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# A Morphological Study of the Antonymous Compounds in Chinese: How the Word Class Changes and Why

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**A Morphological Study of the Antonymous Compounds in Chinese:  
How the Word Class Changes and Why**

**By Yihan Zhou**

**A THESIS**

**SUBMITTED IN PARTIAL FULFILLMENT OF THEREQUIREMENTS FOR THE  
DEGREE OF MASTER OF ARTS IN THE ASIAN STUDIES PROGRAM OF THE  
DEPARTMENT OF LANGUAGES, LITERATURES AND CULTURES AT SETON HALL  
UNIVERSITY, SOUTH ORAGE, NEW JERSEY**

**2015**

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THESIS TITLE:

**A Morphological Study of the Antonymous Compounds in Chinese: .  
How the Word Class Changes and Why**

BY

Yihan Zhou

APPROVED BY

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**THIS THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
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LITERATURES AND CULTURES AT SETON HALL UNIVERSITY, SOUTH  
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## ABSTRACT

The majority of Chinese words are compounds. Among compounds, there is a special kind of compounds. It is made up of two antonymous morphemes. The antonymous compounds undergo functional shift. In 40% percent of the cases, the compounds have different word classes from the morphemes. The thesis investigated how the functional shift happens and why it happens.

Based on the critique of the definitions of antonymous compounds used in others' studies, the thesis comes up with a broad definition. With the help of primary sources such as dictionaries, secondary sources, and the definition, the thesis collects 292 antonymous compounds.

The thesis found that functional shift is common for nearly 40% of the compounds change their word classes. The changes in word class are both qualitative and quantitative. Adjective and verbal morphemes are more likely to cause word class when forming compounds. However, nominal morphemes tend to retain their word class. Some antonymous compounds also have more word classes than the morphemes.

The thesis hypothesized that word class change is fundamentally determined by the parataxis in the Chinese language. Secondly, word class change is caused by the antonymous relation and metaphor and metonym. Finally, noun is more stable than adjectives and verbs and the conceptualization process of the compounds ends up being nouns.

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## Chapter 1

### Introduction

#### Background

Words are an essential part of a language. The most common way of Chinese word formation is compounding. It takes up 61% of the most frequently used words (Lü 1984; Liu and Chang 2010).

A special group of the compounding words is compounding words formed by two antonyms (Wang 1984, pp.287-290). The compounds can differ from the two components in meaning, word class, or both. For example, the antonyms *dà* (大, big) and *xiǎo* (小, small) can form a new word *dàxiǎo* (大小), meaning “size”. *Dà* and *xiǎo* are adjectives while *dàxiǎo* is a noun. Therefore, the compound *dàxiǎo* is different from the components *dà* and *xiǎo* in both meaning and word class.

Seminary Chinese grammar books have mentioned this kind of compounding words. Chao (1968) classified all the Chinese compounds into modified compounds, verb-object compounds, and coordinate compounds, etc. In the group of “coordinate compounds”, he labeled “compounds of antonyms”, where the components of the compounds are of the same word class. Li and Thompson (1981) noticed the change in word class of the antonymous compounds and listed some antonymous adjectives that can form nominal compounds. For example, *gāo* (高, tall) combines with *ǎi* (矮, short) and becomes *gāoǎi* (height).

It is normal that compounding leads to semantic change, but the functional shift (changes in word class) is special. Liao (2006) found the word class changes are much more frequently in antonymous compounds in Chinese than those in English. For example, “sooner or later” do not change word class in English because the phrase “sooner or later” and the constituents “sooner”

and “later” are all adverbs. However, its equivalent in Chinese zǎowǎn (早晚, sooner or later) changes word class. zǎowǎn is an adverb while zǎo (早, morning or early) and wǎn (night or late) are nouns and adjectives at the same time.

Some scholars studied the semantic change of the antonymous compounds and the rules that govern the sequence of the elements in antonymous compounds (Tan 1989, Lan 1998, Guo 2000, Chen 2004, Qi 2004, Wang 2006, Zhang 2006, Jin 2007, Yang 2007, Lang 2008, Shu and Huang 2008, Yuan 2010, Chen 2014). Some discussed the implication of antonymous compounds on second language acquisition (Liao 2006, Qian 2008, Gan 2009). Others traced the process of grammaticalization of antonymous compounds. (Fang and Zeng 2007, Zeng 2007, Zhao and Zhang 2013, Fan 2014, Tian 2014) However, only a few studies focus on the morphological aspects of the antonymous compounds (Liao 2006, Yang 2007, Lang 2008, Gan 2009).

### **Research purpose**

In the first place, it aims to study how the word class changes when new compounds are formed. Secondly, it accounts for the reasons that the word class changes in a particular way. Lastly, the thesis intends to provide a broad definition of antonymous compounds in Chinese.

### **Research questions and hypothesis**

1. What are antonymous compounds?

The author hopes to make a broad definition of antonymous compounds by constructing a continuum of antonymous combination rather than providing a clear-cut definition between antonymous compounds and phrases.

2. How does the word class change?

The author hypothesizes that there is a pattern of correspondence between the word class of the components and the word class of the compounds. For example, adjective components may generate adverb compounds and verb components may generate noun compounds. For example, chí (迟, late) zǎo (早, early) becomes an adverb chízǎo (迟早, sooner or later).

### 3. Why does the word class change in a specific way?

In addition to providing a pattern of change in word class, the authors also aim to account for the pattern of change.

### **Significance of the research**

The research will shed lights on Chinese morphology. As Thompson (1998) pointed out, it is difficult to determine the difference between a character and a word. The changes in word classes of the compounds can be a special case of morphology in Chinese. Explaining why the changes occur can better the understanding of Chinese morphology and the definition of Chinese words.

### **The organization of the thesis**

The thesis has five chapters. Chapter 1 provides a brief introduction of the thesis. Chapter 2 summarizes and critically reviews the existing literature. Chapter 3 explains the design of the thesis, including research questions, method, and data. Chapter 4 interprets the data in chapter 3. Chapter 5 draws conclusion and answers the research questions of the thesis.

## **Chapter 2**

### **Literature review**

#### **Introduction**

The literature review consists of three parts: previous studies on antonymous compounds, unsolved problems, and theories. Previous studies summarize the studies on different aspects of antonymous compounds. Unsolved problems are controversial topics and problematic methods in previous studies. Theories included lexical theories on compounding, semantic theories on antonyms, and morphological theories on word class. The theories will be used to define antonymous compounds from the perspective of antonym and compounds and to analyze the change in word class.

#### **Previous studies**

##### **Sequence of antonymous compounds**

Almost all the studies support that the sequence of antonymous compounds is regular and restricted by some rules (Tan 1989, Guo 2000, Liao 2006, Wang 2006, Zhang 2006, Yang 2007, Shu and Huang 2008, Gan 2009). Guo (2000) found that the sequence of antonymous compounds reflects the hierarchy and closeness of relation. Lang (2007) supported that the formation of antonymous compounds is not arbitrary, instead, it is governed by the phonological constraints, logical sequence, and sequence determined by cultural values. Shu and Huang (2008) used Pollyanna principle (a principle assuming people have bias to positive items than negative items) to explain the sequence of antonymous compounds and concluded that the constituents with positive connotation tend to appear before those with negative connotation with a few exceptions influenced by the phonology. Zhang (2010) compared the antonymous compounds in Chinese and

Korean and found both similarity and difference. Chinese and Korean share similarity in the sequence of antonymous compounds of hierarchical kinship while they are different in antonymous compounds of space and direction. It indicates that culture can influence the sequence of antonymous compounds.

### **Implication on second language acquisition**

Qian (2008) found that the characters that make up the antonymous compounds are high-frequency characters on the HSK vocabulary and character list (a guide for learners of Chinese developed by the Committee of Chinese Proficiency Test) while the compounds are low-frequency words on the HSK vocabulary and character list. Students may recognize the characters, but they may not understand a word that the characters make up, which indicates compounds are not merely a combination of the characters. Gan (2009) gave the English meaning of each constituent and asked participants to answer the meaning, the word class and the sequence of the compounds. She extracted 62 antonymous compounds from the HSK vocabulary and character list. She sampled 18 compounds from all difficulty levels, word classes, and types of semantic change. Sixty-two students from ninth to twelfth grade and aged from 14 to 18 participated in the test. The average error rate is 44.8%, it shows that the compounds are difficult for learners. In addition, according to the error rate, compounds whose meaning is the combination of the constituents are easy while compounds whose meanings are expanded are difficult. She also found students did better in judging the sequence of the compound, indicating some similarity in understanding the sequence of a word across languages. Liao (2006) tested learners' ability to recognize, comprehend and use antonymous compounds. He asked 32 international students, who are learning Chinese in college to identify antonymous compounds,

explain the meaning of compounds and put the correct compounds in sentences. He found that recognition is easy with the exception of antonymous compounds of kinship and psychologically antonymous compounds. In addition, the compounds whose meaning is partially lost are most difficult. Finally, using antonymous compounds are more difficult than recognizing and comprehending them. Guo (2014) created a leveled vocabulary list of antonymous compounds based on the frequency in HSK dynamic composition Corpus and Peking University Centre for Chinese Linguistics corpus. 139 antonymous compounds are in elementary level and 75 antonymous compounds are in the advanced level.

### **Semantic change**

Chen (2014) classified different types of semantic changes: combination, hypernym, narrowing (partial meaning), generalization, metonymy, and abstraction. She found different types of semantic change also indicated the degree of integrity of the constituents of the compounds. For example, the compound whose meaning is metonymy is more integrated than the compound whose meaning is a combination of the constituents. Yuan (2010) concluded that the metaphor and metonymy are two impetuses in semantic change of the antonymous compounds.

Liao (2006) categorized five different antonymous relations: polar opposition, complementary opposition, relation opposition, directional opposition, and psychological opposition. He discussed the relation between the types of antonymous relation and the type of semantic change. He found that combination as a type of semantic change dominates the antonymous compounds belong to polar opposition, complementary opposition, relation opposition, and directional opposition. In antonymous compounds of psychological opposition, the majority semantic change is metaphorical and metonymic.

## **Lexicalization of the antonymous compounds**

Chen (2014) found most of the antonymous compounds are the result of lexicalization and there are three ways to form antonymous compounds of a certain word class: 1. Morphemes form a phrase and the phrase forms a compound of same word class. For example, nán (男, male) and nǚ (女, female) form the noun phrase nán nǚ (男女, male and female) and then form the noun compound nán nǚ (male and female). 2. Morphemes form a phrase and the phrase forms a compound of same word class. Finally, the compound changes word class. For example, shì (是, right) and fēi (非, wrong) form the phrase shìfēi (是非). The phrase shìfēi forms a verb shìfēi, meaning “be true and be false”. The verb changes word class and becomes a noun, meaning “truth and falsehood”. 3. Morphemes form a phrase and the phrase forms a compound with multiple word classes. For example, duō (多, much) and shǎo (少, few) form the phrase duōshǎo (多少). The phrase duōshǎo forms a noun duōshǎo, meaning “quantity”. The verb changes word class and becomes both a pronoun meaning “how much” and an adverb meaning “more or less”. Zeng (2007) studies the lexicalization of typical antonymous compounds composed of nominal morphemes, verbal morphemes, and adjective morphemes. She found that the lexicalization is a long process and the meaning of the compounds have changed several times from concrete reference such as space and people to abstract reference to approximation and adverbs.

