which occurs within the same domain. As has been mentioned, the conceptual structure is mapped onto the target domain by virtue of emphasizing salience of the source domain. Salience is one of the main principles used in the process of conceptual metonymy, the cognition of which is derived from the principle of salience in psychology. In terms of the meaning of “gua”, its meaning of “fixation or attachment” is metonymic extension from the meaning of “hang up”. When people emphasize the points on which something hangs up, people can say that something is attached or fixed on this point. At this time, the meaning of “fixation or attachment” appears, which is the metonymic mode of thinking.

5. Conclusion

5.1. Major Findings

This paper explored the polysemy of “gua” from the cognitive perspective, which mainly employs the prototype theory. After analyzing the semantic changes of “gua” and its new meanings, the author of this thesis finds that the prototype theory can give a better explanation to the relationship among its different meanings. Among all of its meanings, the meaning of “hanging up” is the prototypical meaning, and other meanings are peripheral. What is more, they have different status, which means that some meanings are more closely related to the prototypical one, while some meanings are a little far away from the central meanings. For example, the meanings of “suspending or putting things aside and worrying about” are more related to the central one, and such meanings as “death and failure” are a little far away from the prototypical one. However, each of these meanings has some relationships with each other to some degree and there is no clear boundary among them.

Besides, there are two patterns of meaning extension, which are radiation and concatenation. These two patterns present metaphorical and metonymic mode of thinking respectively. In terms of the polysemy “gua”, both these two patterns are involved. However, by comparison, the extension of the meaning of “gua” mainly depends on the pattern of radiation and metaphor.

5.2. Limitations and Future Exploration

Ungerer and Schmid who advised to employ prototype theory to explain the semantic changes put forward the prototype shift. The author of this paper thought that it is also a good direction in explaining the process of forming a polysemy. However, owing to the limited ability, the author of this paper does not discuss this aspect.

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References

- [1] Deignan, A., (1999). Metaphorical polysemy and paradigmatic relations: A corpus study. *Word* [J], 50: 319-338.
- [2] Hua Guolu & Xiang Qingwei., (2018). Structure polysemy in English learner' dictionaries: A prototype theory-based model. *International Journal of Lexicography* [J], 1-18.
- [3] Taylor, J. R., (2011). Cognitively oriented approaches to semantics. In Maienborn, Heusinger, V. & Portner (Eds.). *Semantics*[M] (pp. 643 - 664) . New Zealand: Dunedin.
- [4] Taylor, J., (1995). *Linguistic categorization: Prototypes in linguistic theory* [M]. Oxford: Oxford University Press.
- [5] Bian Wei. (2016). The exploration of the new meaning of "Gua" based on the semantic change, *Scientific Chinese* [J]. 114 - 115.
- [6] Guo Xiaoying. (2014). Exploration of the semantic development of "Gua", *Modern Chinese*[J], 24 - 26.
- [7] Liu Chuanjiang. (2005). Applications of prototype theory in lexical analysis. [D]. M.A. thesis, Jilin University.
- [8] Liu Runqing & Wen Xu. (2006). *Linguistics: A new coursebook*[M]. Beijing: Foreign Language Teaching and Research Press.
- [9] Lu Weizhong. (2010). Lexical semantic change and understanding: A metonymic account, *Contemporary Foreign Languages Studies* [J],11, 28 -31 + 61.
- [10] Li Ying & Wen Xu. (2006). Cognition from "head" --Metonymy, metaphor and polysemy, *Foreign language education* [J], 27, 1- 5.
- [11] Ma Chenting. (2013). A research extension of lexical meanings under the perspective of metonymic mechanism. *Journal of Anhui Agricultural University (Social Science Edition)* [J]. 2(22), 103-110.
- [12] Ren Junhong. (2010). A Study on polysemy from metonymic and metaphorical perspective, *Journal of Cangzhou Teachers' College* [J]. (26), 33-35.