

Chapter 1 Introduction

In recent studies of Lexical Semantics, a fair amount of attention is paid to near-synonyms (see Tsai *et al* 1993, Huang *et al* 2000, Liu 2002 and many others). Although the analysis of near-synonyms leads to important findings on contrastive features of semantic distinction, some fundamental questions about near-synonyms are rarely discussed. One of them is the semantic range of near-synonyms. For example, Liu (1997) proposes an explicit analysis on the lexical semantic distinctions of the three Mandarin verbs of construction, *jian* 建 ‘build’, *gai* 蓋 ‘build’ and *zao* 造 ‘build’. She focuses mainly on lexical specification and collocational variations in their prototypical uses as exemplified in (1).

- (1) a. 地主在河邊蓋/建倉庫 (Liu 1999)
Dizhu zai hebian gai/jian cangku
‘The landlord built a warehouse near the river.’
- b. …與波音合作造飛機
Yu poyin hezuo zao feiji
‘Cooperate with Boeing to make the airplane.’

However, the fact that the three verbs differ in semantic extensions via metaphorical mapping is not emphasized. As shown in (2), only the verb *jian* can co-occur with an abstract Object NP.

- (2) 建/*蓋/*造一套理論不容易
*Jian /*gai /*zao yitao lilun bu rongyi*
‘It’s not easy to come up with a theory.’

To account for the case of *jian*, Mapping Principles like THEORIES ARE BUILDING proposed by Lakoff and Johnson (1980) or IDEA IS A BUILDING proposed by Ahrens (1999) can be used to explain how an idea is understood as building in terms of mapping from a building source domain to an idea target domain. Although the two mapping principles give an explanation on the metaphorical extension of *jian*, it is observed that they fail to predict why *gai* and *zao* do not undergo the same metaphorical process. Thus, a question like this implies that current researches pay little attention to the linkage between the area of near-synonyms and the area of semantic extension. Hence, in an attempt to bridge the gap between these two areas and to restore the missing pieces, this study will focus on two sets of Chinese near-synonyms and analyze the different semantic range of each set of near-synonyms. In the process, prove that is has influenced on mechanisms of semantic extension. Finally, we hope that the study will shed new light on the current researches on mechanisms of semantic extension.

1.1 The Issue: Semantic Extension and Near-synonyms

Sense semantic (or sense) extension of a polysemous lexical item is based on two kinds of mechanisms: (1) metaphor or metonymy-based extension, and (2) Frame-based extension. As indicated by Fillmore (1992), metaphor-based extension does not involve any change of syntactic patterns, as exemplified in his example:” my car died,” dying is assumed as a metaphor for mechanical failure. On the other hand, frame-based extension displays meaning relatedness of a polysemous lexical item by recognizing different syntactic patterns, as demonstrated in the verb RISK with the two related frames. Although the two kinds of semantic extension mechanism have been explored with great achievement, researches mainly focus on individual items and it is unclear whether the two mechanisms can apply to more general case such as

near-synonyms.

On the other hand, the studies on near-synonyms mainly concern their prototypical uses. For example, the analysis of near-synonyms in Mandarin Chinese revolves around the question: how to extract contrastive features distinguishing verbs in a set of near-synonym. By using the corpus-based approach, the distinct syntactic and collocational patterns associated with verbs in a set of near-synonym reveal indications of their distinct lexical properties and a series of corpus-based analyses have thus been published (e.g. Tsai *et al* 1993, Huang *et al* 2000, Liu 2002 and many others). However, as more and more near-synonyms were analyzed, an obvious issue emerged concerning semantic extensions of near-synonymous verbs.

Thus, to explore the relationship between semantic extension and near-synonyms, two near-synonymous sets are adopted in this study because each set represents one of the two semantic extension mechanisms. The first one is the near-synonymous pair *chusheng* 出生 ‘to be born’ and *dansheng* 誕生 ‘to be born’. Illustrated in (3), we see that under the primary observation of their corpus data, both *chusheng* and *dansheng* suggests the event that a baby was born. However, as shown in (4), only *dansheng* undergoes metaphorical semantic extension, of which will be further analyzed and illustrated in Chapter 4.

(3) 寶寶誕生/出生了

Baobao dansheng /chusheng le

‘The baby was born’

(4) 這套理論誕生/*出生了

*Zhetao lilun zhongyu dansheng /*chusheng le*

‘The theory was born’

The second set of near-synonym is *biaoshi* 表示 ‘to expree’, *biaoda* 表達 ‘to express’ and *biaolu* 表露 ‘to express’. The near-synonym involves the frame-based mechanism to trigger semantic extension. Under the primary observation of the corpus data of the three verbs, we found that *biaoshi* has three senses: *say* in (5), *express* in (6) and *mean* in (7), *biaoda* has the senses of expressing and meaning as shown in (6) and (7), and *biaolu* has the sense of expressing as shown in (6).

(5) 荀伯格、羅斯科和蒙德里安(Speaker)都曾表示/?表達/*表露：「藝術是另一種形式的宗教(Clause)。」

*Schonberg、 Rothko he Mondrian dou ceng biaoshi /?biaoda /*biaolou : yishu shi lingyizhong xingshi de zongjiao*

‘Schonberg, Rothko and Mondrian all had said, ‘Art is the other form of religion.’

(6) 我(Speaker)今天寫這封信(Sign)就是要表示/表達/表露我對你的愛意(Message)

Wo jintian xie zhe yifeng xin jiushi yao biaoshi /biaoda /biaolou wo dui nide aiyi

‘I wrote this letter to you to express you my love towards you..’

(7) 白色(NP)表示/表達/*表露純潔(NP)

*Baise biaoshi /biaoda /*biaolou chunjie*

‘White means purity.’

Notice, the three senses are constructed in terms of different syntactic patterns. The sense of *say* in (5) highlights a speaker and a clause. The sense of *express* in (6) highlights a speaker, a sign carrying message and a NP. Finally, the sense of *mean* in (7) highlights two NPs indicating concepts. Thus, the definitions of the three senses and how they are derived will be illustrated in Chapter 5.

In a nutshell, this paper discusses how semantic extension is operated on the

lexical level by showing that lexical semantics may constrain metaphorical mappings, as evidenced from the fact that near-synonyms may show different range of meanings. While semantic or metaphorical extension is often defined as a transfer from one domain of experience to another (cf. Lakoff and Johnson 1980), one puzzle still remains unsolved: in a domain-to-domain transfer, not all the lemmas in one domain may be transferable to another domain? Therefore, the study utilizes the two sets of near-synonyms as illustrations to analyze the two mechanisms of semantic extensions, and investigates why *chusheng* and *biaolu* are so different from their near-synonymous pairs, in so doing propose new perspectives on semantic extension.

1.2 Theoretical Frameworks: Corpus-based Approach, Conceptual Metaphor and Frame Semantics

The theoretical framework of this is built upon three theoretical approaches: Corpus-based Approach, theory of Conceptual Metaphor and Frame Semantics. In the study, Corpus-based Approach is the methodology used for the collection and analysis of language data. As pointed out by Liu (2002), the advantage of using the corpus-based approach is that it provides a huge database of natural occurrences from which observational generalization and statistic comparison can be made. That is, it provides a better ‘vision’ for tracing grammatical and semantic differences of verbs and offer a new perspective on verb behavior. As for near-synonyms, the corpus-based approach helps us look at corpus distribution of near-synonyms and extract their minimal semantic contrasts. On the other hand, the Metaphor theory and Frame Semantics focus on the issue of domain mapping and classification of frames respectively. Observations on corpus data about mapping elements and frame transferring are often neglected. Thus, the corpus -based approach will be utilized in the study to explore corpus data of verbs in the two near-synonym sets and determine

their semantic ranges and find differentiation of collocation associations between polysemous senses.

Associated with Corpus-based Approach, this study utilizes theories of Conceptual Metaphor to explore the near-synonymous pair *chusheng* and *dansheng*. Conceptual Metaphor (cf. Lakoff & Johnson 1980, Sweetser 1990, Ahrens 2002) is assumed as a fundamental cognitive process on which concrete conceptual domains grounded in common human experience are mapped onto abstract conceptual domains. Thus, metaphorical extension is one of the important mechanisms to illustrate semantic change and meaning relatedness of polysemy. To account for metaphorical extension, mapping principles are proposed to give a precise description of how the two domains are mapped. Based on the theory of Conceptual metaphor, we will try to investigate whether it can be used in explaining why *chusheng* is limited to its semantic range and does not undergo metaphorical extension. If this is not the case, we will then try to devise a revised theory that could propose an explanation for the problem of *chusheng*.

Finally, Frame Semantics is utilized as a theoretical foundation to illustrate the near-synonymous pair *biaoshi*, *biaoda* and *biaolu*. Frame Semantics assumes that the meaning of a word can not be understood without referring to the knowledge of the word. To construct the knowledge, Frame is proposed by Fillmore and Atkins (1992) and defined as a coherent structure of related concepts based on our experience of the world. A frame also provides a precise definition to illustrate the relationship among meanings of polysymous and near-synonymous words which share similar conceptual motivations by recognizing their basic syntactic patterns and collocational associations of corpus data, therefore Frame Semantics is also associated with Corpus-based Approach. Furthermore, in each frame, some highlighted participant roles are regarded as core frame elements to separate one frame from another. On the

other hand, Liu and Chang (2005) and Liu *et al.* (2004) proposed some new perspectives on Frame Semantics. She points out that the flat structure of frames as utilized in FrameNet may not be a finest nor the most suitable way for classifying and exploring verbs in Mandarin , and , therefore, she advanced ‘five-layered hierarchical model’: Domain > Frame > Subframe > Near-synonym Set > Lemma. Associated with Cognitive Linguistics, she also introduced a cognitive conceptual schema to anchor a frame with cognitive evidences. Finally, the ‘one frame, one sense’ principle is also proposed to define the two senses in terms of two different frames. Because Liu’s modification on Frame Semantics is fine-grained and farsighted, her version will be adopted in the study.

