

A Study on Semantic Word-Formation Rules of Chinese Nouns from the Perspective of Generative Lexicon Theory*

——A Case Study of Undirected Disyllable Compounds

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Abstract. This paper mainly applies the qualia structure theory to the study of compound nouns whose lexical meanings cannot be inferred from their morpheme meanings by taking some undirected disyllabic compound nouns as example from the *Chinese Semantic Word-formation Database*. The paper concludes some specific ways by which morpheme meanings can be integrated with lexical meanings. It is hoped that the research result can be conducive to the further study of Chinese semantic word-formation, compilation of dictionaries on motivation, the lexicographical definition and the vocabulary teaching in the teaching of Chinese as a foreign language.

Keywords: disyllabic noun; semantic word-formation; qualia structure; metaphor; metonymy

1 Introduction

There have been many researches about the relationship between morpheme meaning and word meaning. Huaiqing Fu (1981) concluded that there are 5 types of relationship between morpheme meaning and word meaning. In the paper entitled “The Structure Relationship between Compound Morpheme Meanings”, Jian Zhou (1991) made a detailed statistical classification study on the semantic structure relationships between the meanings of two morphemes which form compound nouns on a microscopic level by analyzing the structure in which each compound noun is formed by two morphemes. Zhenlan Yang (1993) argued that there are three kinds of relationships between morpheme meanings, namely ‘integration, synthesis and combination’ so far as the formation of lexical meaning is concerned. Wei Cao(1994) discussed the overt motivation and covert motivation of Chinese lexical meanings from the perspec-

This research is supported by National Social Science Foundation of China (No. 12BYY123) and National Natural Science Foundation of China(No. 61272215).

tive of Genetics. Jinxia Li and Yuming Li(2008) proposed the concept “Semantic Transparency” which indicates the scale difference of how easily the whole lexical meaning can be deduced from the meanings of its compositions. According to the scale difference, words are divided into absolute transparent, relatively transparent, relatively obscure and absolute obscure ones. In addition, Yinxin Sun (2003), Shuzhai Wang (1993) and Houyao Zheng (2006) have also done some researches in this aspect. Ludong University has been long committed to the study of Chinese semantic word formation and created Chinese Character Semantic Category Information Database¹, and Chinese Semantic Word-formation Database². After examining the relationship between the lexical meaning and the meanings of two morphemes in more than 50,000 disyllabic compounds, we generalized four rules that morpheme (ziwei) meanings constitute word meaning, including the similar rule, the backward rule, the forward rule, the undirected rule. The similar rule means the two ziwei of a word belong to the same semantic category, and the semantic category of the word is basically same as that of ziwei. The backward rule means the two ziwei of a word belong to different semantic categories, and the semantic category of the word is the same as that of the second ziwei. The forward type means the two ziwei of the word belong to different semantic types, and the semantic type of the word is the same as the first preceding ziwei. The undirected type means the two ziwei of a word belong to different semantic categories, and the semantic category of the words different from that of the first ziwei and the second ziwei. (Shiyong Kang, 2004). The following is an example from the Chinese Semantic Word-formation Database.

Based on the above study, we selected some undirected nouns as research material to explore the types of undirected words and to interpret why they are undirected with relevant theory. In the same database, Lu Liu (2015) have studied the similar rules (such as $Aa + Aa = A$, $Aa + Ab = A$, $Ba + Ba = B$) and the similar rules in the undirected type (such as $Aa + Aa = B$, $Aa + Ab = C$, $Ba + Bb = A$). In this study we analyzed some disyllabic compound words extracted from the compounds that are formed not by morphemes of the same semantic category in undirected type, which involve such semantic category as EC3, ED, EF, EH, FA, FH, HD, IH, totaling 412.