## **Functional shift**

Lang (2007) pointed out that the word class of the compounds can either be the same or different from the word class of the constituents. Liao (2006) compared the word class of the compounds and the constituents and found 40% of the constituents are nouns while 60% of the compounds are nouns. Verbs occupy the second largest number in both constituents and

compounds. There are 58 adjective constituent pairs, but there is not any adjective compound. Gan (2009) found nearly 40% of the antonymous compounds have multiple meanings and nearly 40% of the antonymous compounds have different word class from their constituents. Jin (2007) showed that metonymy is more likely to happen in antonymous compounds than in synonymous compounds and metonymy usually causes word class change. It indicates that functional shift is an important feature of antonymous compounds.

Chen (2014) studied functional shift and multiple word classes with a few cases. She found functional shift is caused by semantic change of metaphor and metonymy. The multiple word classes of compounds are made possible by the constituents, which have multiple word classes. If the semantic change of metaphor and metonymy does not happen, then there will not be functional shift and multiple word classes.

### **Word formation of antonymous pairs**

Chen (2004) classified how antonymous compounds form four-character idiom. If A-B and C-D are antonymous compounds, they can form ABCD and ACBD. If A-B is an antonymous compound and X is a morpheme, it can form AXBX, XAXB, ABXX, XXAB, AXBX, XAXB, and AXXB. If X is a morpheme indicating simultaneity and halfness, it can form XAXB. Finally, A-B can form four-character idiom by repeating itself and become AABB.

### **Unsolved problems**

#### 1) Data source

Almost all the studies used dictionaries as data sources. However, only one study used the Xiandai hanyu cidian 2012 edition, the most updated dictionary (Chen, 2014). The dictionaries used in other studies have been outdated and may cause obsolete data. For



example, ān wēi (安危) was not included in Xiandai hanyu cidian 1983 edition, but it is included in Xiandai hanyu cidian 2012 edition. Therefore, the data need to be updated.

## 2) Methods of data collection

The methods of data collection are problematic in five ways.

### a) Data collection method is problematic

#### i. Data collection process is unknown

Guo (2000), Qi (2004), Jin (2007), Qian (2008) and Guo (2014) only provided the data sources and the data, but did not explain how the data were collected.

#### ii. Antonymous dictionaries have caused a loss of data

Chen (2014) collected antonymous pairs from an antonymous dictionary, then made all possible combinations of the antonymous pairs, and finally verified all the combinations with the sixth edition Xiandai hanyu cidian publish in 2012. As a result, she found only 65 compounds as compared to 213, the average number of others' data. Tan (1989) found 176 (compounds verified by dictionary), Liao (2006) found 243, Zhang (2006) found 298, Wang (2006) found 257, Yang (2007) found 254, Zeng (2007) found 245, Lang (2008) found 94, Gan (2009) found 262, and Yuan (2010) found 91. Not all the antonymous pairs are listed in the antonymous dictionary because of the volume of the dictionary and the subjective selection of the author. Therefore, antonymous dictionaries will cause a loss of data.

#### iii. The filter process is not clear

Tan (1989), Liao (2006), Wang (2006), Zhang (2006), Zeng (2007), and Gan (2009) set up criteria for antonymous compounds such as same word class, antonymous relation and

look for them in Xiandai hanyu cidian. However, the filter process is not clear since they only provide the final data but did not state how unsuitable words were deleted.

b) The definition of compounds is debatable

Some scholars insist that compounds have a new meaning from the constituents. Lang (2008) cited a model of compounds of Feng (1998) and proposed if the meaning of the antonymous pair is merely the combination of the meaning of the constituents, then the antonymous pair should not be counted as a compound. Yang (2007) proposed that new meaning has to occur in the antonymous compounds. If an antonymous combination has multiple meanings, it must be a compound. If an antonymous combination has a single meaning and the meaning is different from the constituents, it is a compound. She termed those antonymous compounds whose meaning is the combination of the constituents “quasi-antonymous compounds”.

Others suggest that antonymous pairs, which combine the meaning of the constituents, should also be counted as a compound. Tan (1989) argued antonymous pairs are compounds even though their meaning is a combination of the constituents for three reasons. First, there are non-antonymous compounds whose meaning is also combination of the constituents such as yì (意, meaning) huì (会, understand) form yìhuì (意会, understand meaning). Secondly, there is phonological change in antonymous pair. They are in the same flow of speech. Lastly, unlike phrases, the sequence of the antonymous pairs is usually not changeable. Zhang (2006) suggested view all the antonymous pairs as compounds even though the meaning of some compounds are merely a combination of the morphemes. According to prototype theory in cognitive linguistics, Jin (2007)

proposed a continuum of antonymous phrases and antonymous compounds. The transition from phrases to compounds is gradual and the boundary between phrases and compounds is obscure. Chen (2014) included antonymous pairs, which combine the meaning of the constituents, in the word list. She believed those pairs have become compounds, but they are at a low level of lexicalization.

c) Standards on the relation between the morphemes of antonymous compounds are different

i. Antonymous relation

Wang (2006) argued that antonymous relation can exist in items from the same category such as fù mǔ (父母, father and mother) and fū qī (夫妻, husband and wife). However, in Yang (2007)'s study, she deleted xù bá (序跋, prologue in a book and epilogue in a book) because they are in the same category.

ii. Confuse relevant relation with antonymous relation

Yang (2007) included fàn cài (饭菜, rice and dish), běn xī (本息, principal and interest) and běn lì (本利, principal and interest) in her list. The morphemes are more likely to be relevant than to be antonymous.

iii. Arbitrary selection

Yuan (2010) deleted lái huí (来回, come and return), which obviously has directional opposition.

iv. Morphological relation

In Y.R. Chao's classification (1968, 376), antonymous compounds fall under the category of coordinate compounds, namely, the morphemes of the compounds should be

parallel and in the same word class.

Qi (2004) and Zhang (2006) both propose that the morphemes of the antonymous compounds should be in the same word class. However, Yang (2007) included adjective-noun morpheme combination and adjective-verb morpheme combination in her data. Gan (2009) believed that word *dòngjing* is composed by a verb *dòng* and an adjective *jing*. However, Qi (2004) pointed out that *dòng* and *jing* are both verbal morphemes.

Zeng (2007) listed *nǚ'ér* (女儿) and *nǚ'shì* (女士) in the data. Gan (2009) pointed out both words are not in coordinated form. Wang (2006) pointed out *nǚ'ér* (女儿) is a modified compound.

d) The criteria of data selection are different

i. The case of neutral tone

Y.R. Chao (1968) pointed out neutral tone is a feature of antonymous compounds. Jin (2007) placed antonymous compounds with phonological weakening as the highest level of lexicalization, namely, phonological change indicates the word is a compound. However, the studies of Zeng (2007), Yuan (2010) and Lang (2008) did not differentiate words with neutral tone and words without neutral tone. They treated *dōngxī* and *dōngxì* (neutral tone), *duō shǎo* and *duō shao* (neutral tone) as the same word.

ii. Kinship term

Jin (2007) deleted antonymous words about kinship because he believed they are irrelevant to the study.

3) Functional shift

Lang (2007) gave a few examples on word class change, showing two nouns, two verbs and

two adjectives can form a compound either in the same word class or in other category. However, he did not conduct a quantitative study. Liao (2006) calculated and compared the word class of the morphemes and compounds. He only reveals a trend but not the pattern of change in word class. Yang (2007) made a detailed mapping between the word class of the morphemes and the compounds; however, she did not explain why it happened and her data were problematic. She used 326 compounds instead of 254 compounds, which are verified by her standards such as antonymous relation. Chen (2014) discussed the effect of metaphor and metonym on word class change and multiple word classes.

Therefore, we need to discover a detailed mapping between the word class of the morphemes and the compounds with authentic data. More importantly, we need to provide a more complete explanation.

Although some scholars noticed metaphor and metonymy as impetus to word class change, they did not answer how metaphor and metonymy are possible and what else can change the word class. The thesis focuses on change in word class and hypothesizes that the morpheme, word class, antonymous relation, metaphor and metonymy influence the word class together. They are labeled as “factors” and changes in word class and meaning are labeled as “results”. The thesis will explore the interaction between factors (the morpheme, word class, antonymous relation, metaphor and metonymy) and study how they contribute to the results (functional shift).

**Table 2- 1: Factors and results in functional shift**

Factors	Results
Types of morphemes	Functional shift
Word class of morphemes	
Types of antonymous relation	
Metaphor and metonymy	

## Theories

### Boundary between words and phrases

An important yet challenging question is differentiating words from phrases. The author agrees with the idea that the boundary between words and phrases is obscure and a continuum of antonymous pairs can help understand antonymous compounds.

Yang (2007, 35) differentiated antonymous pairs, temporary antonymous phrases, long-term antonymous phrases, antonymous compounds, antonymous compounds that can be used independently. Jin (2007) compared degree of lexicalization of compounds based on semantic, word class, and phonological change: combination of meaning < metaphorical meaning < word class change < partial meaning < phonological weakening. Shu and Huang (2008) proposed a hierarchy of degree of lexicalization of compounds based on semantic change: combination of meaning < partial meaning < synthesis of meaning < new meaning.

The continuum goes beyond the scope of antonymous compounds and takes antonymous co-occurrence, antonymous phrases, and antonymous words into account.

**Table 2- 2: Continuum of antonymous pairs**

	Number of characters	Grammatical unit
Antonymous co-occurrence	5 and more	Sentence
Antonymous phrases	5 and more	Phrase
Antonymous words	3~4	Word
Antonymous compounds	2	Word

## Theories on antonyms

Instead of using antonym dictionary, the thesis uses theories to judge whether the morphemes are antonyms.

D. A. Cruse (1986) categorized different types of antonyms into complementaries, antonyms, and directional oppositions. Liao's framework has five types: polar, complementary, relation, and psychological antonyms. Gan (2009) added social and habitual antonyms to complementary, polar, and directional antonyms and created a framework of four antonymous relations. She merged relation antonyms into directional antonyms.

As pointed out before, culture plays a role in antonymous compounds (Lang 2007, Zhang 2010). Therefore, cultural and social antonyms should be listed. At the same time, the author agrees with Gan (2009)'s combination of relation antonyms and directional antonyms. It is worth noting that some compounds such as kinship term have the features from both directional antonyms and cultural antonyms. However, because they are defined by culture, they should fall in the category of cultural and social antonyms. For example, *xiōng dì* (兄弟, elder brother and younger brother) in English is one word "brother". Chinese has distinctive word for each item because of culture. Therefore, unlike the previous studies, kinship terms will be counted as cultural and social antonyms.

The author constructs a framework for the study based on D. A. Cruse (1986)'s classification:

- I. Complementary: It refers to two mutually exclusive items. They are not gradable. They can neither be present together nor absent together.
- II. Polar: It refers to two opposite items. They are gradable.
- III. Directional: It refers to two items, which have opposite direction on a path. The path can be

concrete such as spatial and abstract such as relation.

IV. Social and cultural: It refers to two words, which people in a certain culture will assign opposite connotation, roles, hierarchy, etc. to them.

**Table 2- 3: Framework of antonymous relation**

	Relation of the antonymous pairs	Has grey area	Gradable	Universal
Complementary	Mutually exclusive	No	No	Yes
Polar	Not mutually exclusive	Yes	Yes	Yes
Directional	Mutually dependent	Yes	No	Yes
Social and cultural	Not mutually exclusive	Yes	No	No

Source: *Lexical semantics* (1986 edition) by D. A. Cruse.

Notes: “Grey area” refers to the possibility that a state can be in the middle of the two antonymous pairs. “Gradable” means the antonymous pairs can be modified by “very”. “Universal” indicates the antonymous relation is true in all cases.