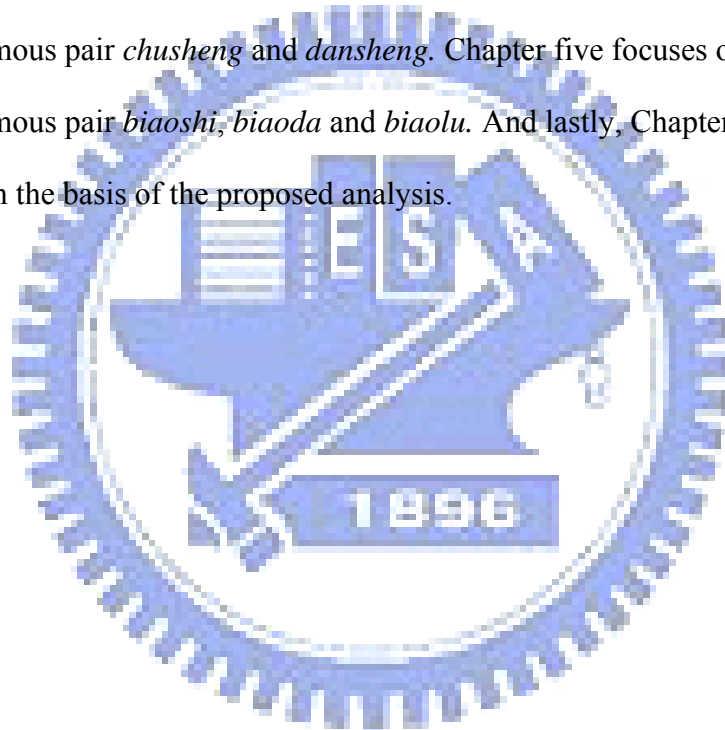
1.3 Scope and Goal

Semantic extension of polysemy and near-synonyms are two important issues in the fields of cognitive linguistics and lexical semantics. Lots of theories and methodologies have been used to explore a huge amount of data and which have achieved great contributions. However, as the questions about near-synonymous pair *jian*, *gai* and *zao* raised in the beginning of this section, there are some areas in the two issues which have never been explored. Also, there is a limit in discussion on single polysemous lexical item or meaning distinctions of near-synonymous verb, current researches paid little attention on the linking between the two issues. As a first attempt to answer the question, two near-synonymous sets *chusheng/dansheng* and *biaoshi/biaoda/biaolu*, are examined in terms of Conceptual Metaphor, Frame Semantics and Corpus-based Approach. Although this study only focuses on the two near-synonymous sets, each set associates with one of two mechanisms of semantic extension. Thus, the ultimate goal of this paper is to bear some broader implications, lead to analysis on more polysemous near-synonymous verbs, and propose a new

perspective approach on mechanisms of semantic extensions.

1.4 Outline of the Thesis

This paper is organized into six chapters. Chapter one is the general introduction of this study. Chapter two reviews works related to Conceptual Metaphor, Frame Semantics and Near-synonyms. Chapter three briefly introduces the database and methodology and observes the grammatical functions and significant collocational associations of the two near-synonymous sets. Chapter four revolves around the first near-synonymous pair *chusheng* and *dansheng*. Chapter five focuses on the second near-synonymous pair *biaoshi*, *biaoda* and *biaolu*. And lastly, Chapter six states the conclusion on the basis of the proposed analysis.



Chapter 2 Literature Review

This section reviews previous studies on near-synonyms in Mandarin, lexical polysemy, Conceptual Metaphor and Frame Semantics. Studies with near-synonyms will be discussed first in section 2.1, studies with polysemy in section 2.2, studies with Conceptual Metaphor in section 2.3 and studies on Frame Semantics in section 2.4. Each section contains a short summary and a brief comment on the reviewed works. It also presents the problems that may need further explanations. Section 2.4 concludes the literature review and points out the direction of this study.

2.1 Studies on Near-synonyms in Mandarin

In the analyses of verbal semantics, much attention is paid to exploring the semantic structure or meaning contrasts in near-synonyms in Mandarin. As a result, many interesting findings have been presented (cf. Tasi, Huang & Chen 1996, Tsai et al 1997, Liu 2002). The goal of these corpus-based studies is to illustrate the assumption that the semantic components of a verb can predict the syntactic behavior of the verb.

2.1.1 Tasi (1996)

Tsai *et al* (1996) is a corpus-based analysis on a near-synonymous pair *gaoxing* 高興 ‘happy, glad’ and *kualie* 快樂 ‘happy, joyful’. She examines the corpus distribution over their syntactic behaviors and lexical semantic properties. The major differences between *gaoxing* and *kualie* are summarized in Table 1 below.

Table 1. Corpus Distribution over syntactic behaviors of *gaoxing* and *kualie*

	<i>gaoxing</i>	<i>kualie</i>
Predicate	80%	32%
Adjectival Modifier -DE	0%	32%
Nominalized	0.3%	23%

Table 1 indicates that *gaoxing* is often used as a predicate, but *kualie* intends to be nominalized. Tsai explains that the two semantic features <+/-control> and <+/-change-of-state> influence the syntactic contrasts between the verbs.

Given her pioneering analysis on the near-synonymous pair, Tsai represents a useful approach to extract minimal contrasts of near-synonyms without defining near-synonyms by their circular lexicographical meanings¹, and further proves the interaction between syntax and semantics.

Although Tsai's study is limited to near-synonymous pairs, the corpus-based approach she adopted triggers more case studies for near-synonyms to support the assumption that the syntactic behaviour of verbs is semantically determined and to develop a framework of representing verbal meanings.

2.1.2 Liu (2002)

Liu (2002) gives a corpus-based analysis on Mandarin verbs and investigates the huge near-synonymous verbs. She examines the corpus distribution over their syntactic behaviors and lexical semantic properties to extract minimal contrasts of near-synonymous pairs. Also, based on Huang *et al* (2000)'s work on a model called MARS (Module-Attribute Representation of Verbal Semantics), used to detect and

¹ For example, the definition of *gaoxing* 高興 'happy' is *kualie* 快樂 'happy'.

represent verb meanings, she displays a clear and comprehensive framework to illustrate the sense distinction of near-synonymous pairs, as exemplified in the case of *jian*, *gai* and *zao* in Table 2.

Table 2. MARVS Representation of *jian*, *gai* and *zao*

Verb	Event Module	Role Module
	Event-Internal Attributes	Role-Internal Attributes
<i>Jian</i>	• // // • (Bounded Process)	<Agent, Incremental Theme> [artifact]
<i>Gai</i>	• // // (Inchoative Process)	<Agent, Incremental Theme> [architecture]
<i>Zao</i>	• // // (Inchoative Process)	<Agent, Incremental Theme> [design]

Given her pioneering analysis on near-synonymous verbs, Liu has made great contributions with her large-scale and in-depth investigation of Mandarin verbs and has thus, provided a suitable and effective approach for the study of Mandarin verbal system.

2.1.3 Summary of Studies of Near-synonyms in Mandarin

The two above mentioned works illustrate how important near-synonyms is in verbal semantics. Therefore, based on Tsai et al and Liu's studies, the issue of near-synonyms should be investigated in many facets. Now that the concern on the

sense distinction of near-synonyms has been elaborated in Tsai and Liu's studies, much attention should be paid to the next question concerning the semantic range of near-synonyms with polysemous senses. As shown in the Introduction of this study, *jian*, *gai* and *zao* are near-synonymous pairs, but the sense of *zao* is more restricted than the two other verbs with metaphorical extension. This seldom-discussed question is important because it will give us a new perspective to deal with the issue of the mechanism of forming lexical polysemy.

2.2 Studies on Mechanisms of Forming Lexical Polysemy

Lexical polysemy has been an important issue in semantics and a great many studies have been published (cf. Lien 2000, Lai 2003, Liu 2004, Liu et al 2005). The goal of these studies is to analyze lexical items with multiple senses in terms of mechanisms of semantic extension. Metaphor, metonymy and syntactic realization are assumed to have the same important mechanisms of sense extension. Here, studies about metaphorical extension and syntactic realization in terms of frame semantics are focused.

2.2.1 Metaphorical Extension

Metaphorical extension is taken as a ubiquitous phenomenon in ordinary language, and has a strong impact on a wide range of linguistic behaviors. Many studies give excellent illustrations of metaphorical extension by focusing on the relationship of domain mapping.

Sweetser (1990) is a study of multiple meanings of English modals, conjunctions, conditionals and perception verbs. Based on the Contemporary Theory of Metaphor (Lakoff and Johnson 1980), she considers metaphor to be a major cause for semantic change. For example, she employs a cross-linguistic metaphor *mind-as-body* to

account for the historical development of polysemy of perception verbs in Indo-European languages. The metaphorical development from a (concrete) source domain to a (less concrete) target domain of vision verbs further proves the Contemporary Theory of Metaphor.

Grady (1997) concerns the accuracy of the concept metaphor and reanalyzes the conceptual metaphor THEORIES ARE BUILDING proposed by Lakoff and Johnson (1980). He assumes that the general claim that theories can be conceptualized as buildings leads to the following questions: 1) “poverty” of mapping, 2) lack of experiential motivation and 3) unclear relationship with other metaphors. He indicates that the solution to these questions is “decomposition”. In other words, the conceptual metaphor such as THEORIES AS BUILDING has to be decomposed into primary metaphor and compound metaphor. In his discussion of THEORIES ARE BUILDINGS, Grady sheds light on further researches on the concept metaphor.

Ahrens (2002) is a study of concept metaphors in Mandarin. She deals with the concerns whether an infinite number of mappings is to exist between a source and a target domain. She assumes that the correspondences between a source and a target domain must be analyzed in order to determine the underlying reasons for the source-target pairings. She proposes the three aspects of each source domain (SD) as follows:

- 1) What entities does the SD have that are mapped to the TD?
- 2) What qualities does the SD or the entity in the SD have that are mapped to the TD?
- 3) a. What does the SD do that is mapped to the TD?
b. What can S/O do to (or in) the SD that is mapped to the TD?

According to the analysis of the three aspects about source domains, Ahrens further examines some mapping principles about ideas in Mandarin, such as IDEA IS BUILDING, IDEA IS FOOD, IDEA IS A COMMODITY, and IDEA IS AN INFANT.

Given her analysis about the correspondence of conceptual mapping between a source domain and a target domain, Ahrens concludes that the governing patterns in the metaphorical correspondences must be analyzed at a linguistic level after which a mapping principle can be proposed. However, Ahrens' postulation fails to apply to the case of polysemous near-synonyms with metaphorical extension. For example, Ahrens proposes a mapping principle IDEA IS AN INFANT to account for the phenomenon that *dangsheng* can co-occur with an abstract object, but the mapping principle is difficult to explain why *chusheng* can not be mapped into the abstract domain, as shown in (8):

(8) 這個偉大的想法終於誕生/*出生了。

Jege weida de shiangfa jungyu dansheng/chusheng le

'The great idea was finally born.'

With regard to their ultimate goals, the three above mentioned studies on metaphorical extension try to propose linking principles between domains. Earlier studies focus on the concept metaphor (e.g., Sweetser 1990). Later studies are more dedicated to providing a detailed analysis of mapping principles and source domains (e.g., Grady 1997; Ahrens 2002). However, these studies do not conclude other issues like near-synonym. Because near-synonyms pose a challenge to mapping principles, the next section will focus on how previous studies approached their analysis of near-synonyms.