¹To make it convenient for both man and machine, when we built the Chinese Character Semantic Category Information Database we introduced a concept—“ziwei” (the smallest semantic word-formation unit, that is, a character consisting of form, sound and meaning, with each ziwei having a form, a sound and a meaning). In accordance with the principles of “one-character-one-entry, one-entry-one-meaning, the combination of meaning and grammatical function, non-morpheme characters as separate entries”, the Database derived 17430 ziwei from 6763 Chinese characters defined by Chinese Standard GB2312 and classified each ziwei according to the three-level semantic classification system with *Tongyici Cilin* or Chinese Dictionary of Synonyms (the major class, the medium class and minor class).

²The Database for the Semantic Word-Formation Rules of Chinese Disyllabic Compound Words is based on *Tongyici Cilin* with more than 50000 disyllabic compound words selected from the Modern Chinese Dictionary and Chinese Neologism Dictionary. The words in the Database follow the principle of “one meaning for one word”, namely, each meaning having an entry, so a polysemous word has multiple entries.

³EC type means the semantic category of morpheme 1 is E, and the semantic category of mor-

Fig. 1.The Example of Chinese Semantic Word-formation Database

词语	素义义类1	素义义类2	词的义类
▶ 猎狗	Hd26, 捕捉猎物, 打猎的	DI05, 人家, 门第, 户头	Ae08
领队	Hf04, 带, 引	DI10, 具有某种性质的集体, 特指少年先锋队	Af10
录事	Hg11, 记载	De01, 事情, 事故	Ae01
录象	Hh03, 录制	De01, 形状, 样子	Ae17
屠伯	Hd28, 宰杀	Dn04, 在弟兄排行的次序里是老大	Ae08
屠户	Hd28, 宰杀	DI05, 人家, 门第, 户头	Ae08
推事	HI33, 推委, 推脱	DI22, 关系或责任	Ae12
秘书	HI20, 保守秘密	Dk17, 文件, 资料	Ae01
亡命	Hj38, 逃跑	De17, 生命, 寿命	Ag08

2 A Brief Introduction of GLT

Generative Lexicon Theory (GLT) was proposed in 1995. Since then it has been developed and improved continually, and evolved into a language generation theory with strong explanatory power which can be applied to various combinations ranging from the combination of words to the combination of morphemes. This paper mainly uses the qualia structure theory which is included in Generative Lexicon Theory .

The Qualia structure describes what constitutes the object, what the object refers to, how it is formed and what purposes and functions it has, respectively corresponding to constitutive role, formal role, telic role and agentive role (Pustejovsky 1995, Zuoyan Song 2011). Constitutive rolerefers to the relationship between the object and its components, which includes materials, weight, parts and compositions; Formal role refers to the properties that distinguish the object from other objects, such as orientation, size, shape and dimensions and so on; Telic role refers to the purpose and function of the object; Agentive role describes how the object is formed or produced (Pustejovsky1995, Zuoyan Song2011). Conventionalized attributeshave also been incorporated into the general qualia structure. Conventionalized attributes refer to the typical characteristics of things, including regular activities and properties related to the things. After the qualia structure was introduced to the Chinese study, YulinYuan , according to Chinese nouns' basic combination, collocationrulesand semantic interpretation in texts, presented a Chinese noun qualia structure description system, and defined ten roles (formal, constitutive, unit, evaluation, agentive, material,telic, behavior, disposal and location). The roles defined by YulinYuan are basically consistent with the above six roles. The material role can be included in constitutive role. Evalu-

pHEME 2 is C, the semantic category of the word is noun that belongs neither to E nor to C (here the letter E and C stands for the mark of the major category in Tongyici Cilin). Such as: E+C=A, E+C=B, E+C=D, the rest can be deduced in the same manner.

ationrole, behavior role, disposal role and location role can be classified under conventionalized attributes, for they all belong to people's common understanding of conventionalized usage of nouns. Take "plaster" for example. Its constitutiverole is "medicine", formal role is "solid", telic role is "cure", agentive role is "production", conventionalized attribute is "paste", unit role is "film".