### **Metaphor and metonymy**

George Lakoff (1980) categorized metaphor into three kinds:

- I. Structural metaphor: metaphor based on similar structures
- II. Orientational metaphor: metaphor related to spatial orientation
- III. Ontological metaphor: metaphor linking intangible things to concrete substance

Lakoff also gave some examples of metonymy: the part for the whole, producer for product, object used for user, institution for people responsible, the place for the institution, and the place for the event. Jin (2006) revised Lakoff’s categorization: part-whole configuration, action-agent/employment configuration, location- person/thing configuration, action-action-related event configuration.

The author summarizes the categorization into:

- I. Part- whole configuration
- II. Action – agent / event configuration



### III. Location – agent/event configuration

The previous studies did not look into the interplay between antonymous relation and metaphor and metonym. Therefore, further study is needed to show why word class change.

#### **Summary**

Chapter 2 reviews the existing literature and identifies remaining questions for antonymous compounds. It also includes the theories on boundary between compounds and phrases, antonymous relation, and metaphor and metonymy. A framework has been constructed to explore the relation between types of morphemes, word class of morphemes, types of antonymous relation, metaphor and metonymy and the functional shift.

## Chapter 3

### Data collection

#### Data source

There are four data sources in the study, two are primary sources and the other two are secondary sources. The primary sources are two dictionaries, one is the sixth edition of Xiandai hanyu cidian (Modern Chinese dictionary), published in 2012 and the other is an online dictionary named Handian (<http://www.zdic.net/>). Xiandai hanyu cidian is the most updated and most authoritative dictionary in China. The secondary sources are word lists in the previous studies and the words cited in grammar books and lexicalization studies.

#### 1. Xiandai hanyu cidian

The large volume, detailed phonological representation, and word class tagging of Xiandai hanyu cidian make it a perfect data source for antonymous compounds. Each entry in the dictionary will be examined carefully by the criteria listed below in the method part. If a word meets all the criteria, it will be counted as an antonymous compound.

The followings are the features of Xiandai hanyu cidian that are helpful to data selection.

#### 1) Volume

The dictionary has more than 13, 000 entries of characters and 69,000 entries of words.

#### 2) Entry arrangement

Single-character entries were in large font and multiple-character entries were be put in “[ ]”, e.g., A [AB] [ABC] [ABCD]

For multiple-character entries, if two words have the same characters but different meaning or pronunciation, they are counted as different entries and differentiated by the superscript, e.g.,

[AB]<sup>1</sup> and [AB]<sup>2</sup>.

### 3) Phonology

Entries with neutral tones are treated as independent entries.

A letter “r” at the end of the Pinyin of the word indicates the word has an r-colored vowel.

Unstressed characters in words will be marked by a dot in front of it, e.g., in the word A·B, character B is unstressed.

In multiple-character entries, a “/” in-between the words indicate that the words are separable and something can be inserted between the morphemes of the words, e.g., we can insert C in [A//B] and form [ACB].

For four-character idioms, a “-” in the middle indicated it can be divided into two disyllables.

### 4) Explanation

A diamond shape or an explicit mention of “metaphor” indicates metaphorical meaning.

### 5) Word class tagging

There are 12 kinds of word classes: noun, verb, adjective, numeral, measure word, pronoun, adverb, preposition, conjunction, auxiliary, exclamation, and onomatopoeia. The word classes of the phrases, four-character idioms and other idioms are not tagged.

## 2. Handian

Handian is an online dictionary compiled by volunteers. It is dedicated to learners and researchers of Chinese. It includes 75,983 characters and 361,998 words and phrases. It has two advantages over Xiandai hanyu cidian: it has tagged word class for each character and it provides English explanation for all characters and words. It is used to identify the word class and provide

English explanations of the morphemes and the compounds.

### 3. Word lists in literature

The study also uses the word lists in the literature. As noted in the literature review, some studies did not explain how the data were collected. In the present study, only word lists with clear data sources and methods will be included. The study will use data from Tan (1989), Liao (2006), Zhang (2006), Wang (2006), Yang (2007), Zeng (2007), Lang (2008), Gan (2009), Yuan (2010), and Chen (2014). The word lists contain a large number of potential antonymous compounds; however, as mentioned in literature review, many of the studies have problematic process of data selection. Therefore, their data will be further verified before using.

**Table 3- 1: A brief introduction of the word lists in the literature**

	Data source	Method	Amount of antonymous compounds
Tan (1989)	1983 Xiandai hanyu cidian second edition	Antonymous pairs -> verified by dictionary -> result	176
Liao (2006)	2005 Xiandai hanyu cidian 5 <sup>th</sup> edition	Dictionary -> filtered by criteria on morphology and antonyms -> results	243
Zhang (2006)	2002 Xiandai hanyu cidian fourth edition	Dictionary -> filtered by criteria on system, semantics, grammar, phonology, and pragmatics -> results	298

Wang (2006)	2005 Xiandai hanyu cidian 5 <sup>th</sup> edition	Dictionary -> filtered by criteria on antonyms and coordination -> results	257
Yang (2007)	Antonymous dictionary: 2002 Fanyici cilin by Zhiyi Zhang, 1989 Fanyici cidian by Jinti Han Dictionary: 2002 Xiandai hanyu cidian fourth edition, Hanyu dacidian	Antonymous dictionary -> antonymous pairs -> subjective selection by the author -> verified by the dictionary -> filtered by criteria on antonyms and compounding	254
Zeng (2007)	2005 Xiandai hanyu cidian 5 <sup>th</sup> edition	Dictionary -> filtered by criteria on antonyms and compounding -> results	245
Lang (2008),	1988 Fanyi cidian (antonymous dictionary)by Yushan Lin	Antonymous dictionary -> antonymous pairs -> filtered by a criterion on compounding -> results	94
Gan	2005 Xiandai	Dictionary -> filtered by criteria	262

(2009)	hanyu cidian 5 <sup>th</sup> edition	on antonyms, morphemes, and compounding -> results	
Yuan (2010)		Yang (2007)'s data -> criteria on antonyms and compounding -> data	91
Chen (2014)	Fanyici cidian, Xiandai hanyu cidian sixth edition	Antonymous dictionary -> antonymous pairs -> dictionary-> filtered by a criterion on word class -> results	66

#### 4. Words in literature

The words in seminary Chinese grammar books by Y.R. Chao (1968), Li Wang (1984), Li and Thompson (1981) are worth studying. In addition, some did detail studies on the lexicalization of a few words, tracing the lexical development of a single word in history. It increased the confidence in identifying them as antonymous compound. The words also need to be verified.

#### Method

##### 1. Criteria on verification

The criteria will be used to look for antonymous compounds in the primary source and verify the word lists and words in literature. As discussed in literature review, there will be several criteria to verify if a word is an antonymous compound:

- a) the word is listed in the entry of 2012 Xiandai hanyu cidian sixth edition
- b) the word is disyllabic

- c) the constituents of the word are in the same word class
- d) the constituents of the word are coordinated
- e) the constituents of the word are content words
- f) the constituents of the word are in one of the antonymous relations:
  - a) complementary opposition
  - b) polar opposition
  - c) directional opposition
  - d) social and cultural opposition

In the process of data collection, the author finds two kinds of exceptions to the standards mentioned in the literature review, one are words in dialects, and the other are short-form words.

The words in dialects are different from those in Mandarin. Dialectal words are marked with <方 (fāng, dialect)> in the entry of Xiandai hanyu cidian. In addition, antonymous compounds can have multiple meanings and sometimes one of the meanings is the meaning of another word that they stand for. In fact, if they stand for other words instead of themselves, they are not disyllabic words and they should not be considered as antonymous compounds. For example, one of the meanings of shuǐ huǒ (水火, water and fire) is shuǐ shēn huǒ rè (水深火热, live in great misery). In this case, shuǐ huǒ is no longer an antonymous compound, but a short form of shuǐ shēn huǒ rè.

Therefore, two more standards need to be added to exclude the words in dialects and exclude the meanings that come from short-form of other words:

- g) the constituents of the word are in Mandarin Chinese

h) the word is not a short form of another word

## 2. Data collection process

The data collection process has four stages:

- 1) Look for characters with multiple-character entries in 2012 Xiandai hanyu cidian sixth edition  
-> verify each entry with the criteria -> generate antonymous compounds List A
- 2) Combine existing word lists in studies on antonymous compounds -> verify each entry with the criteria -> generate antonymous compounds List B
- 3) Collect words in studies on antonymous compounds -> verify each entry with the criteria -> generate antonymous compounds List C
- 4) Combine word List A, B, and C to create the final word list

## Results

### List A

5,506 characters with word entries in Xiandai hanyu cidian were examined and 235 items were found. Table 3-2 shows how the 235 items meet the requirements. The first column shows the words. The second column provides the page number, indicating the words are included in Xiandai hanyu cidian. The third column verifies if the word is from a dialectal origin. The fourth column shows if the word is a short form of another word. The fifth column “Conte” stands for content word. “Coor” in the sixth column is short for “coordination”. “Y” and “N” in the third to sixth column stands for “Yes” and “No”, indicating the words either meet the requirements of dialectal word, short form, content word, and coordination or not. “Cla” in the seventh column represents “word class”. In the column, “A” stands for adjective, “V” stands for verb, “N” stands for noun, “P” stands for pronoun, and “ADV” stands for adverb. The meanings of the constituents



are given separately in the eighth column. The last column shows the antonymous relation between the constituents, “C” stands for complementary, “P” represents polar, “D” is directional, and “S” indicates social and cultural.

**Table 3- 2: List A**

Word	Page	Dia	Sho	Conte	Coor	Cla	Meaning of the constituents	Antonym
安危	8	N	N	Y	Y	A	safe, dangerous	P
捭阖	30	N	N	Y	Y	V	open, close	D
板眼	35	N	N	Y	Y	N	accented beat, unaccented beat	C
褒贬	43	N	N	Y	Y	V	praise, degrade	P
褒贬	43	N	N	Y	Y	V	praise, degrade	P
本末	61	N	N	Y	Y	N	root, top of tree	D
彼此	68	N	N	Y	Y	P	that, this	P
标本	83	N	N	Y	Y	N	top of tree, root	D
表里	86	N	N	Y	Y	N	surface, inside	D
宾东	90	N	N	Y	Y	N	guest, host	S
宾主	90	N	N	Y	Y	N	guest, host	S
薄厚	101	N	N	Y	Y	A	thin, thick	P
裁缝	119	N	N	Y	Y	V	cut, sew	D
裁缝	119	N	N	Y	Y	V	cut, sew	D
操纵	128	N	N	Y	Y	V	hold, let go	D
拆建	139	N	N	Y	Y	V	destruct, construct	D
长短	145	N	N	Y	Y	A	long, short	P
唱和	150	N	N	Y	Y	V	sing, accompany	D
朝野	154	N	N	Y	Y	N	imperial court, ordinary people	S
潮汐	154	N	N	Y	Y	N	morning tide, night tide	C
噂	157	N	N	Y	Y	N	ghost in east, ghost in west	D
沉浮	159	N	N	Y	Y	V	sink, float	D
晨昏	161	N	N	Y	Y	N	morning, dusk	D
成败	164	N	N	Y	Y	V	succeed, fail	C
承转	168	N	N	Y	Y	V	receive, pass	D
城郭	168	N	N	Y	Y	N	interior city, exterior city	D
乘除	169	N	N	Y	Y	V	multiply, divide	D
迟早	174	N	N	Y	Y	A	late, early	P
出处	188	N	N	Y	Y	V	be an official, be a recluse	S
出没	190	N	N	Y	Y	V	appear, hide	C