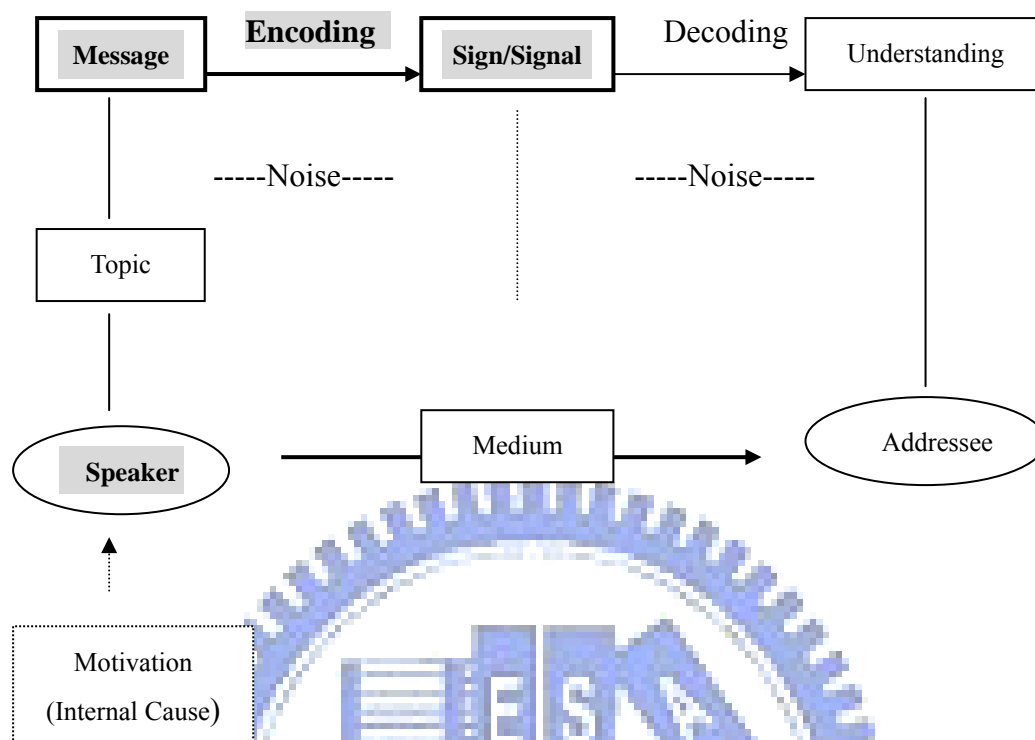
2.2.2 Frame Semantics

Frame semantics is an approach to the understanding and description of the meanings of lexical items and grammatical constructions. Many studies utilize this approach to classify the senses of a lexical polysemy (cf. Lien 2000, Lai 2003, Liu & Wu 2004).

Fillmore (1992) is a study of frame semantics. He assumes that one cannot understand the meaning of a single word without access to all the essential knowledge that relates to that word, and proposes the notion of “Frame”, defined as a coherent structure of related concepts based on our experience of the world. For example, the *commercial transaction frame* provides a cognition construction including a seller, a buyer, goods, money, the relation between the money and the goods, the relations between the seller, the goods and the money, the relation between the buyer, the goods and the money to understand the word "sell" without knowing anything about the situation of commercial transfer. Frame is also used to define polysemy. Fillmore states that the verb RISK has two senses: one is “put at risk” and the other is “face the risk of”. The two senses are suggested to associate with two related frames, which are syntactically different.

Liu & Wu (2004) take a polysemous verb *biaoshi* 表示 ‘say, express, or mean’ to demonstrate how the three senses of *biaoshi* are defined as the three different semantic frames by highlighting different core frame elements in terms of the frame-based approach. They assume that the three senses of *biaoshi* are anchored in the three different frames -- Statement, Encoding, and Evidence frames, each with its own frame-based features. For example, the schema of the Encoding Frame below is used to illustrate how the expressing sense of *biaoshi* is formed by highlighting the three core frame elements: Speaker, Message and Sign.

Figure 1. Defining Schema of the Encoding Frame



The two above mentioned studies provide a basic and preliminary description of sense distinction of a lexical polysemy, but what they are concerned with is a single lexical item. However, does near-synonymous pair of a lexical polysemy has the same semantic and syntactic characteristics like it? In addition, there is no further explanation to the question of how the relationship among frames is. These questions will be focused and dealt with in the study.

2.3 Summary

Regarding their ultimate goals, research studies on near-synonyms and lexical polysemy has made great contributions in providing pioneering explanations. The studies of near-synonyms are successful in exploring the lexical specification and collocational variations in prototypical uses of near-synonyms by examining their corpus data (e.g., Tasi, Huang & Chen 1996, Liu 2002). However, although they work

in the right direction, questions concerning the semantic range of polysemous near-synonym still need to be further elaborated on. On the other hand, studies on semantic extension of lexical polysemy seem to reveal some part of mechanisms of semantic extension (eg., Lien 2000, Lai 2003, Liu & Wu 2004). The big picture of their mechanisms should be investigated and supported by examining the larger-scope of linguistic categories like near-synonyms. Therefore, to bridge the gap between the area of near-synonyms and the area of lexical polysemy is crucial and should be discussed in greater detail.



Chapter 3 Methodology and Observations

In Mandarin, *dansheng/chusheng* and *biaoshi/biaoda/biaoshi* are two sets of near-synonyms, which can not be investigated in great detail. Although few previous studies explore the single verb of the near-synonyms, their focus do not expand to its near-synonymous pair and do not take corpus data into consideration. As shown in 1.1, the primary observation on the corpus data of the two sets of near-synonyms suggests that verbs are not interchangeable in all contexts and can not be substituted by one another. Therefore, this study thus aims to distinguish the difference between *dansheng* and *chusheng*, and among *biaoshi*, *biaoda* and *biaolu* by examining their corpus data, which if explored in their semantic properties shows a wide range of collocational and grammatical distributions.

3.1 Methodology

3.1.1 The Database: Balanced Corpus

Two online resources are used for the analysis in the main body of this study. One is the 5-million-word Sinica Corpus², which contains 5 million tagged Chinese words (<http://www.sinica.edu.tw/SinicaCorpus/>) collected from oral samples and written articles from different genres and sources in Taiwan. Sinica Corpus is the major data source in the paper. The other is the daily-update online archive, Google (<http://www.google.com>), which helps in finding more collocational patterns for low-frequency verbs in the Sinica Corpus and provides insufficient examples for the study.

3.1.2 Corpus-based Approach

The corpus-based approach is adopted in the analysis of the study. Unlike

² Sinica Corpus is abbreviated from Academia Sinica Balanced Corpus of Modern Chinese.

traditional approaches which select intuitive data as data source for linguistic analysis, corpus provides a large database of natural data that shows frequency distribution of collocational associations and grammatical patterns, and help to observe the generalization of linguistic phenomenon and find statistical comparisons.

On the other hand, the corpus-based approach views the distributional tendencies rather than grammaticality as the important evidence for linguistic analysis. Therefore, as for each verb in the two sets of near-synonyms, it is important to observe and examine its distributional differences with respect to nominalization, syntactic variations of core frame elements, and collocational associations. To do this, the first 300 examples³ of each verb in the Sinica Corpus are tagged and analyzed to find its distributional tendencies.

3.2 Initial Observations

3.2.1 *Chusheng* and *Dansheng*

3.2.1.1 Grammatical Function

In Sinica Corpus, the total occurrences of *chusheng* and *dansheng* are 231 and 120 respectively. A preliminary classification and distribution with respect to their grammatical functions is shown in Table 3, and the illustrated examples are represented in examples (9) to (12).

³ If the total occurrences of a verb exceed 300, the first 300 examples are collected and tagged.

Table 3. Distribution of Grammatical Functions of *chusheng* and *dansheng*

Function	<i>Chusheng</i>	<i>Dansheng</i>
Verb		
Subject+* ⁴	211 (91.3%)	79 (65.8%)
*+NP	0	6 (5%)
Adjective	14 (6%)	4 (3.3%)
NP	6 (2.6%)	31 (25.8%)

(9) Verb:

a. 孩子已經出生了

Haizi yijing chusheng le

‘The kid was born.’

b. 他的長孫即將誕生

tade zhangsun jijiang dansheng

‘His first grandson will be born.’

(10) Adjective:

a. 台灣地區的男女出生比率為一點零六比一

Taiwan diqu de nannu chusheng bilu dayue wei yi dian ling liu bi yi

‘The birthrate of male and female is 1.06 to 1.’

b. 校長人選的誕生方式

Xiaozhang renxuan de dansheng fangshi

‘The way the principle was chosen.’

(11) NP:

a. 人的出生並非自己可以選擇

⁴ The sign * represents the verb.

Ren de chusheng bingfei ziji keyi xuanze

‘People can’t choose to be born or not.’

b. 液晶投影電視的誕生

Yijing touying dianshi de dansheng

‘The birth of LCD TV’

From Table 3, we found that the two verbs are mainly used as verbs taking a subject; however, *dansheng* has a higher percentage of 25.8% nominalized use compared to *chusheng*’s 2.6%. Other grammatical uses of the two verbs are found with very little distributional significance.

3.2.1.2 Significant Collocational Association

Although *chusheng* and *dansheng* have a common similarity in grammatical functions, it must be noted that there is an obvious difference between the two of them, namely the semantic variation of Subject NP. Corpus data indicates that *chusheng* is limited to co-occur with a Subject NP with animate attributes in (12), while *dansheng* allows taking a Subject NP with animate or inanimate attributes in (13). The semantic variations with Subject NPs of the two verbs are classified in Table 4.

Table 4. Distribution of Semantic Variation with Subject NPs

Types of Subject NP	出生	誕生
Infant	231/231 (100%)	37/120 (30.8%)
Physical Entity	0	23/120 (19.2%)
Abstract Entity	0	60/120 (50%)

(12) Types of Subject NP of *chusheng*

- a. 小老虎(Animate)剛出生時，體重約900公克

Xiaolaohu gang chusheng shi tizhong yue 900 gongke

‘When the little tiger was born, it only weighted 900 grams.’

(13) Types of Subject NP of *dansheng*

- a. 第一個試管嬰兒(Animate)誕生了

Diyige shiguan yinger dansheng le

‘The first test-tube baby was born.’

- b. 南非羅佛斯蒸汽火車的火車頭(Physical)誕生於1893年

Nanfei luofosi zhengqi huochede huochetou dansheng yu 1893 nian

‘The steam train’s locomotive of South Africa was born in 1893.’