3 Types of Undirected Words

After data analysis, we conclude several reasons why lexical meaning cannot be inferred from morpheme meaning. They are as follows:

3.1 Lexical meaning deriving from the metaphorical or metonymic use of morpheme.

Lexical meaning derives from the metaphorical or metonymical use of morpheme. For example, the morpheme meanings of "zhaoya" are claws(zhao) and teeth(ya), yet "zhaoya" refers to the members of the evildoers. The reason why it can refer to human beings is that teeth and claws are the powerful weapons of animal. It is based on the similarity of the telic role that people gradually came to refer to the gang of a clique as "zhaoya". "Chengchi" consists of the morpheme meaning of walls and moat, yet its lexical meaning is city. This is because the city includes city walls and moat. It is based on the correlation of the constitutive role that "cheng chi" metonymically becomes a synonym for city.

3.2 The lexical meaning bearing no metaphorical and metonymic meaning of morpheme

Under the premise that there is no metonymy or metaphor or metaphonymy, there are three reasons why the lexical meaning can't be deduced from the morpheme meanings: Firstly it is because of historical reasons that some words retain the old meaning. Due to the disruption of the etymology, some unprofessional persons are unable to infer the lexical meaning. Secondly it is due to some cultural factors. For example, "zuxia", "tongchui", "wending" are historical allusions. Thirdly there are some proper nouns like "haihong", "yibei", "hongyou", "haisong"; Fourthly there are abbreviated words, dialectal words or colloquial words.

Based on the above review, we analyzed some disyllabic nouns whose meanings have undergone metaphoric and metonymic changes from the perspectives of the qualia structure theory and the metaphonymy theory, hoping to find new rules for the "exception" that does not follow the semantic word formation rules.

4 Disyllabic Nouns with Metonymy and Metaphor

4.1 Disyllabic Nouns with Metonymy (including the Preceding, Latter or Overall Metonymy)

Morpheme Reflecting the Telic Role of Words.

That a morpheme reflects the telic role of a word means that the morpheme is the telic role of its compound word. The relationship between the morpheme meaning and the meaning of the word composed by the morphemes is shown by the fact that the morpheme reflects the function of the word meaning. It is based on the correlation of this kind of telic role that metonymy occurs. For example, “bubai” refers to “short notes”, and its function is to fill in the blank. The morpheme meaning is the telic role of the word, thus, based upon the correlation of telic role, the metonymic meaning of “bubai” here refers to “short notes” which are used to fill in the blanks. “Jiangyi” refers to the textbooks or notes which explain some reasons or meanings. The morpheme is the telic role of the word. As a result, based upon the correlation of telic role, metonymically “jiangyi” refers to the supplementary teaching materials or notes.

Explicit Telic Role.

Explicit telic role means that a morpheme can directly tell the role or function of something or someone signified by a word. Take “jingli” (manager, director of a company) for example. The primary function of “jingli” is to be responsible for the whole operation and management of the company. The specific situations in our corpus are as follow:

E+F=B Latter Metonymy: “Xiaochi” refers to the local delicacy (eating—food). Food is to be eaten, and the latter “chi” (eat) is the function of food, namely the morpheme reflects the telic role of words. Based upon the correlation of telic role, the function of food “chi” metonymically refers to food.

E+H=A Latter Metonymy: “Zhubian” refers to the main editorial staff, and “zongbian” refers to the most important editor (editing—editor). The morpheme “bian” (edit) is the telic role of the word meaning (human). Based upon the correlation of telic role, the function of the editorial staff “bianji” metonymically refers to “editorial staff”.