出纳	190	N	N	Y	Y	V	take out, take in	D
出入	190	N	N	Y	Y	V	go out, go in	D
传受	201	N	N	Y	Y	V	teach, learn	D
春秋	208	N	N	Y	Y	N	spring, autumn	D
雌雄	214	N	N	Y	Y	A	female, male	C
粗细	220	N	N	Y	Y	A	thick, thin	P
存亡	225	N	N	Y	Y	V	live, die	C
大小	246	N	N	Y	Y	A	big, small	P
旦夕	256	N	N	Y	Y	N	morning, dusk	D
得失	271	N	N	Y	Y	V	gain, lose	C
弟兄	286	N	N	Y	Y	N	younger brother, elder brother	S
东西	310	N	N	Y	Y	N	east, west	D
东西	310	N	N	Y	Y	N	east, west	D
动静	312	N	N	Y	Y	V	move, calm	C
短长	324	N	N	Y	Y	A	short, long	P
多少	334	N	N	Y	Y	A	much, little	P
多少	334	N	N	Y	Y	A	much, little	P
儿女	343	N	N	Y	Y	N	male, female; son, daughter	C
反正	362	N	N	Y	Y	A	obverse, reverse	D
方圆	366	N	N	Y	Y	N	square, circle	S
肥瘦 儿	376	N	N	Y	Y	A	fat, thin	P
凤凰	394	N	N	Y	Y	N	male legendary bird, female legendary bird	C
夫妇	396	N	N	Y	Y	N	husband, wife	C
夫妻	396	N	N	Y	Y	N	husband, wife	C
浮沉	400	N	N	Y	Y	V	float, sink	D
俯仰	404	N	N	Y	Y	V	face down, face up	D
父母	405	N	N	Y	Y	N	father, mother	C
甘苦	420	N	N	Y	Y	A	bitter, sweet	P
纲目	426	N	N	Y	Y	N	general outline, detailed outline	P
高矮	429	N	N	Y	Y	A	tall, short	P
高低	429	N	N	Y	Y	A	high, low	P
割接	437	N	N	Y	Y	V	cut, join	D
公私	451	N	N	Y	Y	A	public, private	C
供求	454	N	N	Y	Y	V	supply, need	D
供需	454	N	N	Y	Y	V	supply, need	D
购销	461	N	N	Y	Y	V	buy, sell	D
顾盼	471	N	N	Y	Y	V	look backward, look forward	D

官兵	479	N	N	Y	Y	N	official, soldier	S
光阴	485	N	N	Y	Y	N	light, shadow	C
广袤	487	N	N	Y	Y	A	length from east to west, length from south to north	D
规矩	489	N	N	Y	Y	N	compasses, carpenter's square	S
鬼神	491	N	N	Y	Y	N	ghost, god	P
贵贱	492	N	N	Y	Y	A	expensive, cheap	P
寒热	510	N	N	Y	Y	A	cold, hot	P
寒暑	510	N	N	Y	Y	A	cold, hot	P
行列	514	N	N	Y	Y	N	row, column	D
好歹	517	N	N	Y	Y	A	good, bad	P
好恶	520	N	N	Y	Y	V	like, dislike	P
黑白	529	N	N	Y	Y	A	black, white	S
横竖	534	N	N	Y	Y	A	horizontal, vertical	D
厚薄	544	N	N	Y	Y	A	thick, thin	P
呼吸	546	N	N	Y	Y	V	exhale, inhale	D
缓急	567	N	N	Y	Y	A	slow, quick	P
毁誉	580	N	N	Y	Y	V	criticize, praise	P
吉凶	604	N	N	Y	Y	A	auspicious, inauspicious	P
嫁娶	627	N	N	Y	Y	V	woman marry man, man marry woman	D
稼穡	627	N	N	Y	Y	V	sow, reap	D
剪接	633	N	N	Y	Y	V	cut, join	D
奖惩	643	N	N	Y	Y	V	reward, punish	P
将士	644	N	N	Y	Y	N	general, soldier	S
交接	646	N	N	Y	Y	V	pass, receive	D
教学	649	N	N	Y	Y	V	teach, learn	D
教学	656	N	N	Y	Y	N	teach, learn	D
接转	659	N	N	Y	Y	V	receive, pass	D
姐妹	665	N	N	Y	Y	N	elder sister, younger sister	S
借贷	669	N	N	Y	Y	V	borrow, lend	D
进出	677	N	N	Y	Y	V	come in, come out	D
进退	677	N	N	Y	Y	V	move forward, move backward	D
巨细	703	N	N	Y	Y	A	huge, small	P
军民	713	N	N	Y	Y	N	soldier, civilian	S
开关	718	N	N	Y	Y	V	open, close	D
快慢	753	N	N	Y	Y	A	quick, slow	P
宽窄	755	N	N	Y	Y	A	wide, narrow	P
来去	769	N	N	Y	Y	V	come, go	D
劳逸	777	N	N	Y	Y	A	industrious, leisurely	P
老少	780	N	N	Y	Y	A	old, young	P

老小	781	N	N	Y	Y	A	old, young	P
老幼	782	N	N	Y	Y	A	old, young	P
冷暖	789	N	N	Y	Y	A	old, warm	P
离合	791	N	N	Y	Y	V	depart, reunion	D
利弊	800	N	N	Y	Y	N	advantage, disadvantage	P
利钝	800	N	N	Y	Y	A	sharp, blunt	P
利害	800	N	N	Y	Y	N	profit, loss	P
利害	800	N	N	Y	Y	N	profit, loss	P
录放	844	N	N	Y	Y	V	record, play	D
买卖	866	N	N	Y	Y	V	buy, sell	D
矛盾	877	N	N	Y	Y	N	spear, shield	C
卯榫	877	N	N	Y	Y	N	mortise, tenon	D
明灭	909	N	N	Y	Y	V	brighten, die out	C
男女	931	N	N	Y	Y	N	man, woman	C
南北	931	N	N	Y	Y	N	south, north	D
内外	940	N	N	Y	Y	N	inside, outside	D
浓淡	956	N	N	Y	Y	A	heavy, light	P
平仄	1003	N	N	Y	Y	N	level tone, oblique tone	C
婆媳	1006	N	N	Y	Y	N	mother-in-law, daughter-in-law	S
铺盖	1009	N	N	Y	Y	V	spread, cover	D
起降	1024	N	N	Y	Y	V	rise, fall	D
起落	1024	N	N	Y	Y	V	rise, fall	D
阡陌	1031	N	N	Y	Y	N	path leading to south and north, path leading to east and west	D
前后	1035	N	N	Y	Y	N	front, back	D
乾坤	1037	N	N	Y	Y	N	heaven, earth	D
亲戚	1051	N	N	Y	Y	N	relative by blood, relative by marriage	S
轻重	1057	N	N	Y	Y	A	light, heavy	P
曲直	1070	N	N	Y	Y	A	curved, straight	P
取舍	1073	N	N	Y	Y	V	obtain, abandon	D
去就	1074	N	N	Y	Y	V	leave the position, assume the position	D
拳脚	1078	N	N	Y	Y	N	fist, feet	D
人物	1093	N	N	Y	Y	N	people, things	C
日夜	1098	N	N	Y	Y	N	day, night	D
日月	1099	N	N	Y	Y	N	sun, moon	D
荣辱	1099	N	N	Y	Y	N	honor, shame	P
枘凿	1110	N	N	Y	Y	N	tenon, mortise	D
僧尼	1124	N	N	Y	Y	N	monk, nun	C
僧俗	1124	N	N	Y	Y	N	monk, ordinary people	C

上下	1141	N	N	Y	Y	N,V	top, bottom; go up, go down	D
舍得	1147	N	N	Y	Y	V	abandon, gain	D
伸缩	1151	N	N	Y	Y	V	stretch, contract	D
身心	1152	N	N	Y	Y	N	body, mind	S
参商	1153	N	N	Y	Y	N	Constellations Orion, Constellations Antares	S
深浅	1154	N	N	Y	Y	A	deep, shallow	P
升降	1159	N	N	Y	Y	V	ascend, descend	D
生死	1163	N	N	Y	Y	V	life, death	C
胜败	1168	N	N	Y	Y	V	win, lose	C
师弟	1171	N	N	Y	Y	N	teacher, student	S
时空	1177	N	N	Y	Y	N	time, space	D
始终	1183	N	N	Y	Y	N	beginning, end	D
士女	1184	N	N	Y	Y	N	unmarried man, unmarried woman	C
是非	1191	N	N	Y	Y	A	right, wrong	C
是否	1191	N	N	Y	Y	ADV	certainly, not	C
收发	1193	N	N	Y	Y	V	receive, send	D
手脚	1196	N	N	Y	Y	N	hand, feet	D
手足	1198	N	N	Y	Y	N	hand, feet	D
首尾	1199	N	N	Y	Y	N	head, tail	D
授受	1202	N	N	Y	Y	V	teach, learn	D
舒卷	1205	N	N	Y	Y	V	stretch, roll up	D
输赢	1206	N	N	Y	Y	V	lose, win	C
水火	1219	N	N	Y	Y	N	water, fire	S
睡觉	1223	N	N	Y	Y	V	sleep, wake	C
朔望	1227	N	N	Y	Y	N	the first day of lunar month, the fifteenth day of lunar month	D
死活	1232	N	N	Y	Y	V	die, live	C
松紧	1236	N	N	Y	Y	A	loose, tight	P
夙夜	1240	N	N	Y	Y	N	day, night	C
损益	1248	N	N	Y	Y	V	decrease, increase	D
锁钥	1251	N	N	Y	Y	N	lock, key	D
题跋	1279	N	N	Y	Y	N	prologue, epilogue	D
天地	1283	N	N	Y	Y	N	heaven, earth	D
天壤	1285	N	N	Y	Y	N	heaven, earth	D
吞吐	1326	N	N	Y	Y	V	swallow, spit	D
往返	1346	N	N	Y	Y	V	go, return	D
往来	1346	N	N	Y	Y	V	go, come	D
往还	1346	N	N	Y	Y	V	go, return	D
忘记	1347	N	N	Y	Y	V	forget, remember	C