- c. 什麼時候會有新的理論(Abstract)誕生

Sheme shihou huiyou xinde lilun dansheng

‘When will there be a new theory?’

From Table 3 and Table 4, we found that although *chusheng* and *dansheng* are near-synonymous pair with similar grammatical functions, they are different in the semantic variations of co-occurring Subject NP. The difference will be further analyzed in Chapter 4.

3.2.2 *Biaoshi, Biaoda and Biaolu*

3.2.2.1 Grammatical Function

In Sinica Corpus, there are a total of 5000 occurrences of *biaoshi*, 667 occurrences of *biaoda*, and 18 occurrences⁵ of *biaolu*, but the first 300 examples of *biaoshi* and *diaoda* are tagged and analyzed. A preliminary classification and distribution with respect to their grammatical function is shown in Table 5, and the

⁵ Other 283 occurrences are collected from Google.

illustrated examples are represented in examples (14) to (16).

Table 5. Distribution of Grammatical Functions of *biaoshi*, *biaoda* and *biaolu*

Grammatical function	表示	表達	表露
Verb			
*+NP	58/300 (19.3%)	248/300 (82.7%)	267/300 (89%)
*+Clause	242/300 (80.7%)	10/300 (3.3%)	0
Adjective	0	12/300 (4%)	15/300 (5%)
NP	0	30/300 (10%)	18/300 (6%)

(14) Verb:

- a. 施美惠悔恨難過地表示：「一直想把他教好，但是都教不好。」

Shimeihui huihen nanguo di biaoshi : ‘ yizhi xiang ba ta jiaohao , danshi dou jiao bu hao ’

‘May -Huay, Shi said regretfully, ‘I’ve always wanted to cultivate him as a good person, but I failed.’

- b. 我是臺大教授之一，但是我很少在外界表達政治立場

Wo shi taida jiaoshou zhiyi , danshi wo henshao zai waijie biaoda zhengzhi lichang

‘I’m one of the professors of National Taiwan University, but I rarely express my political position outside.’

- c. 這是素還真最後一次在他面前表露愛意 (google 2006/10/11)

Zheshi n zuihouyici zai ta mianqian biaolou aiyi

‘This was the last time Hwon-Chen ,Su expressed his love in front of him..’

(15) Adjective:

- a. 表達的形式不拘

Biaoda de xingshi buju

‘You can express freely.’

- b. 表露的機會 (google 2006/10/11)

Biaolou de jihui

‘This is the chance to express’

(16) NP:

- a. 聲音的表達

Shengyin de biaoda

‘Vocal expression’

- b. 情感的表露 (google 2006/10/11)

Qinggan de biaolou

‘The expression of emotion’

Table 5 shows that *biaoshi* and *biaoda* are mainly used as verbs taking a complement, while *biaolu* tends to be nominalized. We also found that *biaoshi* prefers to take a clause as its complement, but *biaoda* and *biaolu* tend to take a NP as its complement. Other grammatical uses of the three verbs are found with very little distributional significance.

3.2.2.2 Significant Collocational Association

By analyzing corpus data, there are obvious differences among the three verbs which should be paid attention to, namely that the collocation of aspectual and phase markers in (17) and (18), and semantic variations of message types in (19), (20) and (21). The two salient distinctions are classified in Table 6.

Table 6. Distinction of collocation patterns

		表示	表達	表露
Aspectual marker	<i>jeng</i> (正) 'a progressive marker'	Yes/No	Yes/No	Yes
Phase marker	<i>wan</i> (完) 'a perfective marker'	Yes/No	Yes/No	No
Message types	Mental ⁶	Yes	Yes	No
	Emotional	Yes	Yes	Yes
	Linguistic	Yes	No	No

Aspectual markers:

(17) a. 工人正用消極的怠工來表示/表達他們的不滿

Gongren zheng yong xiaoji de daigong lai biaoshi /biaoda tamen de buman

'The workers are expressing their anger by having a strike.'

b. *白色正表示/表達純潔之意

Baise zheng biaoshi /biaoda chunjie zhiyi

'White means purity.'

c. 我正向她表露我的愛意

Wo zheng xiang ta biaolou wode aiyi

'I'm telling her my love towards her.'

(18) a. 工人先用消極的怠工來表示/表達完他們的不滿後，才上街抗議

Gongren xian yong xiaoji de daigong lai biaoshi /biaoda wan tamen de

buman hou , cai shangjie kangyi

⁶ The three message types: "Metal", "Emotional" and "Linguistic" will be revised in Chapter 5.

‘The workers expressed their anger by having a strike. And they went on the street to have a demonstration afterwards.’

b. *白色通常表示/表達完純潔之意

Baise tongchang biaoshi/biaoda wan chunjie zhiyi

‘*Usually white means purity.’

Message types:

Mental:

(19) 抗議人士不斷表示/表達/*表露他們的看法

*Kangyi renshi buduan biaoshi /biaoda /*biaolou tamen de kanfa*

‘Demonstrator kept expressing their opinion.’

Emotional:

(20) 我今天寫這一封信就是要表示/表達/表露我對你的愛意

Wo jintian xie zheyifeng xin jiushi yao biaoshi/biaoda/biaolou wo dui nide aiyi

‘I wrote to you to show you my love towards you.’

Linguistic:

(21) 學生團體向官員表示/?表達/*表露:「學生反對全民健保法。」

*Xuesheng tuanti xiang guanyuan biaoshi/?biaoda/*biaolou: ‘xuesheng fandui
quanmin jianbaofa.’*

‘The student group told the governor, ‘The students against National Health Insurance policy.’”

Chapter 4 Analysis of *dansheng* and *chusheng*

This section explores the mapping principle and process of the near-synonymous set, and tries to figure out how they shed a new light on the traditional view of the conceptual metaphor. As mentioned in Section 3.2.1.2, the distributional variation with Subject NPs could be an important indicator to distinguish *dansheng* and *chusheng*, but it also raises a question to be answered: why do *dansheng* and *chusheng* display different semantic ranges?

Within this question, two important factors are involved. First, the adaptation of the near-synonymous set *dansheng* and *chusheng* is based on the realization that *dansheng* is regarded as a verb with metaphorical extension (e.g. Ahrens2002), but it is unclear whether *chusheng* has also undergone the same metaphorical mapping. Therefore, the analysis on the near-synonymous set will provide an opportunity to associate the issue of conceptual metaphor with the issue of near-synonyms. Second, near-synonym is defined as semantically related words, and the study on near-synonyms associated with metaphorical extension will facilitate to investigate how the source domain is mapped onto into the target domain. Because previously there are very few researches which explore the way in which a near-synonymous set is mapped in conceptual metaphor, the study uses *dansheng* and *chusheng* to verify previous analyses on conceptual metaphor and at the same time provides a different perspective to it. *Dansheng* will be discussed first and then *dansheng*.

4.1 Semantic types of Subject NPs of *Dansheng*

We have primarily classified the semantic types of Subject NP of *dansheng* into three groups in Table 4: Infant, Physical Entity and Abstract Entity. The three types will help to realize the metaphorical extension of *dansheng*. Thus, they should be discussed in detail.

4.1.1 “Infant”

According to Table 4, *dansheng* co-occurs with Subject NPs which denote the sense of Infant with 30.8%. The concept of Infant is realized in variant forms such as proper nouns, generic nouns or definite nouns which indicate the being-born baby.

(22) Variant forms of “Infant”

- a. 查理八世就是在此誕生的

Chalibashi jiushi zai ci dansheng de

‘This is where Charles VIII l’Affable was born.’

- b. 讓各部分的溫度很平均，這樣一來，幼鳥就能如期的誕生了

*Rang gebufen de wendu hen pingjun , zheyangyilai , youniao jiuneng ruqide
dansheng le*

‘Adjust the temperature to the same degree, and the fledgling will be born on the expected date.’

- c. 他的長孫即將誕生

Tade zhangsun jijiang dansheng

‘His first grandson will be born.’

In the mapping principle “Idea as an Infant”, Infant is used to be a mapping element because infants are physical beings that are born and ideas are abstract entities that are born. The mapping of Infant onto the abstract entities assumes a domain mapping that the source domain of infant is used to map onto the target domain of idea.

4.1.2 “Physical Entity”

As shown in Table 4, inanimate physical entities can also co-occur with *dansheng*. According to the data, they denote the sense of physical created entity such

as *yijingtoutingdianshi* 液晶投影電視、*yige xinde jiche tingchechang* 一個新的機車停車場 and so on. Because they are physical entities, they may be possible mapping elements in the source domain. However, in the mapping principle “Ideas as an Infant”, Physical Entities are seldom discussed and it only deals with the mapping that Infant in the source domain is mapped onto the target domain. Thus, it inevitably raises questions regarding the relationship between Physical Entities and Infant, and how Physical Entities are mapped onto the target domain.

4.1.3 “Abstract Entity”

“Abstract entities” can occupy 50% of the Subject NP of *dansheng*. The data also shows there are variant abstract entities which collocate with *dansheng*, as shown in the following examples:

(23) Variant forms of “Abstract Entity”

a. 什麼時候會有新的理論誕生

Sheme shihou huiyou xinde lilun dansheng

‘When will the new theory be born?’

b. 台灣新文學誕生

Taiwan xinwenxue dansheng

‘The birth of Taiwan’s new literature’

c. 新人性的誕生

Xin renxing de dansheng

‘The birth of the new human character’

d. 中華民國院轄市是怎麼誕生

Zhonghuaminguo yuanxiashi shi zenme dansheng

‘How does the Municipalities of Taiwan came into shape?’

e. 『編印連環圖畫輔導辦法』的審查制度於是誕生了！」

Bianyin lianhuan tuhua fudao banfa de shencha zhidu yushi dansheng le

“The Regulation of Editing Comic Book” had finally come into shape!

f. 一個鮮活的都市生活意象已然誕生

Yige xianhuo de doushi shenghuo yixiang yiran dansheng

‘A lively urban image was born.’

It has been assumed that the mapping principle “Idea as an Infant” perfectly explains the example (a), for the domain mappings between the source domain of infant and the target domain of idea. However, as for (b) to (c), the mapping principle seemed to have failed. The possible solution for these cases is to write more mapping principles such as “Literature as an Infant” and so on, but the solution seems to be impossible and impractical, because after searching for more data on Google, there were too many abstract entities which could co-occur with *dansheng*. Thus, we will propose another solution in the latter section.