Overall Metonymy: “Tongyi” refers to the person who interprets for people with language barriers (interpreting—interpreter). The main function of interpreters is to provide comprehensive linguistic translation for those who know nothing about the foreign language, that is, to practice “tongyi”. The morpheme reflects the telic role of words. Based upon the correlation of this kind of telic role, the function is used metonymically to refer to “the people with this function”. “Antan” means spy (spying—

⁴The linguistic expression preceding the dash refers to the morphemes and metonymic or metaphorical meanings of morphemes. The linguistic expression succeeding the dash refers to the meanings of words.

spy). The main function of a spy is to spy on others. Similar words include “luxiang” (video), “lingdui” (leader), “shexiang” (camera), “jiechai” (escort), “tongshi” (interpreter), “ganshi” (director), “yanhu” (cover) and “baishe” (decoration), etc.

Implicit Telic Role.

Implicit telic role means that the function signified by the morpheme is related to the things or person possessing this kind of function, including both the direct telic role and the indirect telic role. In the direct telic role, what a morpheme signifies is the thing signified by the word or the direct object acted upon by people signified by the word. For example, “fuzhuang” (costume) can be used to refer to those who manage the costume. In the indirect telic role, the content after the transfer of word meaning maintains the same function as that of the content before the transfer of word meaning. For example, “xinfu” (henchman) represents the trustworthy person. The function of the trustworthy is similar to that of our heart and stomach. In our selected corpus, the direct telic role is the majority; the details are as follow:

E+D=A Overall Metonymy: “Yilu” means companion (whole journey—those who go through the whole journey). Companion’s function is to accompany others; “shuwu” refers to officers (general affairs—officer). Officer’s main function is to deal with various affairs; “tewu” refers to someone engaged in special tasks (special task—those who handle special task). The main function of a spy is to finish the special task and work. It is based upon the correlation of direct telic role that the whole morpheme takes on the metonymic meaning in which the function of the word is used to refer to the meaning of the word.

So far, according to our analysis of the corpus, there are 126 words with the morpheme reflecting their telic role and having metonymic meanings (including the preceding, latter and overall metonymy) based upon the telic role.

Morpheme Reflecting the Constitutive Role of Words.

In the disyllabic compounds, a morpheme is an integral part of a word; both the morpheme and the word are closely connected, forming a part-and-whole relationship, as well as a relationship between the typical individual and the overall category. Morphemes stimulate and reflect the constitutive role of words, thus bearing metonymic meaning based upon the correlation of constitutive role. For instance, “xumei” refers to male (beard and eyebrows—face—man), “xu” (beard) and “mei” (eyebrows) are parts of man’s face, and they are used to refer to male. In our corpus the circumstances are as follow:

Part-whole Relations.

E+C=D Latter Metonymy: “Yiyu” refers to other countries (lands within certain boundaries or territory—country). Countries are usually made up of several localities or territories. Morpheme reflects the constitutive role of words. It is based on the correlation of constitutive role that the metonymy occurs where the parts of a country are used to refer to the country

E+D=A Latter Metonymy--Overall Metonymy: “Guorong” means the most beautiful woman in the country (appearance—face—woman). “Rong” refers to appearance, which is generally manifested in the face and attached to the face. The face is an integral part of human being. Similarly, both “hongyan” and “zhuyan” refer to beauties; and “ciyan” refers to parents.

Relations between Typical Individual and Overall Category.

I+H=D Overall Metonymy: “Yange” refers to the process of development (continuity or revolution—the process of development). Things basically have two forms of development and changes. One is the continuity of the original, and the other is the revolution, both are intended to make it develop. Based upon the correlation of this kind of constitutive role, “yange”metonymically here refers to the process of development and changes of things.

Close Relations.

E+B=A Latter Metonymy: “Nvguan” refers to female Taoist priest (guan: hat—human being). Because female Taoist priests in Tang Dynasty all wore yellow guans, while worldly women wore nothing, hence “nvguan” (female hat) is used to refer to female Taoist priest.