文武	1364	N	N	Y	Y	N	civilian post, military post	S
问答	1367	N	N	Y	Y	V	ask, answer	D
遐迩	1402	N	N	Y	Y	A	far, near	P
先后	1408	N	N	Y	Y	N, A	early, late; former, latter	D
向背	1425	N	N	Y	Y	V	face to, face with the back	D
消息	1429	N	N	Y	Y	V	decrease, increase	D
消长	1429	N	N	Y	Y	V	decrease, increase	D
霄壤	1430	N	N	Y	Y	N	heaven, earth	D
兴衰	1454	N	N	Y	Y	V	thrive, decline	D
兴亡	1454	N	N	Y	Y	V	thrive, die	D
行止	1458	N	N	Y	Y	V	move, stop	C
兄弟	1462	N	N	Y	Y	N	elder brother, younger brother	S
兄弟	1462	N	N	Y	Y	N	elder brother, younger brother	S
休戚	1464	N	N	Y	Y	A	happy, sorrowful	P
修短	1465	N	N	Y	Y	A	long, short	P
虚实	1469	N	N	Y	Y	A	virtual, concrete	P
序跋	1471	N	N	Y	Y	N	prologue, epilogue	D
轩轻	1473	N	N	Y	Y	N	high front carriage, high back carriage	D
妍媸	1496	N	N	Y	Y	N	beauty, ugliness	P
炎凉	1497	N	N	Y	Y	A	hot, cold	P
扬弃	1505	N	N	Y	Y	V	promote, abandon	D
依违	1532	N	N	Y	Y	V	obey, disobey	D
异同	1543	N	N	Y	Y	A	different, same	C
抑扬	1543	N	N	Y	Y	V	press, lift	D
因果	1548	N	N	Y	Y	N	cause, effect	D
阴阳	1550	N	N	Y	Y	N	shadow, sun	C
隐现	1556	N	N	Y	Y	V	hide, appear	C
盈亏	1561	N	N	Y	Y	V	increase, reduce	D
优劣	1570	N	N	Y	Y	A	good, bad	P
幽明	1571	N	N	Y	Y	A	dim, bright	C
宇宙	1589	N	N	Y	Y	N	space, time	D
鸳鸯	1597	N	N	Y	Y	N	male mandarin duck, female mandarin duck	C
渊博	1597	N	N	Y	Y	A	deep, broad	D
原委	1600	N	N	Y	Y	N	origin, flow	D
源流	1603	N	N	Y	Y	N	origin, flow	D
远近	1604	N	N	Y	Y	A	far, near	D
臧否	1622	N	N	Y	Y	A	good, evil	P
凿枘	1624	N	N	Y	Y	N	mortise, tenon	D
早晚	1624	N	N	Y	Y	N,A	morning, evening; early,	D

							late	
皂白	1625	N	N	Y	Y	N	black, white	S
增删	1629	N	N	Y	Y	V	add, delete	D
涨落	1641	N	N	Y	Y	V	rise, fall	D
朝夕	1644	N	N	Y	Y	N	morning, dusk	D
真伪	1653	N	N	Y	Y	A	true, fake	C
枝干	1667	N	N	Y	Y	N	branch, trunk	D
昼夜	1695	N	N	Y	Y	N	day, night	C
主次	1699	N	N	Y	Y	A	main, subordinate	C
主从	1699	N	N	Y	Y	A	main, following	C
装卸	1713	N	N	Y	Y	V	load, unload	D
子女	1723	N	N	Y	Y	N	man, woman; sun, daughter	C
姊妹	1723	N	N	Y	Y	N	elder sister, younger sister	S
纵横	1734	N	N	Y	Y	A	vertical, horizontal	D
左右	1744	N	N	Y	Y	N	left, right	D

Source: *Xiandai hanyu cidian* 2012 sixth edition.

#### List B

The total number of the words collected from all the word lists in studies on antonymous compounds is 1,986. After deleting the repetitive items, there are 426 items. Among the 426 items, only 321 items are included in *Xiandai hanyu cidian*. Finally, there are 101 words remaining after deleting the repetitive items included in List A. 57 words were extracted. Below is the extraction process of the 101 words.

The first column shows the words. The second column provides the page number, indicating the words are included in *Xiandai hanyu cidian*. The third column verifies if the word is from a dialectal origin. The fourth column shows if the word is a short form of another word. The fifth column “Conte” stands for content word. “Coor” in the sixth column is short for “coordination”. “Y” and “N” in the third to sixth column stands for “Yes” and “No”, indicating the words either meet the requirements of dialectal word, short form, content word, and coordination or not. “Cla” in the seventh column represents “word class”. In the column, “A” stands for adjective, “V” stands

for verb, “N” stands for noun, “P” stands for pronoun, and “ADV” stands for adverb. The meanings of the constituents are given separately in the eighth column. The last column shows the antonymous relation between the constituents, “C” stands for complementary, “P” represents polar, “D” is directional, and “S” indicates social and cultural.

**Table 3- 3: List B**

Word	Page	Dia	Sho	Conte	Coor	Cla	Meaning of the constituents	Antonym
跋涉	19	N	N	Y	Y	V	cross mountain, cross water	N
本利	61	N	N	Y	Y	N	principal, interest	N
冰炭	92	N	N	Y	Y	N	ice, coal	S
伯仲	99	N	N	Y	Y	N	first son, second son	N
补缺	104	N	N	Y	N	V + N	fill, vacancy	N
产销	143	N	N	Y	Y	V	produce, sell	N
臣民	158	N	N	Y	Y	N	subject, citizen	N
城镇	169	N	N	Y	Y	N	city, town	N
出缺	190	N	N	Y	N	V + N	leave, vacancy	N
传习	201	N	N	Y	Y	V	teach, learn	D
窗户	204	N	N	Y	Y	N	window, door	N
倒立	267	N	N	Y	N	ADV + V	reversely, stand	N
弟妹	286	N	N	Y	Y	N	younger brother, younger sister	C
颠末	290	N	N	Y	Y	N	head, end	D
多寡	334	N	N	Y	Y	A	much, little	P
恩怨	342	N	N	Y	Y	N	benevolence, enmity	P
反复	360	N	N	Y	Y	V	turn over, return to original place	D
饭菜	363	N	N	Y	Y	N	food, dish	N
父子	405	N	N	Y	Y	N	father, son	S
刚韧	426	N	N	Y	Y	A	firm, tenacious	N
高下	432	N	N	Y	Y	A	high, low	P
公婆	451	N	N	Y	Y	N	father in law, mother in law	C
功过	453	N	N	Y	Y	N	achievement, guilt	P
功罪	453	N	N	Y	Y	N	achievement, fault	P



供销	454	N	N	Y	Y	V	supply, sell	N
姑嫂	463	N	N	Y	Y	N	wife of elder brother, wife of younger brother	N
关张	477	N	N	Y	N	V + N	close, opening	N
国家	496	N	N	Y	Y	N	country, family	N
寒暄	511	N	N	Y	Y	A	cold, warm	P
好赖	518	N	N	Y	Y	A	good, bad	P
呼应	546	N	N	Y	Y	V	call, respond	D
化斋	560	N	N	Y	N	V + N	collect, vegetarian food	N
晦明	583	N	N	Y	Y	N, A	night, day; dark, bright	C
晦朔	583	N	N	Y	Y	N	last day of this month, first day of next month	N
婚嫁	585	N	N	Y	Y	N	marriage, woman marry man	N
剪贴	633	N	N	Y	Y	V	cut, paste	D
斤两	670	N	N	Y	Y	N	Chinese pound, Chinese once	N
今昔	670	N	N	Y	Y	N	now, before	D
经络	682	N	N	Y	Y	N	main channel, collateral channels	P
举止	702	N	N	Y	Y	V	lift, stop	N
绝续	711	N	N	Y	Y	V	end, continue	C
考妣	728	N	N	Y	Y	N	father, mother	D
昆仲	761	N	N	Y	Y	N	elder brother, younger brother	S
来回	768	N	N	Y	Y	V	come, return	D
来往	769	N	N	Y	Y	V	come, return	D
郎舅	773	N	N	Y	Y	N	husband of sisters, brother-in-law	N
劳资	777	N	N	Y	Y	N	employee, employer	C
廉耻	806	N	N	Y	Y	N	honest, shame	N
留别	830	N	N	Y	N	V + N	stay, leaving	N
没有	881	N	N	Y	N	ADV + V	not, have	N
女儿	958	N	N	Y	N	ADJ + SUFFIX	female + suffix	N
女士	959	N	N	Y	N	ADJ + SUFFIX	female + suffix	N
女子	959	N	N	Y	N	ADJ +	female + suffix	N

						SUFFIX		
起伏	1023	N	N	Y	Y	V	stand, lie down	D
起居	1024	N	N	Y	Y	V	stand, sit	D
起讫	1024	N	N	Y	Y	V	start, end	D
起止	1025	N	N	Y	Y	V	start, end	D
亲疏	1051	N	N	Y	Y	A	familiar, unfamiliar	P
禽兽	1053	N	N	Y	Y	N	poultry, beast	N
去留	1074	N	N	Y	Y	V	leave, stay	D
权责	1076	N	N	Y	Y	N	right, responsibility	D
任免	1096	N	N	Y	Y	V	appoint, dismiss	C
日夕	1098	N	N	Y	Y	N	daytime, dawn	D
山水	1130	N	N	Y	Y	N	mountain, wate	N
商贾	1135	N	N	Y	Y	N	moving business man, staying businessman	C
赏罚	1137	N	N	Y	Y	V	reward, punish	P
胜负	1168	N	N	Y	Y	V	win, lose	C
始末	1183	N	N	Y	Y	N	start, end	D
收缴	1194	N	N	Y	Y	V	receive, get	N
收支	1195	N	N	Y	Y	V	receive, pay	D
水陆	1219	N	N	Y	Y	N	water, land	C
锁匙	1251	Y	N	Y	Y	N	lock, key	D
天渊	1287	N	N	Y	Y	N	heaven, pit	D
听讲	1298	N	N	Y	N	V	hear, say	D
听说	1298	N	N	Y	N	V	hear, speak	D
庭院	1299	N	N	Y	Y	N	hall, courtyard	N
万一	1343	N	N	Y	N	A + N	ten thousandth, one	N
往复	1346	N	N	Y	Y	V	return, return to original place	N
忘怀	1347	N	N	Y	Y	V	forget, keep in mind	C
危机	1349	N	N	Y	Y	N	crisis, opportunity	P
翕张	1393	N	N	Y	Y	V	close, open	C
行藏	1456	N	N	Y	Y	V	move, hid	C
姓名	1461	N	N	Y	Y	N	family name, given name	N
言行	1496	N	N	Y	Y	N	word, deed	C
挹注	1545	N	N	Y	Y	V	take liquid out, put liquid in	D
音义	1551	N	N	Y	Y	N	pronunciation,	N

							meaning	
余缺	1585	N	N	Y	Y	V	have extra, lack	P
语文	1591	N	N	Y	Y	N	spoken language, written language	C
语言	1591	N	N	Y	Y	N	spoken word, spoken word	N
赠答	1629	N	N	Y	Y	V	give, pay back	D
瞻顾	1635	N	N	Y	Y	V	look forward, look back	D
正误	1662	N	N	Y	Y	N	correctness, mistake	C
质量	1679	N	N	Y	Y	N	quality, quantity	N
治乱	1680	N	N	Y	N	V + N	govern, chaos	N
中外	1686	N	N	Y	Y	N	China, foreign countries	C
中西	1686	N	N	Y	Y	N	China, western countries	C
妯娌	1694	N	N	Y	Y	N	brothers' wives, two	N
朱墨	1696	N	N	Y	Y	N	red color, black color	N
珠玑	1696	N	N	Y	Y	N	round pearl, unround pearl	C
祖孙	1740	N	N	Y	Y	N	grandpa, grandson	N
作息	1745	N	N	Y	Y	V	work, rest	C

List C

**Table 3- 4: The words and sources in List C**

Lexicalization studies	Chao (1968) pp. 375 -377	Li, Thompson (1981) p.81	Wang (1984) p.395
多少(Fang and Zeng, 2007)	好坏	好坏	贵贱
始终 (Zhao and Zhang, 2013)	大小	大小	左右
好歹(Fang and Zeng, 2007)	长短	长短	死活
横竖(Fan, 2014)	高低	冷热	东西
消息(Tian,2014)	高矮	高矮	利害

	厚薄	快慢	横竖
	粗细	厚薄	反正
	软硬	真假	好歹
	冷热		大小
	咸淡		长短
	浓淡		多少
	彼此		上下
	浓淡		来往
	铺盖		动静
	上下		长短
	左右		是非
	利害		早晚
			买卖
			始终

The total number of the non-repetitive words is 25. After deleting the items that appear in List A and List B, there is not any item left.

#### List D

List D is the combination of List A, B and C. It includes 292 items. The data in List D will be discussed in chapter 4. In the column of “word class”, “A” stands for adjective, “V” stands for verb, “N” stands for noun, “P” stands for pronoun, and “ADV” stands for adverb.