4.2 The Metaphorical Mapping of *dansheng*

We have analyzed the three types of Subject NPs of *dansheng* and recognized their roles and functions in the metaphorical mapping, but it remains unclear how they interact with each other. Although the mapping principle “Idea as an Infant” shows the relationship between Infant and Idea domains, Physical Entity and variant forms of Abstract Entity still poses an unresolved question about how they are mapped. To answer the question, we assume that there are two possibilities, as shown in Figure 2 and Figure 3.

Figure 2. The First Possibility of the Metaphorical Mapping of *dansheng*

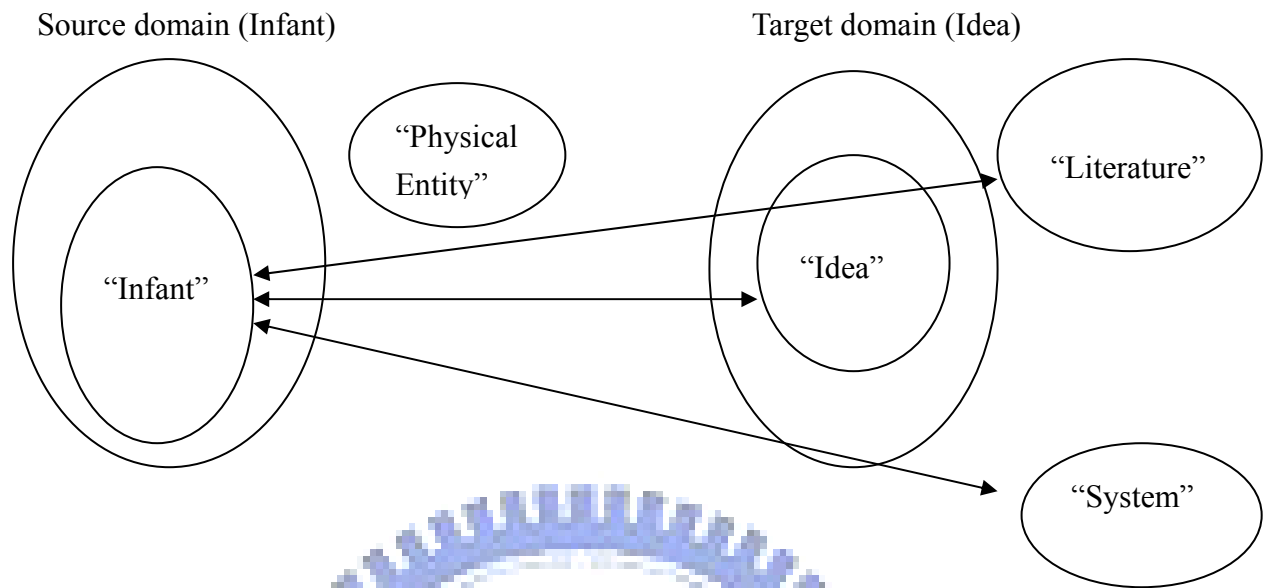


Figure 3. The Second Possibility of the Metaphorical Mapping of *dansheng*

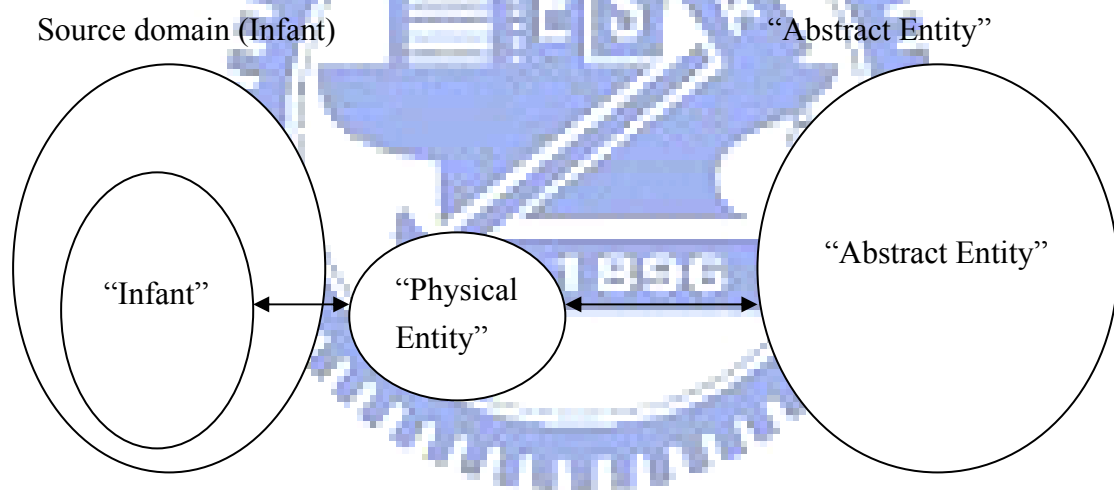


Figure 2 shows that the Metaphorical Mapping of *dansheng* is based on the Source domain of Infant. Physical Entity does not play an important role in the metaphorical mapping process. Figure 2 also demonstrates the way in which the Mapping Principle “Ideas as an Infant” operates.

However, Figure 3 displays a different kind of metaphorical mapping with the process starting from Infant to Physical Entity and then Physical Entity to Abstract Entity. In other words, it is a step-by-step process in which the role in the

metaphorical mapping from Infant to Abstract Entity. On the other hand, the target domain is replaced by Abstract Entity which covers more abstract entities and avoids generating superabundant mapping principles. Such an assumption about Figure 3 has its theoretical foundation, because, based on the direction and position of three mapped elements in Figure 3, *dansheng* undergoes the full range of metaphorical mappings from a concrete domain to an abstract domain, in the direction specified in Claudi & Heine (1986): person>object>space>process>quality.

(24) The Implication Relations of Conceptual Metaphors

The implicational relation is unidirectional. The direction from 'PERSON→OBJECT→SPACE→PROCESS→QUALITY' is possible, while the possibility of the opposite direction is ruled out (*'QUALITY→PROCESS SPACE→OBJECT→PERSON') since it is difficult for humans to use abstract properties to describe concrete entities.

To explain the sequence of metaphorical extension of *dansheng*, we assume that the transferred meanings of physical entities such as *yijingtoutingdianshi* 液晶投影電視 and *yige xinde jiche tingchechang* are created when the metaphorical strategy PERSON-to-OBJECT is applied. That is, the semantic transfers in NPs start with the use of infant status of physical beings as vehicles to express infant status of physical entities.

Following Claudi and Heine's categorical metaphor, we found that there is no an appropriate metaphorical strategy to explain how abstract entities such as *lilun* 理論 and *Xiangfa* 想法 are derived from physical entities. Therefore, we propose a revisited mechanism of metaphorical extension, as shown in Figure 4:

Figure 4. The Process that Object is mapped onto Abstract Entity

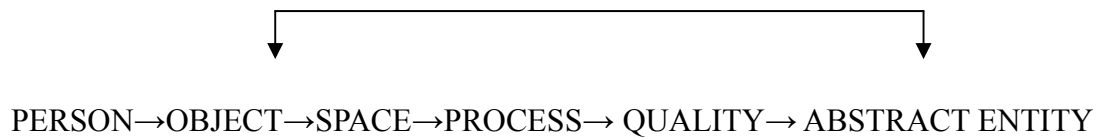
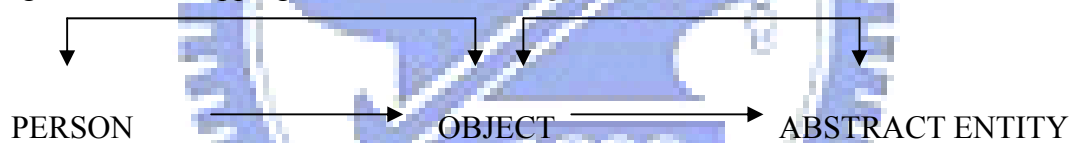


Figure 4 shows how abstract entities are derived from objects. It also means that the metaphorical mapping is operated at the OBJECT-to-ABSTRACT ENTITY level, because it complies with the metaphorical extension from Physical Entity to Abstract Entity. Now, the whole process of metaphorical mapping of *dansheng* is clear, as shown in Figure 5. The routine “PERSON-to-OBJECT-to-ABSTRACT ENTITIES” in Figure 5 indicates the mapping process of *dansheng* from Person (Infant) to Object (Physical Entity) to Abstract Entity.

Figure 5. The Mapping Process of *dansheng*



4.3 Semantic types of Subject NPs of *Chusheng*

As shown on Section 4.2, *dansheng* can undergo the metaphorical mappings between psychical and abstract entities. It raises the question whether its near-synonym pair *chusheng* also displays such a metaphorical process. In answer to the question, we also start from the analysis on semantic types of Subject NP of *chusheng*.

4.3.1 “Infant”

According to the data, *chusheng* co-occurs with Subject NPs which denote the sense of “Infant” 100%. Subject NPs of *chusheng* are also realized in variant semantic forms such as proper nouns, generic nouns or definite nouns which indicate the baby

being-born.

(25) Variant Semantic Forms of Subject NPs of *chusheng*

- a. 宮本輝出生時，父親已五十歲，而且是獨子

Gongbenhui chusheng shi , fuqin yi wushisui , erqie shi duzi

‘When KinShu was born, his father was fifty and the only son of the family.’

- b. 小老虎剛出生時，體重約900至1400公克

Xiaolaohu gang chushengshi , tizhong yue 900 zhi 1400 gongke

‘When the little tiger was born, it just weighted 900 to 1400 grams.’

- c. 這些孩子一出生就註定要學習屈辱

zhexie haizi yi chusheng jiu zhuding yao xuexi quru

‘The children were meant to learn to face the humiliation when they were born.’

Although *chusheng* allows Infant as its Subject NP, it does not co-occur with Physical Entity and Abstract Entity, as shown in the following examples:

- (26) a.*南非羅佛斯蒸汽火車的火車頭出生於1893年

Nanfei luofosi zhengqi huoche de huochetou chusheng yu 1893 nian

‘The steam train’s locomotive of South Africa was born in 1893.’

- b.*天曉得哲學家什麼時候會有新的理論出生

Tianxiaode zhexuejia shemeshihou hui you xin de lilun chusheng

‘Who knows when the philosophers will come up with a new theory.’