E+D=A Overall Metonymy: “Wansheng” refers to an emperor (tens of thousands of chariots—emperor). The emperor always takes control of the country’s military power which was shown through the number of chariots in the ancient times. “Tongyan” refers to classmates (sharing one ink-stone—classmates). One ink-stone was shared by students to grind ink for brush writing. Rubbing an ink stick on the ink-stone for the ink is usually done by scholars or learners. Based upon this close correlation, “tongyan” is metonymically used to refer to classmates.

According to our present analysis of the corpus, there are 43 words whose morphemes reflecting the constitutive role of words and having metonymic meanings (including the preceding, latter and overall metonymy) based upon the constitutive role.

Morpheme Reflecting the Agentive Role of Words.

Morphemes reflect the agentive role of words, and the morpheme meaning and the meaning of words often form a cause-and-effect relation. Based upon this correlation of agentive role, the metonymic meaning of morphemes usually refers to the result. From the perspective of grammatical category, the meaning of a noun is generally derived from the meaning of a verb, that is, the result comes from action. In our selected corpus the circumstances are as follow:

E+F=D Overall Metonymy: “Jingzhuang” refers to style and decoration (elaborate assembling—style, decoration). Delicate style depends on elaborate assembling. “Cixiu” refers to a kind of handicraft (“ci” means penetrating something with a sharp object; “xiu” means sewing something with silk threads on clothes—a kind of handicraft).

F+H=D Overall Metonymy: “Nisu” is another kind of handicraft (shaping—a kind of handicraft shaped by clay).

H+A=B Overall Metonymy: “Pushou” refers to the circlet on the doorknob (animal heads made up of materials like gold, silver, bronze and so on—circlets shaped as animal heads on the doorknobs).

I+H=D Overall Metonymy: “Huibian” refers to a series of articles and documents compiled together (collecting and editing—forming articles and documents). Articles and documents are always compiled. “Bianjian” refers to books. During the ancient times, most Chinese scripts were written on bamboo or wooden slips, which must be bound together for collection. Usually two strands of hemp ropes or silk threads are used to link both the upper and lower ends of the bamboo or wooden slips where there is no word; it is much similar to knitting bamboo curtain.

H+D=B Preceding Metonymy: “Zhalei” refers to a kind of food cooked by frying (frying—food). This kind of food is always fried; similar food includes roasted food, quick-fried food, and stir-fried food and so on.

“Suibi” (essay) and “xubian” (continuation) also belong to this category. They are all referred by the agentive role of words, which are reflected by morpheme. At present, according to our corpus, there are 58 such words.

Morpheme Reflecting the Formal Role of Words.

Formal role refers to the forms of manifestation of the words constituted by morphemes, mainly including color, shape, size, etc. For example, the morpheme of “dahuang” (“da” means big, “huang” means yellow) shows the formal role (color) of the word, and thus the formal role of medicinal materials “dahuang” (yellowish-white) is used to refer to the Chinese herbal medicine. “Cangmang” refers to the sky. “Cang” is the gray color, and “mang” means “boundless”, which is a formative description of the color and size of the sky. In our selected corpus the circumstances are as follow:

E+D=B Overall Metonymy : “Huaquan” refers to the sacrificial offering (decorated with flowers or decorative pattern, circle shape—sacrificial offering). “Huaquan” (“quan” means circle) is a circle decorated with flowers and decorative patterns; “hengfu” refers to a sign or banner (something hanging above parallel to the ground and as wide as cloth fabric—sign and flag). The hanging banner is generally parallel to the ground and as wide as something like cloth fabric, etc.

H+D=B Latter Metonymy: “Fatiao” refers to a long strip of steel sheet which generates driving force with the help of elasticity when released after tight winding (strip: the elongated shape—the elongated shape of the steel sheet).

Attribute Based on the Conventionalization.