Table 3- 5: List D

Word	Page	Word class of morphemes	Meaning of morphemes	Word class of compounds	Meaning of compounds
安危	8	A	safe, dangerous	N	danger
捭阖	30	V	divide, connect	V	make it divide or connect
板眼	35	N	accented beat, unaccented beat	N	rhythm, order
褒贬 1	43	V	praise, degrade	V	comment
褒贬 2	43	V	praise, degrade	V	criticize
本末	61	N	root, top of tree	N	from beginning to end, primary and secondary
彼此	68	P	that, this	P	both sides
标本	83	N	top of tree, root	N	branch and root, sample
表里	86	N	surface, inside	N	outside and inside,
宾东	90	N	guest, host	N	guest and host
宾主	90	N	guest, host	N	guest and host
冰炭	92	N	ice, coal	N	exclusive things
薄厚	101	A	thin, thick	N	thickness, attitude of prioritizing and neglecting
裁缝 1	119	V	cut, sew	N	cut and sew
裁缝 2	119	V	cut, sew	V	tailor
操纵	128	V	hold, let go	V	control, hold
拆建	139	V	destruct, construct	V	destruct and construct
长短	145	A	long, short	N	length, danger, good things and bad things
唱和	150	V	sing, accompany	V	respond in poem, sing
朝野	154	N	imperial court, ordinary people	N	government and non-government
潮汐	154	N	morning tide, night tide	N	tide
嗔嘘	157	N	ghost in east, ghost in west	A	fierce
沉浮	159	V	sink, float	V	strive and decay
晨昏	161	N	morning, dusk	N	morning and dusk
成败	164	V	succeed, fail	N	success or failure
承转	168	V	receive, pass	N	pass
城郭	168	N	interior city, exterior city	N	city
乘除	169	V	multiply, divide	N	calculation, change
迟早	174	A	late, early	ADV	sooner or later
出处	188	V	be an official, be a recluse	V	be an official and be a recluse
出没	190	V	appear, hide	N	appear
出纳	190	V	take out, take in	V	receive and pay out money, cashier

出入	190	V	go out, go in	V, N	go out and go in, difference
传受	201	V	teach, learn	V	teach and learn
传习	201	V	teach, learn	V	teach and learn
春秋	208	N	spring, autumn	N	one year, age
雌雄	214	A	female, male	N	female and male, win and lose
粗细	220	A	thick, thin	N	thickness, carefulness
存亡	225	V	live, die	N	life and death
大小	246	A	big, small	ADV, N	length, generation rank, adults and children
旦夕	256	N	morning, dusk	ADV, N	morning and dusk, shortly(in time)
得失	271	V	gain, lose	N	gain and lose, advantage and disadvantage
弟兄	286	N	younger brother, elder brother	N	younger brother and younger sister
弟妹	286	N	younger brother, younger sister	N	brothers, intimate people
颠末	290	N	head, end	N	details from beginning to end
东西 1	310	N	east, west	N	East and west, distance from east to west
东西 2	310	N	east, west	N	things
动静	312	V	move, calm	N	sound, situation
短长	324	A	short, long	N	advantage and disadvantage, danger, good things and bad things
多少 1	334	A	much, little	ADV, N	quantity, more or less, a little
多少 2	334	A	much, little	N	quantity
多寡	334	A	much, little	P	how much
恩怨	342	N	benevolence, enmity	N	benevolence and enmity, focus on enmity
儿女	343	N	male, female; son, daughter	N	son and daughter, male and female
反复	360	V	turn over, return to original place	ADV, N, V	repeatedly; change mind, repeat; repetition
反正	362	A	obverse, reverse	ADV	anyway
方圆	366	N	square, circle	N	surroundings, length, area, square and circle
肥瘦 儿	376	A	fat, thin	N	size
凤凰	394	N	male legendary bird, female legendary bird	N	Chinese phoenix
夫妇	396	N	husband, wife	N	husband and wife
夫妻	396	N	husband, wife	N	husband and wife
浮沉	400	V	float, sink	V	float and sink, be in favorable and unfavorable

					position
俯仰	404	V	face down, face up	V	face down and face up, action
父母	405	N	father, mother	N	parents
父子	405	N	father, son	N	father and son
甘苦	420	A	bitter, sweet	N	favorable and unfavorable situation, bitterness
纲目	426	N	general outline, detailed outline	N	general outline and detailed outline
高矮	429	A	tall, short	ADV, N	height, level, discretion, anyway
高低	429	A	high, low	N	height
高下	432	A	high, low	N	superiority
割接	437	V	cut, join	N	cutover
公私	451	A	public, private	N	public and private owner
公婆	451	N	father in law, mother in law	N	father in law and mother in law
功过	453	N	achievement, guilt	N	achievement and fault
功罪	453	N	achievement, fault	N	achievement and guilt
供求	454	V	supply, need	N	supply and need
供需	454	V	supply, need	N	supply and need
购销	461	V	buy, sell	N	buy and sell
顾盼	471	V	look backward, look forward	V	look around
官兵	479	N	official, soldier	N	official and soldier
光阴	485	N	light, shadow	N	time
广袤	487	A	length from east to west, length from south to north	N	length and width, vast
规矩	489	N	compasses, carpenter's square	ADJ, N	tool, rule, standard
鬼神	491	N	ghost, god	N	ghost and god
贵贱	492	A	expensive, cheap	N	price, position
寒热	510	A	cold, hot	N	cold and fever
寒暑	510	A	cold, hot	ADJ, N	cold and hot, winter and summer, one year
寒暄	511	A	cold, warm	V	greet
行列	514	N	row, column	N	row and column
好歹	517	A	good, bad	ADV, N	goodness, danger, anyway
好赖	518	A	good, bad	ADV, N	goodness and badness; more or less
好恶	520	V	like, dislike	N	interest
黑白	529	A	black, white	N	black and white, right and wrong

横竖	534	A	horizontal, vertical	ADV	anyway
厚薄	544	A	thick, thin	N	thickness, attitude of prioritizing and neglecting
呼吸	546	V	exhale, inhale	N	breathe, a short period of time
呼应	546	V	call, respond	V	associate
缓急	567	A	slow, quick	N	slow and urgent, urgent
毁誉	580	V	criticize, praise	N	criticize and praise
晦明	583	N, A	night, day; dark, bright	ADJ, N	day and night; dark and bright
吉凶	604	A	auspicious, inauspicious	N	good luck and bad luck
嫁娶	627	V	woman marry man, man marry woman	V	marry
稼穡	627	V	sow, reap	V	sow and reap, labour
剪接	633	V	cut, join	V	cut and join
剪贴	633	V	cut, paste	V, N	cut and paste; an art form
奖惩	643	V	reward, punish	V	reward and punish
将士	644	N	general, soldier	N	general and soldier
交接	646	V	pass, receive	V	connect, pass and receive, pass
教学 1	649	V	teach, learn	V	teach and learn
教学 2	656	N	teach, learn	N	teach and learn
接转	659	V	receive, pass	V	receive and pass
姐妹	665	N	elder sister, younger sister	N	sisters
借贷	669	V	borrow, lend	N, V	borrow, debtor and creditor
今昔	670	N	now, before	N	now and before
进出	677	V	come in, come out	V, N	come in and come out, income and expenditure
进退	677	V	move forward, move backward	V, N	move forward and move backward,
经络	682	N	main channel, collateral channels	N	main and collateral channels
巨细	703	A	huge, small	N	important things and trivial things
绝续	711	V	end, continue	V	end and continue
军民	713	N	soldier, civilian	N	soldier and civilian
开关	718	V	open, close	N	switch
考妣	728	N	father, mother	N	parents
快慢	753	A	quick, slow	N	speed
宽窄	755	A	wide, narrow	N	width
昆仲	761	N	elder brother, younger brother	N	the brothers of others



来回	768	V	come, return	ADV, N, V	come and go; round trip; repeatedly
来去	769	V	come, go	V	1. come and go 2. communicate
来往	769	V	come, go	V	come and go, come or leave
劳逸	777	A	industrious, leisurely	N	labor and leisure
劳资	777	N	employee, employer	N	employee and employer
老少	780	A	old, young	N	the old and the young, everyone
老小	781	A	old, young	N	the old and the young, everyone
老幼	782	A	old, young	N	the old and the young
冷暖	789	A	cold, warm	N	cold and warmth, life,
离合	791	V	depart, reunite	V	depart and reunite
利弊	800	N	advantage, disadvantage	A	profit, loss
利钝	800	A	sharp, blunt	N	sharp or blunt, smooth or not smooth
利害 1	800	N	profit, loss	A	advantage and disadvantage
利害 2	800	N	profit, loss	N	influential
录放	844	V	record, play	V	record and play
买卖	866	V	buy, sell	N	business, store
矛盾	877	N	spear, shield	ADJ, N, V	contradiction, contradictory, repel
卯榫	877	N	mortise, tenon	N	mortise and tenon
明灭	909	V	brighten, die out	V	brighten and die out
男女	931	N	man, woman	N	man and woman
南北	931	N	south, north	N	south and north, distance from south to north
内外	940	N	inside, outside	N	inside and outside, approximate
浓淡	956	A	heavy, light	N	degree of heavy and light
平仄	1003	N	level tone, oblique tone	N	level tone and oblique tone, rhyme
婆媳	1006	N	mother-in-law, daughter-in-law	N	mother-in-law and daughter-in-law
铺盖	1009	V	spread, cover	N	bedding and cover
起伏	1023	V	stand, lie down	V	1. go up and down 2. change in relation etc.
起降	1024	V	rise, fall	N	take off and land
起落	1024	V	rise, fall	V	rise and fall, change
起居	1024	V	stand, sit	V	daily life
起讫	1024	V	start, end	V	start and end
起止	1025	V	start, end	V	start and end
阡陌	1031	N	path leading to south and north, path leading to east and west	N	path in the field
前后	1035	N	front, back	N	front and back, a period of time
乾坤	1037	N	heaven, earth	N	heaven and earth

亲戚	1051	N	relative by blood, relative by marriage	N	relatives
亲疏	1051	A	familiar, unfamiliar	N	familiarity
轻重	1057	A	light, heavy	N	weight, degree of importance, appropriateness
曲直	1070	A	curved, straight	N	right and wrong
取舍	1073	V	obtain, abandon	V	obtain or abandon
去就	1074	V	leave the position, assume the position	V	leave or stay
去留	1074	V	leave, stay	V	leave the position or assume the position
权责	1076	N	right, responsibility	N	power and responsibility
拳脚	1078	N	fist, feet	N	fist and feet, martial art
人物	1093	N	people, things	N	representative person, figure
任免	1096	V	appoint, dismiss	V	appoint and dismiss
日夜	1098	N	day, night	ADV	everyday
日夕	1098	N	daytime, dawn	N	day and night
日月	1099	N	sun, moon	N	life, time
荣辱	1099	N	honor, shame	N	honor and shame
榫凿	1110	N	tenon, mortise	N	agree
僧尼	1124	N	monk, nun	N	monk and nun
僧俗	1124	N	monk, ordinary people	N	monk and ordinary people
商贾	1135	N	moving business man, staying businessman	N	business man
赏罚	1137	V	reward, punish	V	reward and punish
上下	1141	N, V	top, bottom; go up, go down	N, V	high and low, distance, go from low to high
舍得	1147	V	abandon, gain	V	willing to abandon
伸缩	1151	V	stretch, contract	V	stretch and contract, change
身心	1152	N	body, mind	N	body and mind
参商	1153	N	Constellations Orion, Constellations Antares	N	constellation, not able to meet, in bad relation
深浅	1154	A	deep, shallow	N	depth, appropriateness
升降	1159	V	ascend, descend	V	ascend and descend
生死	1163	V	life, death	A, N	life and death, re
胜败	1168	V	win, lose	N	victory and loss
胜负	1168	V	win, lose	N	victory and loss