The examples suggest that *chusheng* does not undergo the metaphorical extension from Infant to Psychological Entity to Abstract Entity. The metaphorical limitation of *chusheng* is a very interesting phenomenon because *chusheng* seems to be a

prototypical verb in the source domain of Infant. It can be a nominal modifier with wider distributions in collocating with nouns of a more boring sense than *dansheng*, as shown in the following examples:

(27) a. 請填寫出生/*誕生年月日

*qing tianxie chusheng/*dansheng nian yue ri*

‘Please fill out the birthrate in the order of year, month, and date.’

b. 死亡率比出生/*誕生率高

*Siwanglu bi chusheng/*danshenglu gao*

‘The death rate was higher than the birth rate.’

c. 每個人出生/*誕生的時代都有差異

*Meigeren chusheng/*dansheng de shidai douyou chayi*

‘Every generation was different.’

d. 出生/*誕生人口不減的情形下，糧食的供應將會有問題

*Chusheng/*dansheng renkou bu jian de qingxing xia , liangshi de gongying
jiang hui you wenti*

‘If the birthrate doesn’t decrease, there would be a shortage of food supply.’

e. 民國三十二年以前出生/*誕生者

*Minguo sanshier nian yiqian chusheng/*dansheng zhe*

‘People who was born before the year of 32’

f. 男女出生/*誕生比率有失衡的情形

*Nannu chusheng/*dansheng bilu you shiheng de qingxing’*

‘The birth rate of men and woman was imbalanced.’

The examples imply that *chusheng* may be a more suitable verb to undergo the metaphorical mapping; however, this is not the case as we know it. Thus, it raises a

question that will be answered and discussed in the following section.

4.4 The Metaphorical Mapping of *Chusheng*

The analysis of Subject NP of *chusheng* shows that *chusheng* is limited in its metaphorical extension although it might be a prototypical verb of boring. The limitation of *chusheng* poses a challenge on the mapping principle “Idea as an Infant”. According to the definition of the mapping principle, we assume that the “Infant” of *chusheng* can also be mapped onto the abstract entities. Meanwhile, because *dansheng* and *chusheng* are near-synonymous pairs, it is reasonable to predict that *chusheng* should have the same metaphorical extensions as *dansheng*. However, the data proved our prediction to be incorrect. This means that the mapping principle is too powerful to rule out the non-metaphorical verb like *chusheng*.

It may be a possible solution to modify the mapping principle to solve the question, but it is difficult. Because *dansheng* and *chusheng* share the same syntactic patterns and have no salient discrimination in corpus data, we can not postulate an appropriate mapping principle to separate *dansheng* with *chusheng*. Thus, we reconsider the question and hypothesize that metaphorical mapping is lexical-based instead of domain-based. Lexical-based metaphorical extension means that lexical semantics may have an impact in metaphorical utterances and lexical-based principle may play an important role on metaphorical mapping. To illustrate the hypothesis, we profiled the metaphorical extension comparison of *dansheng* and *chusheng* from the point of the lexical-based metaphor mapping, as shown in Figure 6.

Figure 6. Lexicon-based Metaphorical Mapping

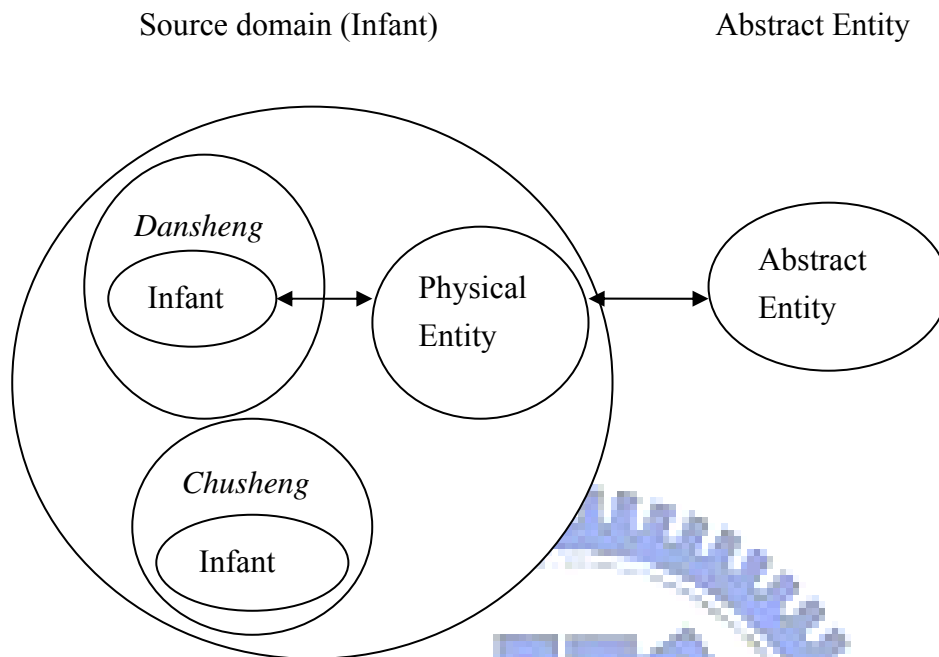


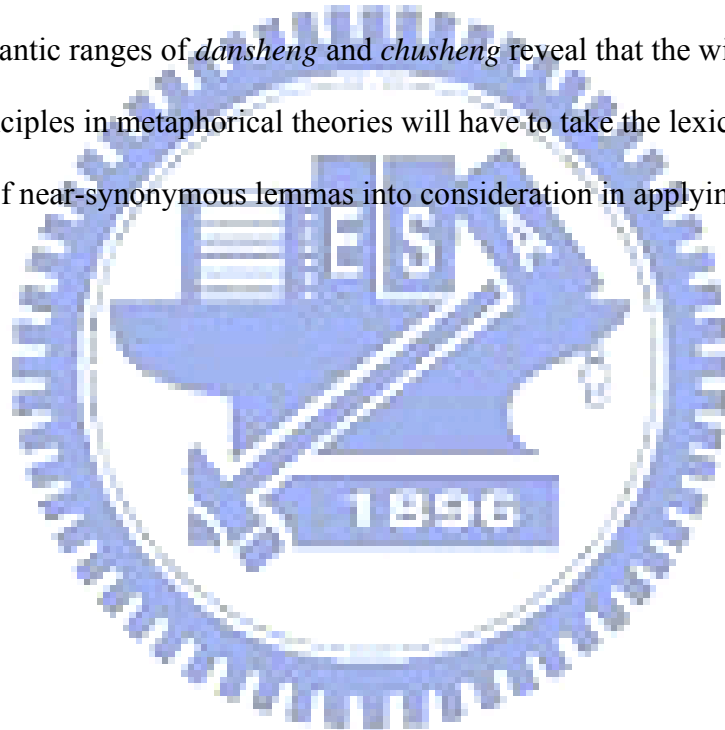
Figure 6 shows that metaphorical mapping of *dansheng* is triggered by itself and operates in the lexical domain. The mapping element like Infant is selected from *dansheng* instead of *chusheng* and the mapped elements like Physical Entity and Abstract Entity are only associated with *dansheng*.

Therefore, *chusheng* is limited to the biological birth of animate entities only and often collocates with time and place, indicating its highly restricted meaning in naming the natural, biological process of genealogical birth. Compared with the more flexible and less-restricted *dansheng*, *chusheng* is highly specialized in its core meaning and thus constrained from further functional extension. Contrary to lexical diffusion, *lexical differentiation* in semantic specification is at play in this case.

4.5 Summary

This section explores the metaphorical extension of the near-synonymous pair *dansheng* and *chusheng* by defining the semantic types of Subject NP and their

distributional differences in terms of the collocational evidences. The classification of the semantic types of Subject NPs of *dansheng* and *chusheng* clearly indicates that the metaphorical mapping of *dansheng* is operated at Claudi & Heine's categorical metaphor: "PERSON-to-OBJECT-to-ABSTRACT ENTITIES" and *chusheng* is limited to the birth of physical beings only, without further extensions to inanimate birth. Compared with the more flexible counterpart *dansheng*, *chusheng* may be viewed as an 'idiomatic' verb that always takes a Subject NP with animate properties. Contrary to lexical diffusion, lexical differentiation is at play in this case. The different semantic ranges of *dansheng* and *chusheng* reveal that the widely accepted mapping principles in metaphorical theories will have to take the lexical semantic distinctions of near-synonymous lemmas into consideration in applying metaphorical extensions.

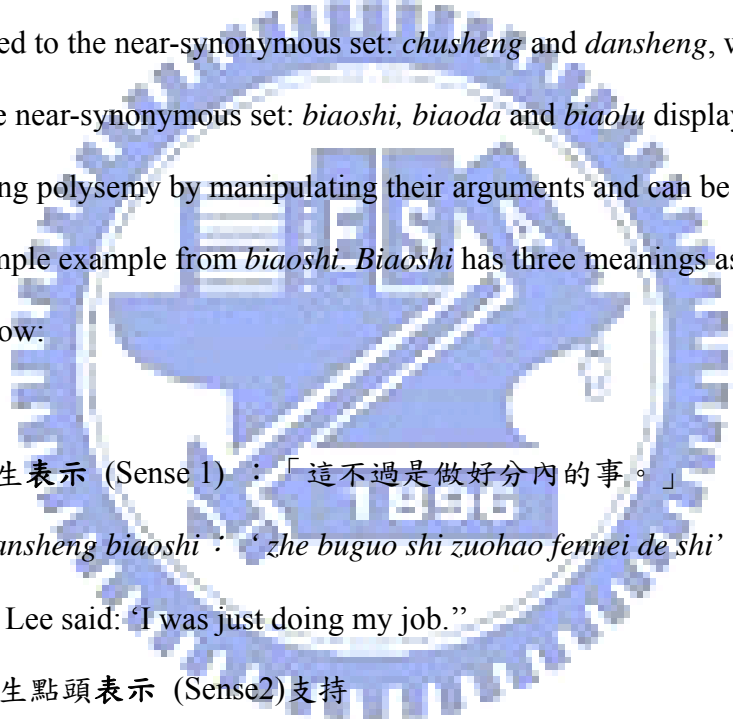


Chapter 5 Analysis of *biaoshi*, *biaoda* and *biaolu*

This section explores the process of semantic extension of the near-synonymous set and tries to figure out what the semantic transferring mechanism is. As mentioned in section 3.2.2, the three verbs differ in their collocation associations and syntactic patterns, which lead us to the next question of whether or not the three verbs display the same semantic ranges.

5.1 Frame-based Approach to Polysemy

Compared to the near-synonymous set: *chusheng* and *dansheng*, which has been discussed, the near-synonymous set: *biaoshi*, *biaoda* and *biaolu* displays a different way of forming polysemy by manipulating their arguments and can be explained in terms of a simple example from *biaoshi*. *Biaoshi* has three meanings as shown in the examples below:

- 
- (28) a. 李先生表示 (Sense 1) : 「這不過是做好分內的事。」
Lixiansheng biaoshi : 'zhe buguo shi zuohao fennei de shi'
'Mr. Lee said: 'I was just doing my job.'
- b. 李先生點頭表示 (Sense 2) 支持
Lixiansheng diantou biaoshi zhichi
'Mr. Lee nodded to express his support.'
- c. 鮮花表示 (Sense 3) 愛情
Xianhua biaoshi aiqing
'Flower means love.'