Conventionalized attributes are the typical features of things, mainly including regular activity, direct characteristic, direct space and object-dependent attribute, etc. The regular activity attribute means that the meaning of a word is the related activity it is engaged in; the direct characteristic attribute means that the meaning of a word is the main feature of things; the direct space attribute means that the meaning of a word derives from the activity space which is used to refer to things or human being, such as “jiefang”(neighborhood), in which the spatial meaning of residential places is used to refer to the residents living there; the object-dependent attribute means that the

meaning of a word usually depends on the meaning of morphemes, and that the morpheme meaning is generally concrete, yet the meaning of a word is usually abstract. For example, “moshui” is usually used to indicate whether a person has true skill and genuine knowledge or not, and a person’s knowledge is measured by how much ink the person uses while reading and writing. In our selected corpus the circumstances are as follows:

Attribute of Regular Activity.

E+H=A Overall Metonymy: “Linju” refers to people living close to one’s own dwellings (living in adjacent place—people who live in adjacent place).

F+H=B Overall Metonymy: “Tiaotuo” refers to the bracelet (jumping and breaking away—bracelet). Bracelet worn on the hand is not so tight, so it is easy to fall off the wrist if one jumps up and down; “feizou” refers to birds and animals (birds flap wings and leave—birds and animals). The basic activities of birds and animals are flying and walking (leaving).

H+D=B Overall Metonymy: “Shougong” refers to gecko (keeping the palace—gecko). It is also known as Flat-tailed House Gecko. For the gecko always climbs on the wall to predate moth, hence “shougong” is used to refer to gecko.

Feature Attribute.

E+C=A Overall Metonymy: “Qingtian” refers to honest and upright officials (the bluesky—incorrupt and upright officials maintaining the same characteristics as the blue sky).

I+H=D Overall Metonymy: “Jiqing” refers to things characterized by good luck and worthy of celebration (auspiciousness and celebration—auspicious things and something worth celebration). “Gaoming” refers to people with smart features (wise—people who maintain smart features). “Duyao” refers to a kind of grass with the characteristic of shaking in the absence of wind. The name of the grass is originated from DouBaicao in Dunhuang QuziCi, namely, “The flower blossoms with tears, the grass shakes alone without winds.” It is further proved by a quote by Shizhen Li to interpret the names of plant terms in the Ming Dynasty from Mingyibielu (Supplementary Records of Famous Physicians) in his book Bencaogangmu (Compendium of Materia Medica, Caoer, Duhuo). It goes like this, “*The grass remains still in the wind, but shakes without the wind, hence the name ‘duyao’.*”

Spatial and Temporal Attribute.

E+D=A Overall Metonymy: “Tangshang” refers to parents (the principal room which parents live in—parents); “dahu” refers to rich men (big portal—the millionaire who possesses large portal); “fangzhang” refers to the host of the Buddhist temple (the dwelling place of a Buddhist abbot—abbot)

E+C=A Latter Metonymy: “Shaonian” refers to the younger person.

Object-dependent Attribute.

E+C=D Overall Metonymy: “Shangwei” refers to glorious position (top position—

those who are in a top position).

E+H=D Latter Metonymy: “Zhuobi” is a humble term for one’s own work (pen: a writing and drawing tool—works).

I+H=D Overall Metonymy: “Xingjian” refers to good conduct (good behavior—good conduct); “fanlian” refers to the sudden change of one’s attitudes towards other people, usually changing from good to bad (complexion—attitude). People’s attitude, good or not, can easily be seen from the tone and complexion.

According to the statistics of the corpus, there are 140 words with morphemes reflecting the conventionalized attributes and having metonymic meaning (including the preceding, latter and overall metonymy) based on the conventionalized attributes.

1. Morpheme Reflecting the Role of the Unit of Words.

According to the basic combination modes, collocation rules and semantic interpretation of Chinese nouns in the text, Yulin Yuan proposed a descriptive system of Chinese noun qualia structure and defined 10 qualia roles, including the role of unit which means nouns have a unit of measurement. Take “Linli” for example. In ancient Chinese, five families can be called “Lin” and five neighbors can be called “Li”. But now “linli” is used to refer to neighborhood.