师弟	1171	N	teacher, student	N	teacher and student
时空	1177	N	time, space	N	time and space
始终	1183	N	beginning, end	ADV, N	whole process, from beginning to end
始末	1183	N	start, end	N	whole process
士女	1184	N	unmarried man, unmarried woman	N	men and women
是非	1191	A	right, wrong	ADV	whether
是否	1191	ADV	certainly, not	N	right and wrong
收发	1193	V	receive, send	V, N	receive and dispatch, dispatcher
收支	1195	V	receive, pay	N	income and expenditure
手脚	1196	N	hand, feet	N	action, underhand method
手足	1198	N	hand, feet	N	action, brotherhood
首尾	1199	N	head, tail	N	beginning and ending, process
授受	1202	V	teach, learn	V	give and receive
舒卷	1205	V	stretch, roll up	V	stretch and roll up
输赢	1206	V	lose, win	N	lose and win, amount of money that win or lose
水火	1219	N	water, fire	N	1. water and land route 2. food from water and land
水陆	1219	N	water, land	N	water and land, food from water and land
睡觉	1223	V	sleep, wake	V	sleep
朔望	1227	N	the first day of lunar month, the fifteenth day of lunar month	N	syzygy
死活	1232	V	die, live	ADV, N	death and life, anyway
松紧	1236	A	loose, tight	N	degree of loose and tight
夙夜	1240	N	day, night	N	day and night, every moment
损益	1248	V	decrease, increase	N	decrease and increase, profit and loss
锁钥	1251	N	lock, key	N	lock and key, important parts, important military post
题跋	1279	N	prologue, epilogue	N	prologue and epilogue
天地	1283	N	heaven, earth	N	heaven and earth, scope of activity,
天壤	1285	N	heaven, earth	N	1. heaven and pit 2. great difference
天渊	1287	N	heaven, pit	N	1. heaven and pit 2. great difference
吞吐	1326	V	swallow, spit	A, V	swallow and spit, mince the word
往返	1346	V	go, return	V	1. come and go 2. communicate
往来	1346	V	go, come	V	come and go
往还	1346	V	go, return	V	1. come and go 2. communicate
往复	1346	V	return, return to original place	V	1. come and go 2. communicate

忘记	1347	V	forget, remember	V	forget
忘怀	1347	V	forget, keep in mind	V	forget
危机	1349	N	crisis, opportunity	N	1. hidden danger 2. extremely difficult trouble
文武	1364	N	civilian post, military post	N	civilian and military post
问答	1367	V	ask, answer	V	ask and answer
翕张	1393	V	close, open	V	close and open
遐迩	1402	A	far, near	N	far place and near place
先后	1408	N, A	early, late; former, latter	ADV, N	earliness and lateness, continuously
向背	1425	V	face to, face with the back	V	support and oppose
消息	1429	V	decrease, increase	N	news, change
消长	1429	V	decrease, increase	V	decrease and increase
霄壤	1430	N	heaven, earth	N	1. heaven and pit 2. great difference
兴衰	1454	V	thrive, decline	V	thrive and decline
兴亡	1454	V	thrive, die	V	thrive and die
行藏	1456	V	move, hid	N	1. attitude to being an official and recluse 2. origin
行止	1458	V	move, stop	N	trace, conduct
兄弟	1462	N	elder brother, younger brother	N	elder brother and younger brother
兄弟	1462	N	elder brother, younger brother	N	brother, peer
休戚	1464	A	happy, sorrowful	N	happiness and sadness, favorable and unfavorable situation
修短	1465	A	long, short	N	length
虚实	1469	A	virtual, concrete	N	virtual and concrete things, reality
序跋	1471	N	prologue, epilogue	N	prologue and epilogue
轩轻	1473	N	high front carriage, high back carriage	N	carriages, quality
妍媸	1496	N	beauty, ugliness	N	word and deed
言行	1496	N	word, deed	N	beauty and ugliness
炎凉	1497	A	hot, cold	N	heat and cold, attitudes of treating people
扬弃	1505	V	promote, abandon	V	abandon
依违	1532	V	obey, disobey	V	obey or disobey

异同	1543	A	different, same	N, V	difference and similarity, different meaning
抑扬	1543	V	press, lift	V	raise and lower voice
挹注	1545	V	take liquid out, put liquid in	V	take liquid from one container and put it in another container
因果	1548	N	cause, effect	N	cause and effect
阴阳	1550	N	shadow, sun	N	yin and yang
隐现	1556	V	hide, appear	V	hide and appear
盈亏	1561	V	increase, reduce	N	wax and wane, profit and loss
优劣	1570	A	good, bad	N	quality
幽明	1571	A	dim, bright	N	dead space and living space
余缺	1585	V	have extra, lack	N	surplus and dearth
宇宙	1589	N	space, time	N	universe
语文	1591	N	spoken language, written language	N	language and character, language and literature
鸳鸯	1597	N	male mandarin duck, female mandarin duck	A	Mandarin ducks
渊博	1597	A	deep, broad	N	deep and broad
原委	1600	N	origin, flow	N	beginning and ending, whole story
源流	1603	N	origin, flow	N	origin and flow, development
远近	1604	A	far, near	N	distance, far place and near place
臧否	1622	A	good, evil	V	distance, far place and near place
凿枘	1624	N	mortise, tenon	ADV, N	match
早晚	1624	N, A	morning, evening; early, late	N	morning and evening; sooner or later
皂白	1625	N	black, white	N	black and white, right and wrong
增删	1629	V	add, delete	V	add and delete
赠答	1629	V	give, pay back	V	give mutually
瞻顾	1635	V	look forward, look back	V	1. look forward and look back 2. look after
涨落	1641	V	rise, fall	V	rise and fall
朝夕	1644	N	morning, dusk	ADV, N	every day, a short period of time
真伪	1653	A	true, fake	N	truth and false
正误	1662	N	correctness, mistake	N	correctness and mistake
枝干	1667	N	branch, trunk	N	branch and trunk
中外	1686	N	China, foreign countries	N	China and foreign countries
中西	1686	N	China, western countries	N	China and western countries
昼夜	1695	N	day, night	N	day and night
珠玑	1696	N	round pearl,	N	1. pearls 2. beautiful prose

			unround pearl		
主次	1699	A	main, subordinate	N	the main and the subordinate
主从	1699	A	main, following	N	the main and the following
装卸	1713	V	load, unload	V	load and unload
子女	1723	N	man, woman; son, daughter	N	son and daughter
姊妹	1723	N	elder sister, younger sister	N	sisters
纵横	1734	A	vertical, horizontal	A, V	vertical and horizontal, pass through
左右	1744	N	left, right	N, V	left and right, follower, approximate, control
作息	1745	V	work, rest	V	work and rest

Source: Table 3-2, Table 3-3-, Table 3-4.

### Summary

Chapter 3 lists primary sources, secondary sources and data collection method. The chapter sets up eight criteria for antonymous compounds, including:

1. the word is listed in the entry of 2012 Xiandai hanyu cidian sixth edition
2. the word is disyllabic
3. the constituents of the word are in the same word class
4. the constituents of the word are coordinated
5. the constituents of the word are content words
6. the constituents of the word are in one of the antonymous relations:
7. the constituents of the word are in Mandarin Chinese
8. the word is not a short form of another word

Every word entry in Xiandai hanyu cidian 2012 edition was examined by the eight criteria. Those words that meet the criteria were incorporated in List A. List B comes from the word lists in previous studies on antonymous compounds. After deleting the repetitive items and filtering items that do not meet the eight criteria, List B is created. The example words in grammar books

and lexicalization studies on antonymous compounds are included in List C.

A combination of List A, List B and List C makes List D, which is the data used in the thesis.

The majority of the data in List D comes from List A, which is extracted from primary sources. At the same time, List B is a useful supplement to List A, making the final data more complete.

## Chapter 4

### Data analysis and discussion

This chapter interprets the data in List D and answers three research questions mentioned in Chapter 1: what are antonymous compounds, how does the word class change and why does the word class change.

#### **What are antonymous compounds?**

As the name suggests, two important features of antonymous compounds are antonymous relation and compounding form. Based on the criteria used in data selection, we can define antonymous compounds as:

1. compounds that are recognized by corpus such as dictionary
2. compounds that are disyllabic
3. compounds that have constituents with the same word class
4. compounds that have coordinated the constituents
5. compounds whose constituents are content words
6. compounds whose constituents have an antonymous relation
7. compounds that are in Mandarin Chinese
8. compounds that are not a short form of another word

The definition is different from the previous definitions in three ways. First, it is a more comprehensive definition based on the critique of the other definitions. For example, Yang (2007) confuses relevant relation with antonymous relation in her definition. However, the definition in the thesis clearly states the antonymous relation. Second, it takes broad perspective towards the definition of compounds. Some studies (Lang, 2008) insist that compounds should have new



meanings, instead of adding the meaning of the constituents. However, the thesis considers all the compounds, even though the meaning of the compound is merely a combination of the constituents. As Jin (2007) proposed, there is a continuum of antonymous phrases and antonymous compounds. In addition, the thesis proposed a continuum of antonymous co-occurrence. Using a broad definition helps understand the continuum and study the transition. Lastly, the antonymous compounds are changing over time; a broad definition will better capture the essence of antonymous compounds.

Although the definition covers different aspects of antonymous compounds, it is not and cannot be complete, because another feature of antonymous compounds is that they are changing. An antonymous compound such as ān wēi (安危, safety) is included in *Xiandai hanyu cidian* 2012 edition but is not included in *Xiandai hanyu cidian* 2002 edition. The broad definition can help further understand and study the antonymous compounds; however, they are not precise enough to cover every existing antonymous compounds.

### **How does the word class change?**

1. A comparison between the word class of the morphemes and the compounds

Table 4-1 and Table 4-2 show the word class of the morphemes and compounds. In Table 4-1 and Table 4-2, “A” stands for adjective, “ADV” stands for adverb, “N” stands for noun, “P” stands for pronoun, and “V” stands for verb.

**Table 4- 1: Word class of the morphemes**

Word class of the morpheme	Number
A	61
ADV	1
A, N	3
N	117
N, V	1
P	1
V	108

Sources: Table 3-5.

For example, in Table 3-5, the morphemes ān (安, safe) and wēi (危, dangerous) are adjectives, shì (是, certainly) and fǒu (否, not) are adverbs, zǎo (早, morning/early) and wǎn (晚, evening/late) are both adjectives and nouns, fū (夫, husband) and qī (妻, wife) are nouns, shàng (上, top/go up) and xià (下, bottom/go down) are both nouns and verbs, bǐ (彼, that) and cǐ (此, this) are pronouns, and bǎi (捩, divide) and hé (鬪, connect) are verbs.

**Table 4- 2: Word class of the compounds**

Word class of the compounds	Number
A	4
A, N	1
A, V	2
ADJ, N	3
ADJ, N, V	1
ADV	5
ADV, N	11
ADV, N, V	2
N	182
N, V	4
P	2
V	70
V, N	5

Sources: Table 3-5.