It is easy to observe the difference of the arguments in three senses: Sense 1 emphasizes a Speaker with a direct-quoted message, Sense 2 focuses on a speaker

who expresses something in some way, and Sense 3 focuses on a Sign which is used to represent something. Although, the descriptions above can be used to explain the difference among the three senses, it is not enough. Thus, further systematic analysis needs to be done in order to form the difference between the three senses. Therefore, the frame-based approach will be used to illustrate the definition of sense distinction. By associating different senses with different frames, Liu and Wu (2004) demonstrate a frame-based approach to polysemy with grammatical evidence. The polysemous verb such as *biaoshi* can be defined as highlighting different core frame elements that link them to different semantic frames with conceptual and structural motivations. Moreover, the ‘one frame, one sense’ principle, as suggested in Liu and Chang (2004), helps to facilitate sense distinctions on a well motivated and structured basis. A ‘sense’ is thus anchored in a conceptual structure and grammatical realizations that in turn defines a ‘frame’ with a set of core participant roles. Thus, the three senses of *biaoshi* are viewed as belonging to three different frames -- Statement, Encoding, and Evidence frames, each with its own frame-based features. However, a more interesting issue arises: what about the near-synonyms of *biaoshi*? Do they display the same kind of polysemy? With a thorough investigation of the corpus data, we found that *biaoshi* is not the only verb of expression that involves polysemy. Other expression verbs such as *biaoda* exhibit similar polysemous behavior. In the examples below, the uses of *biaoda* are illustrated:

(29)a. 今天寫這一封信就是要表達 (Sense2) 我衷心的感謝

Jintian xie zheyifeng xin jiushi yao biaoda wo zhongxin de ganxie

‘I wrote this letter to express my appreciation.’

b. 紅色表達 (Sense3) 熱情之意

Hongse biaoda reqing zhi yi

‘Red means passion.’

Similar to *biaoshi*, *biaoda* is also polysemous and may be analyzed as belonging to different frames. But, do the two verbs share the same range of frame membership? If so, then what are the fine-grained distinctions? If not, should cross-frame polysemy be taken as a defining indicator of near-synonym in addition to within-frame distinctions?

From the perspectives of frame semantics (Fillmore and Atkins 1992), the meaning of a lexical unit (or lemma) is defined within a frame. Therefore multiple senses (or ‘polysemy’) are considered as having multiple frame memberships. As exemplified above, the three senses of *biaoshi* are recognized as belonging to three different frames: *biaoshi*₁ exists in the Statement frame, *biaoshi*₂ in the Encoding frame, and *biaoshi*₃ in the Evidence frame.

From a traditional sense enumerating approach, such as WordNet’s sense definitions, the meaning of *biaoshi* in example (1a) is *say*; the meaning in example (1b) is *express*, and that of (1c) is *mean*. As an alternative to underpinning or ‘labeling’ the meanings, Fillmore and Atkins (1992) proposed that polysemy can be recognized as a result of transferring from a semantic frame to a new domain (through metonymy or metaphor). They hold that Frame Semantics makes it possible to separate the notion of the conceptual underpinnings of a concept from the precise way in which the words anchored in them get used (cf. Fillmore and Atkins 1992). Following such a view, Liu and Wu (2004) provided a frame-based analysis of polysemy: the polysemous verb of communication *biaoshi* is defined as highlighting different situational types with different core participants that link them to different semantic frames with structured motivations behind them. They also proposed a cognitive system based on the Conduit Metaphor to capture the conceptual motivations and

linage between different frames in the domain of communication, as represented below:

Figure 7. Conceptual Schema of the Communication domain

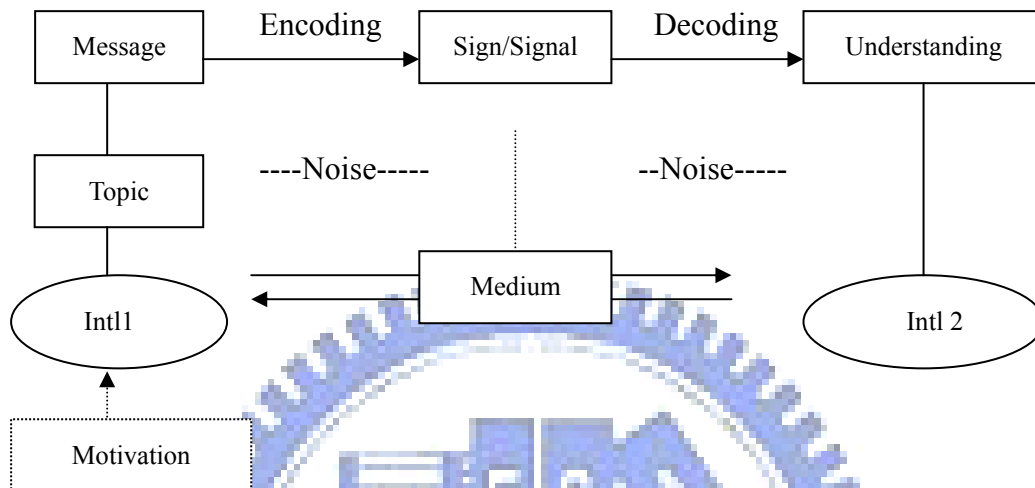


Figure 8. Defining Schema of the Statement Frame (表示₁)

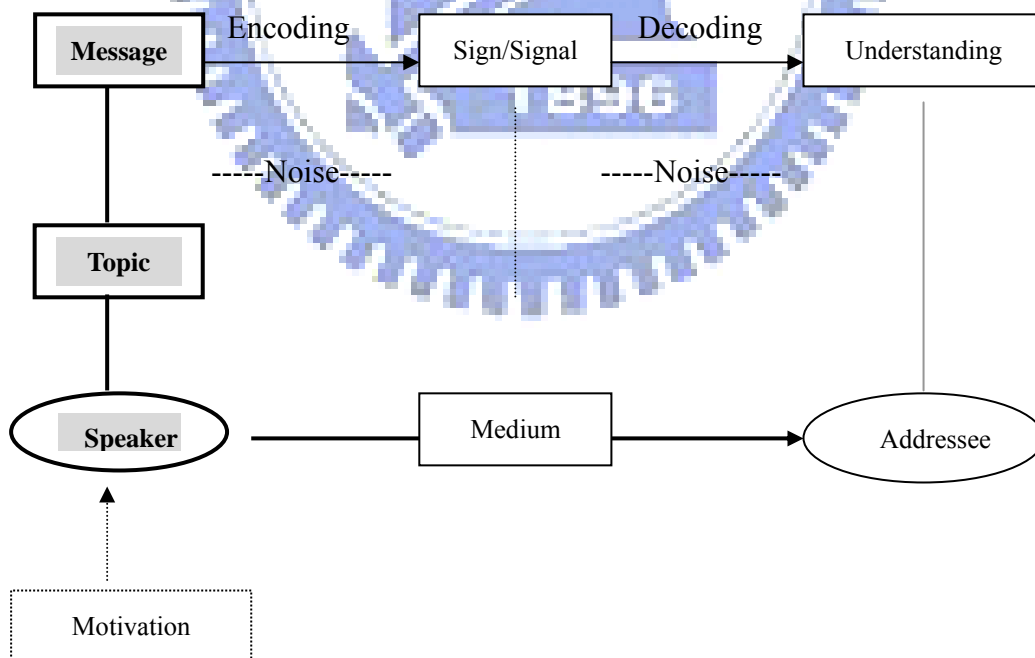


Figure 9. Defining Schema of the Encoding Frame (表示 2)

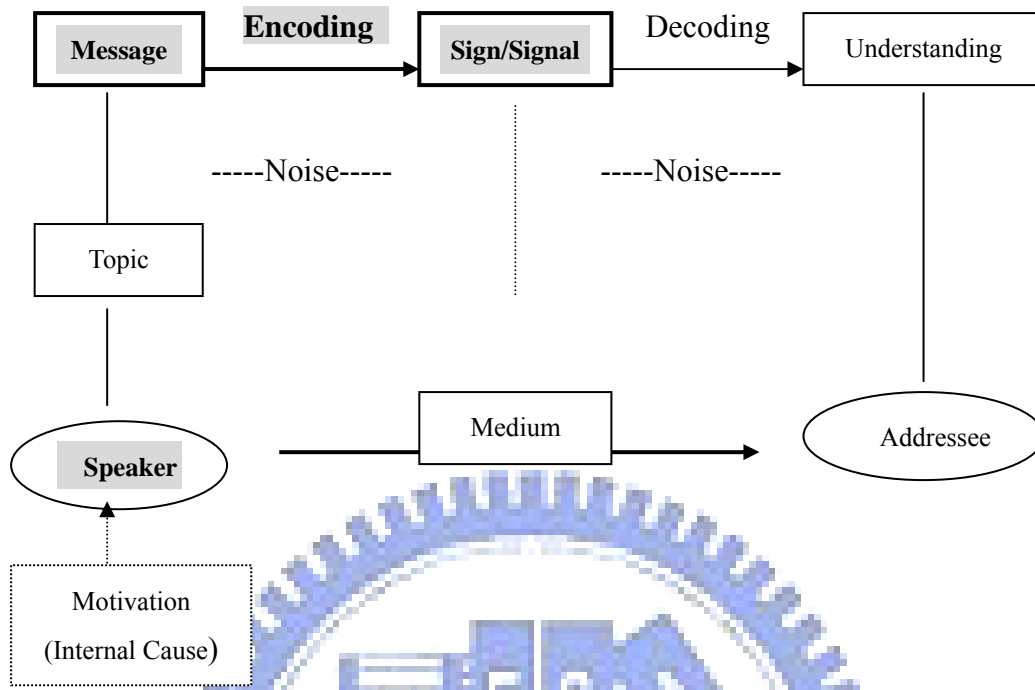
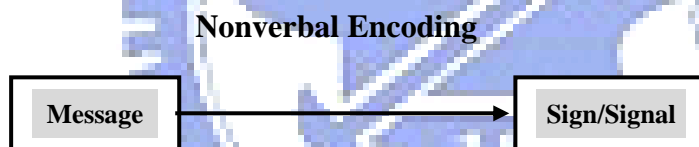


Figure 10. Defining Schema of the Evidence Frame (表示 3)



Each frame profiles different highlighted participant roles, called core frame elements. In the Statement frame, verbs emphasize the utterance of a Message by a certain Speaker roughly functioning as performing speech act. Verbs of Encoding focus on the Speaker's ways of 'packaging' the Message with the use of specific Signs or Signals. As for the Evidence frame, the Message is encoded by the verbal or nonverbal sign (cf. Liu and Wu 2004, Liu and Chiang 2004). The core frame elements of the three frame elements are summarized below:

(30) Core Frame Elements of the Three Frames

Statement : Speaker, Message (Message-as-content⁷)

Encoding : Speaker, Message (Topic, Message-as-encoded⁸)

Evidence : Sign, Message

5.2 Further Investigation into Basic Patterns and Collocational Associations

As mentioned above, conceptual schemas of Statement, Encoding and Evidence Frames provide a fine-grained foundation to describe the sense of a verb by highlighting their core frame elements. From the point of view of a lexical semantic analysis of the three near-synonymous verbs of communication - *biaoshi*, *biaoda* and *biaolu* can be developed in this study from the perspective of frame semantics, and a frame-based model of polysemous near-synonymy can also be proposed for sense and verbal distinction. In order to do this, the investigation into basic patterns and collocational associations of the three verbs should be examined to make further distinctions among the three frames and to determine which frames the three verbs are categorized into.