E+D=A Latter Metonymy: “Zhuwei” / “gewei” / “nawei” refers to people (wei: the unit of person—human being);

E+D=B Latter Metonymy: “Quanzhang” refers to the paper that has not been cut (“zhang”, literally meaning piece: the unit of paper—paper); “dajian” refers to the large objects (“jian”, literally meaning piece: the unit of objects—objects).

H+D=B Latter Metonymy: “Suanchi” refers to slide rules (ruler: a unit of length—a tool that is used to measure length—something like a ruler). According to the statistics of the corpus, there are 7 words which have metonymic meaning (including the latter and overall metonymy) based on the role of the unit of words.

4.2 Preceding and Latter Metaphor (including Overall Metaphor)

Similarity of Agentive Role.

I+H=D Overall Metaphor: “Zahui” refers to a motley assortment of things (mixing different food and cooking—the food that is mixed and cooked—something mixed). Morphemes reflect indirect agentive role of the word, and there are some similarities in agentive role between the cooked food that is mixed and something mixed.

Similarity of Formal Role.

H+D=B Preceding Metaphor: “Jianguo” refers to olive (“jian”: giving some expostulation to correct mistakes—“good advice is harsh to the ear” should be bitter in taste—criticism always makes one feel bitter). Something harsh to one’s ear has similarity with the bitterness of olive, this association leads to metaphor, and therefore, “jianguo” is often used to refer to olive. It is worth attention that the part of speech of “jian”

here has transformed from a verb into a word with the characteristic of an adjective. In addition, “jiansun” also refers to bitter bamboo shoot.

E+D=A Overall Metaphor: “Changtiao” refers to a tall person (something shaped like a long strip—a tall person). This kind of person has similar characteristic as a long strip, and they are both thin and long.

E+H=B Overall Metaphor: “Yudan” refers to the morning star (white and beautiful ball—the morning star). The shape of the morning star is like a beautiful and white ball.

E+D=B Overall Metaphor: “Baiye” refers to the bean products (“ye”, meaning page: piece—things with lots of pages—bean products); “baiye” is also called omasum which refers to cattle’s stomach (a thing which has a lot of layers and pieces like leaves—stomach).

Overall Metaphor: “Yuchen” is compared to snow (jade-like dust –snow). The snow is as white and flawless as jade and is as tiny as dust; “yulong” is compared to waterfall and spring (jade-like dragon—waterfall, spring). Waterfall and spring look like a long dragon and their color is like jade.

Similarity of Conventionalized Attribute.

Similarity of Feature Attribute.

“Rugou” means “falling into a trap”, namely, “gou” refers to “a trap”. According to “Anecdotes in Tang Dynasty: On Chin-shih”, when the emperor Taizong of the Tang Dynasty saw crowds of Chin-shih swarming out through the side door of the Forbidden City, he said excitedly, “All the great minds have been under my control and they will pledge loyalty to me.” “Gouzhong” originally referred to the shooting range. “Rugou” is a metaphor based upon the similarity of conventionalized attribute. “Rugou” later took on such metaphorical meaning as “to be put into prison” or “to be under one’s control”.

E+C=B Overall Metaphor: “Mangcang” refers to the sky (the vast wilderness—the sky). The sky shares the same characteristic of boundlessness with the wilderness.

E+C=D Overall Metaphor: “Jiuquan” refers to the deepest place under the ground (the underground water in the deepest place—the deepest place). “Jiuwei” refers to the world (infinite space—the world). The feature of the world is the infinite space. “Zhenggui” refers to the right way of development (right track—right way for development).