As we can see, most of the morphemes are nouns, followed by verbs and adjectives. In the case of compounds, nouns and verbs make up the majority, but adjective decreases drastically. In Table 3-4, three morphemes are both adjectives and nouns and one morpheme is both a noun and a verb. Therefore, there are only four morphemes with multiple word classes. However, there are 292 words in Table 3-5, 4 of them are adjectives, 182 of them are nouns, 2 of them are pronouns, and 70 of them are verbs. If we exclude the words with only one word class, there are 29 words in Table-3-5 with more than one word classes. As we can see, the number of compounds with multiple word classes rises to 29. The word class change reduces the number of adjectives and gives rise to the words with multiple word classes.

## 2. How many compounds have changed word class

113 out of 292 words have changed their word classes, which takes up nearly 40%. It indicates that word class change is not rare and is a characteristic of antonymous compounds.

## 3. Word class change pattern

Table 4-3 describes the pattern of word class change in details. In the table, the arrow indicates the direction of word class change, “A” stands for adjective, “ADV” stands for adverb, “N” stands for noun, “P” stands for pronoun, and “V” stands for verb.

**Table 4- 3: Types of functional shift**

Types of functional shift	Number	Types of functional shift	Number
A → A, V	1	N → A	2
A → A, N	1	N → ADJ, N	1
A → ADV	4	N → ADJ, N, V	1
A → ADV, N	5	N → ADV	1
A → N	45	N → ADV, N	3
A → N, V	1	N → N, V	1
A → P	1		
A → V	2	V → A, N	1
A,N → ADV, N	2	V → A, V	1
		V → ADV, N	1
ADV → N	1	V → ADV, N, V	2
		V → N	30
		V → N, V	6

Sources: Table 3-5.

For example, in Table 3-5, the morphemes ān (安, safe) and wēi (危, dangerous) are adjectives, while the compound ānwēi (安危, safety) is a noun. The functional shift of ānwēi is from adjectives to a noun and the pattern is marked as “A → N”.

If we compare morphemes with different word classes, we can find that most of the morphemes, which lead to change in word class, are adjectives and verbs. Very few nouns and adverbs change word class when compounding. At the same time, if we compare morphemes with the same word class, we can see that adjectives are very likely to change word class, while nouns are stable in the word class.

**Table 4- 4: Relation between word class of the morphemes and functional shift**

Word class of the morphemes	Total number of the compounds formed by the morphemes	Number of compounds that change word class
A	64	62
V	109	41
N	118	9
ADV	1	1

Sources: Table 3-5.

If we take an opposite point of view, we can find that noun and adverb are the two most frequent word class of the compounds.

**Table 4- 5: Relation between word class of the compounds and functional shift**

Word class of compounds that changed word class	Number of compounds that changed word class
A	2
A, N	3
A, V	2
A, N, V	1
ADV	5
ADV, N	11
ADV, N, V	2
N	76
N, V	8
P	1
V	2

*Sources:* Table 3-5.

In summary, while adjective and verbal morphemes are more likely to cause change in word classes of the compounds, the majority of the compounds that changed word class end up being nouns and adverbs.

#### 4. Qualitative and quantitative change in word class

The qualitative change refers to how the word class has changed into another kind. There are three types of word class change: add word class (e.g. N → N, V), partly changed word class (e.g. A, N → ADV, N), completely changed word class (e.g. V → N).

**Table 4- 6: Relation between word class of the morphemes and degree of functional shift**

Word class of morphemes	Add word class	Partly changed word class	Completely changed word class	Total
A	2	2	58	62
V	9	0	32	41
N	6	0	3	9
ADV	0	0	1	1
Total	17	2	93	112

*Sources:* Table 3-5.

From the perspective of word classes of the morphemes, most adjectives and verbs change their word class completely. However, nouns have resistance to complete change in word class. They add new word class while retaining the original word class. From the perspective of the types of change, the majority of the change type is “completely changed”. It suggests that the word class change is intense and complete.

In addition to qualitative change, it is also worth studying the quantitative change, namely, how the number of word classes changed. The quantitative change pattern can be summarized into four types: one word class to one word class, one word class to two word classes, one word class to three word classes, two word classes to two word classes. For example, in Table 3-5, the word class of the morphemes dà (大, big) and xiǎo (小, small) is adjective and it only have one word class. The compound dàxiǎo (大小, size/ at least) is both a noun and an adjective and it has two word classes. Therefore, the quantitative change is from one word class to two word classes. The process is marked as “one word class to two word classes”.

**Table 4- 7: Quantitative change in word class**

Quantitative change in word class	Number
One word class to one word class	86
One word class to two word classes	22
One word class to three word classes	3
Two word classes to two word classes	2

Sources: Table 3-5.

#### 5. Multiple word classes

From Table 4-7 we can see 27 compounds have either two or three word classes, indicating that some compounds not only change their word classes, but also acquire multiple word classes.

Their word classes are shown in Table 4-8.

**Table 4- 8: Multiple word classes**

Multiple word classes	Number
A, N	4
A, V	2
A, N, V	1
ADV, N	11
ADV, N, V	2
N, V	9

Sources: Table 3-5.

Notes: In the first column, “A” stands for adjectives, “N” stands for nouns, “V” stands for verbs, and “ADV” stands for adverbs.

If we look into the compatibility between different word classes, we have the results in Table 4-9.

**Table 4- 9: Compatibility between different word classes**

	A	ADV	N	V
A			Y	Y
ADV			Y	Y
N	Y	Y		Y
V	Y	Y		Y

Sources: Table 3-5.

Notes: 1. “A” stands for adjectives, “N” stands for nouns, “V” stands for verbs, and “ADV” stands for adverbs. 2. “Y” stands for “yes”, meaning the two word classes can occur in the same word.

## 6. Summary

Word class change is an important characteristic of antonymous compounds given that nearly 40% of the compounds change their word classes.

The changes in word class are both qualitative and quantitative. Adjective and verbal morphemes are more likely to cause word class when forming compounds. However, nominal morphemes tend to retain their word class. Adjective and verbal morphemes usually change into a different word class, undergoing a change more completely than nominal morphemes. Most of the compounds are nouns, or at least has a nominal word class. It suggests a major tendency of antonymous compounds is nominalization.

In addition, some antonymous compounds also have more word classes than the morphemes. Nouns and verbs are more compatible with other word classes in compounds with multiple word classes.

### **Why word class changes?**

The thesis hypothesizes that the characteristics of the morphemes will lead to changes in characteristics of the compounds. The former include the free or bound quality of the morphemes, the word classes of the morphemes, the antonymous relation between the morphemes, and the metaphor and metonym rhetoric. The latter are changes in meaning and word class. The following paragraphs discuss the reasons for qualitative and quantitative change in word class of the compounds.



1. Why word class change is possible

a. Morphology

Unlike Indo-European languages, the Chinese language lacks inflection. Tse (2010) argues that Chinese is a parataxical language and the combination of Chinese words is governed by semantics rather than inflection. The lack of inflection gives Chinese compounds a morphological freedom. Their word class is not limited by the form, but rather determined by the meaning.

b. Bound and free morphemes

Among 113 compounds that changed word class, 58 of them are composed of bound morphemes and 55 are composed of free morphemes. It shows that the bound and free quality of morphemes do not make much difference in word class change.

c. Antonymous relation

**Table 4- 10: Antonymous relations**

Antonymous relations	Number
Polar	46
Directional	41
Complementary	23
Social and cultural	3

*Sources:* Table 3-5.

For example, in Table 3-5, *bó* (薄, thin) and *hòu* (厚, thick) are polar antonyms because they are gradable and something can be neither thin nor thick. *Chū* (出, go out) and *rù* (入, go in) are directional antonyms since they indicate opposite direction of the action. *bǎn* (板, accented beat) and *yǎn* (眼, unaccented beat) are complementary antonyms because a beat is either accented or unaccented. *Pó* (婆, mother-in-law) and *xí* (媳, daughter-in-law) are social and cultural antonyms. The relation of mother-in-law and daughter-in-law is usually portrayed as conflict in Chinese

culture.

As we can see, polar antonyms are the majority, followed by directional antonyms. It happened because polar antonyms are gradable. There is space between the two antonyms as compared to the complementary antonyms, which absolutely bisected by the two components. Because of the grey area in-between, polar antonyms are able to extend their meaning and undergo semantic change by means of part-whole configuration of metonymy. Finally, it leads to change in word class. As for the directional antonyms, it can take an orientational metaphor or location – agent/event configuration and change the word class.

d. Word class

As Table 4-4 shows, adjectives and verbs are more likely to change their word class.

2. Qualitative change in word class

From the results about, we may need to ask why adjective and verbal morphemes are more likely to change word classes and why most of the compounds are nouns or have a nominal word class.

First, adjectives and verbs can easily undergo the metaphor and metonymy process that can change word class, such as orientational metaphor, part- whole configuration and action – agent / event configuration. Nouns do not change their word class even though they undergo metaphor and metonymy process. Secondly, nouns seem more stable than adjectives and verbs given its compatibility with other word classes. Nouns absorb other word classes and seldom lose original word class. Finally, since the antonymous compounds change their meaning in ways of conceptualization and abstraction, they tend to become nouns in the end.

The thesis studies functional shift of the antonymous compounds and only makes hypothesis as to why the functional shift happens. To analyze the phenomenon comprehensively is beyond the scope of the thesis. It needs evidence from future studies. Further studies can be done in lexicalization of each antonymous compounds. By tracing the development of antonymous compounds, we can define the antonymous compounds better and understand the transition from phrases to words. In addition, a hierarchy of the lexicalization of antonymous compounds can be constructed and it may support the broad definition of antonymous compounds. Last but not least, studies on word classes will help explain the functional shift in antonymous compounds better.

## Chapter 5

### Conclusion

Antonymous compounds have a special feature of changing the word class. The thesis focuses on the functional shift in antonymous compounds and explains how and why the word class changes. The thesis collects data from both primary sources and secondary sources. It discusses the shortcoming in the previous definitions and makes a broad definition of antonymous compounds. Finally, it analyzes the data and answers how and why the word class changes.

In data collection, the combination of both primary sources and secondary sources yields to a more complete word list as compared with the previous studies. In addition, the correction of some problematic methods such as using the antonymous dictionary incorporates more data. Finally, a definition based on the critique of the previous studies makes the data more valid.

The three research questions are: 1. what are antonymous compounds? 2. how the word class changes? 3. why the word class changes?

Because antonymous compounds are changing over time, the author believes a broad and dynamic definition will help the research better. In addition to the basic features of antonymous compounds such as antonymous relation and compounding, the definition in the thesis also defines the relation between the morphemes: they are in the same word class; they are in coordinated form; they are monosyllabic, and they are content words. Furthermore, the definition limits the scope of the compounds: they are recognized by a dictionary, they are used in Mandarin Chinese, and they do not stand for another word

Word class change is common among the antonymous compounds with nearly 40% of the compounds change their word classes. The changes in word class are both qualitative and

quantitative. Adjective and verbal morphemes are more likely to cause word class when forming compounds. However, nominal morphemes tend to retain their word class. Adjective and verbal morphemes usually change into a different word class, making the change more complete than nominal morphemes. Most of the compounds are nouns, or at least has a nominal word class. It suggests a major tendency of antonymous compounds is nominalization. In addition, some antonymous compounds also have more word classes than the morphemes.

In an attempt to answer the functional shift happens, the thesis hypothesized that word class change is fundamentally determined by the parataxis in the Chinese language. Secondly, word class change is caused by the antonymous relation and metaphor and metonym. Finally, noun is more stable than adjectives and verbs and the conceptualization process of the compounds ends up being nouns. However, the questions why the functional shift happens and why adjectives and verbs are more likely to change than nouns are beyond the scope of the thesis. The hypothesis in the thesis needs to be tested and further studies on word class in Chinese and lexicalization of each antonymous compound will provide insights into the questions.

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