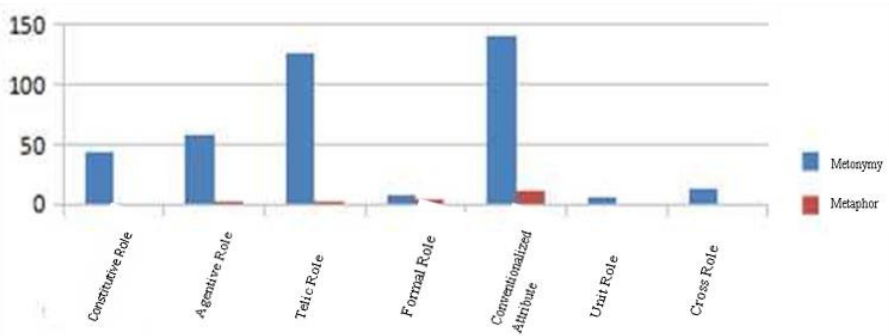
E+D=B : “Guibi” refers to fungi (“gui” literally means “bad”, “bi” means “pen”—fungi). This kind of fungi is toxic and is shaped like a pen; the metaphor here involves the overlapping of the two roles, namely, the formative role (shape) and the feature attribute. “Wangpai” refers to a person with outstanding talent (the best card in card games—the strongest ability—talent). Whether “wangpai” refers to a card or a person, they share a common feature, that is, the strongest ability.

In our selected corpus, there are 17 words whose meanings derived from metaphors.

5 Summary

After the statistics, we concluded that there are 412 words whose meaning derive from metaphor or metonymic word formation. The main qualia structure roles involved and their numbers are shown in the figure below:

Fig. 2. The Quantity of the Qualia Roles



Through the analysis, we can conclude that metaphor and metonymy compound nouns derive their new meanings from the mapping of a single domain or two domains realized by the partial or whole activation of the qualia roles by morphemes. It is obvious that there are more occurrences of metonymy than that of metaphor, namely: metonymy(395) > metaphor(17). So far as the qualia structure is concerned, we can see such an order: conventionalized attributes(140) > telic role (126) > agentive role (58) > constitutive role (43) > cross role (13) > formal role (8) > unit role (7). This result has something to do with our choice of corpus, for in our corpus, most of the morphemes belong to such semantic categories as E (features), C (time and space), H (activity), F (action) and I (phenomenon and state), and a few belong to other minor semantic category as A (person) and D (abstract things). Their characteristics, activities and actions are more related to conventionalized attributes, telic role or agentive role.

In the process of corpus analysis, there are many morphemes with metaphorical or metonymic meanings, such as "daocaoren" (scarecrow), "niren" (clay figure) and "xueren" (snowman), and they are not real man, but things just like man. Other examples are "jiaoshui" (glue) and "huazhuangshui" (lotion). They are not water, but they are of liquid form, and they all contain some water. In other words, they represent things like water. In Modern Chinese Dictionary, many words are defined with the expression "something like....". For example, one of the definitions of the "er" (ear) is "something like ears". We think that "something like water or man" should also be included in the definition of "water" and "man".

This paper did not interpret all the disyllabic nouns with qualia structure theory. On the one hand, some words (such as allusion words or proper nouns, etc.) indeed cannot be explained with qualia structure theory. On the other hand, the classification in Tongyici Cilin by Jiaju Mei is based on the introspective approach adopted by previ-

ous scholars. What's more, the semantic categories classified are controversial, and the scope of the corpus is not large. All in all, because of our limited knowledge and understanding of the qualia structure theory, this paper only selected some of the undirected words for study. In the future, the researcher will continue to expand the corpus so as to make the conclusion more conclusive and representative. The analytic process is not without personal subjective element, we are looking forward to your valuable suggestions.

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Chinese Lexical Semantics

17th Workshop, CLSW 2016, Singapore, Singapore, May

20-22, 2016, Revised Selected Papers

Dong, M.; Lin, J.; Tang, X. (Eds.)

2016, XXIV, 772 p. 125 illus., Softcover

ISBN: 978-3-319-49507-1