5.2.1 Analysis of *Biaoshi*

Liu and Wu (2004) have demonstrated a frame-based approach to polyemesy with grammatical evidence in the case of *biaoshi*. Based on their findings, we will further

⁷ According to Fillmore (2001), Message-as-content is a kind of message type, in which the sentence gives an indication of the force and content of the communication. For example, “they said that you weren’t ready.” (cf. 28 a) The form of Message-as-content is realized as a clause.

⁸ Message-as-encoded, coined in the thesis, is a kind of message type, in which the semantic attribute of a message tends to be emotional. Compared with Topic, Message-as-encoded cannot be preceded by a PP.

Ex: a. 李先生點頭表示支持 (Message-as-encoded) 。
b. *關於支持，李先生點頭表示。
c. 關於他的立場(Topic)，李先生已經表示過了。

analyze the basic patterns and collocational associations of it to find more evidences for distinguishing the three frames associated with the verb and to illustrate event structures of each frame.

The first step is to focus on basic patterns of *biaoshi*. After tagging 300 sentences from Sinica Corpus, the realization of basic patterns with frame elements of *biaoshi* is profiled and illustrated in Table 7.

Table 7. Basic Patterns with Frame Elements of *biaoshi*

NO.	Core FEs	BP ⁹	Percentage
1.	[+Speaker] [+Message-as-content]	Speaker < * < Message-as-content	51%(153/300)
2.	[+Speaker] [+Medium_Sign] [+Message-as-encoded] [+Topic]	Speaker < Medium_Sign < * < {Message-as-encoded, Topic}	19.3%(58/300)
3.	[+Sign] [+Message]	Sign < * < Message	29.7%(89/300)

Biaoshi has three basic patterns. BP1 belongs to the Statement frame, in which Message-as-content and Speaker are the core frame elements. BP2 is regarded as a basic pattern of the Encoding frame because the core frame elements of this basic pattern coincides with the conceptual schema of the Encoding frame. BP 4 accounts for the Evidence Frame. Examples of each frame are illustrated in (31).

(31) a. 施美惠[Speaker]悔恨難過地表示：「一直想把他教好，但是都教不好。」

⁹ BP is the abbreviation of basic patterns.

[Message]

Shimeihui huihen nanguodi biaoshi : ‘yizhi xiang ba ta jiaohao , danshi dou jiaobuhao’

‘May -Huay, Shi said regretfully, “I’ ve always wanted to cultivate him as a good person, but I failed.’

- b. 部屬[Speaker]只能熱烈的鼓掌[Medium_Sign]表示支持[Message]

Bushu zhineng relie de guzhang biaoshi zhichi

‘The subordinates can only clap loudly to express their support.’

- c. 樣本數量的多寡[Sign]表示代表性的高低的研究方法[Message]

Yangben shuliang de duogua biaoshi daibiaoxing de gaodi de yanjiu fangfa

‘The quantities of the sample represent the representative high and low level of the research method.’

Besides, basing the BPs of *biaoshi* in the three separate frames, we found that there is another major characteristic to distinguish the Evidence frame from both the Statement and Encoding Frames. The frame element Speaker indicates that *biaoshi* in the Statement and Encoding frames can co-occur with a speaker as its core frame element, while *biaoshi* in the Evidence frame does not.

Now that we have discussed the basic patterns of each frame, the next step is to depict collocational associations, through which we can realize event types of the three frames. Collocational associations of *biaoshi* in the three frames are shown from Table 8 to Table 10.

Table 8. Collocational Associations of *biaoshi* in the Statement frame

	CA ¹⁰
1.	Aspectual modification: * < 1)aspect marker[<i>le</i> (了)/ <i>guo</i> (過)/ <i>wan</i> (完)] 2)[<i>zhengzai</i> (正在)] < *
2.	Speaker [>non-human] < * ¹¹
3.	Speaker [>official] < * ¹²
4.	Preverbal Modification: modifier < *

(32) a. 吳文達等表示過仍支持張豐緒連任中華奧會主席

Wuwenda deng biaoshi guo reng zhichi zhangfengxu lianren zhonghua ao hui zhuxi

‘Wen-Da, Wu said he still support Fun-Shi, Chang’s re-election of the chairman of Chinese Taipei Olympic.’

b. 該公司表示，日內將先通知特定人繳款，而後再度送件

Gai gongsi biaoshi , rinei jiang xian tongzhi tedingren jiaokuan , erhou zai du songjian

‘The spokesman of the company said, they will notify the specified person to pay and will send the documents again after that.’

c. 環保局在會中表示：垃圾進場前，對南港居民做簡報

Huanbaoju zai huizhong biaoshi : lese jinchang qian , dui nangang jumin zuo jianbao

‘Department of Environmental Protection said during the meeting: ‘Before the garbage come in, we would report to the residents of Nangang.’’

¹⁰ CA is the abbreviation of collocational association.

¹¹ The speaker may be government organizations or companies.

¹² The speaker tends to be official with 83% (83/100).

- d. 李大經謙虛地表示，他與所有工作夥伴們在台灣市場上打下了「適當」的基礎

Lidajing qianxudi biaooshi , ta yu suoyou gongzuo huoban men zai taiwan shichang shang daxia le shidang de jichu

‘Lee Da Jin said modestly that he and his co-workers have built the “appropriate” foundation in Taiwanese market.’

Table 9. Collocational Associations of *biaoshi* in the Encoding frame

	CA
1.	Aspectual modification: * < 1)aspect marker[<i>le/guo/wan</i>] 2)[<i>zhengzai</i>] < *
2.	Speaker [>human] < *
3.	Speaker [>non-official] < *
4.	Preverbal Modification: modifier < *

- (33) a. 三位民眾分別表示完意見後 (google 2006/11/8)

Sanwei minzhong fenbie biaooshi wan yijian hou

‘After three citizens expressed their ideas individually.’

- b. 很多中國人表示懷疑

Henduo zhongguoren biaooshi huaiyi

‘Many Chinese are in doubt of this.’

- c. 工人先用消極的怠工來表示他們的不滿

Gongren xianyong xiaoji de daigong lai biaooshi tamen de buman

‘The workers are expressing their anger by having a strike.’

- d. 他略微驚訝地表示意見 (google 2006/11/8)

Ta luwei jingya di biaooshi yijian

‘He was surprised and then expressed his opinion.’

Table 10. Collocational Associations of *biaoshi* in the Evidence frame

	CA
1.	Aspectual modification: * <aspect marker[<i>le</i>]

(34) a. 線條的長度表示了那些脈衝星相對於太陽的距離

Xiantiao de zhangdu biaoshi le naxie mochongxing xiangdui yu taiyang de juli

‘The length of the line shows the distance of the pulsars to sun.’

Based on the CAs of *biaoshi* in the three frames, we found that there is one major key fact that distinguishes the Evidence frame apart from other two frames. CA of aspectual modification indicates that *biaoshi* in the Statement and Encoding frames can co-occur with the aspectual markers, *zhengzai*, *le*, *guo* and *wan*. It shows that the event type of *biaoshi* in the two frames is a bounded process with an endpoint¹³, while *biaoshi* in the Evidence frame can only co-occurs with the aspect marker *le*, which profiles the event type of a stative event.¹⁴

5.2.2 Analysis of *Biaoda*

As has been mentioned in Chapter 3, the corpus data shows that *biaoda* has a 82.7% tendency of taking a NP as its complement, which is significantly much higher than *biaoshi*. However, this does not offer enough attention to focus on the NP complements. Further investigation into basic patterns and collocational associations

¹³ By using the bottom-up approach, we can realize the Event type of a frame. Although the analysis of a lemma is not sufficient to profile the event type of a frame, but it can however, indicate the possible tendency of the event type of one frame. More lemmas analysis will be needed to support the assumption.

¹⁴ For example, the sentence “*線條的長度表示完/過那些脈衝星相對於太陽的距離。” is ungrammatical.

of *biaoda* should also be taken into consideration from the point view of Frame Semantics. After tagging 300 sentences with the main verb *biaoda*, its basic patterns and collocational associations are listed as follows:

Table11. Basic Patterns with Frame Elements of *biaoda*

NO.	Core FEs	BP	Percentage
1.	[+Speaker] [+Medium_Sign] [+Message-as-encoded] [+Topic]	Speaker< Medium_Sign < *< {Message-as-encoded, Topic}	84.3%(253/300)
2.	[+Sign] [+Message]	Sign < *< Message	15.7%(47/300)

Biaoda has two BPs. BP1 is regarded as a basic pattern of the Encoding frame because the core frame elements of it coincide with the conceptual schema of the Encoding frame. BP 3 accounts for Evidence Frame. Examples of each frame are illustrated in (35).

(35) a. 可見孔子[Speaker]擊磬的技巧很高，可以透過擊磬[Medium_Sign]表達
[Communication_Encoding_Express]內心的深意[Message]，這是很不容易
的事

*Kejian kongzi jiqing de jiqiao hengao , keyi touguo jiqing biaoda neixin de
shenyi , zheshi hen bu rongyi deshi*

‘We can see Confucius is very skillful at playing the Chime stone. He could
express his feeling by playing it, and it’ s not easy.’

b. 戲劇[Sign]不但可表達人生的甘苦，社會的轉變[Message]，也是文化的

精髓

Xiju budan ke biaoda rensheng de ganku , shehui de zhuanbian , yeshi wenhua de jingsui

‘Opera can not only express the ups and downs of life, the change of a society, and is also the pith of a culture.’

Based on the observation of BPs, it is clear that *biaoda* belongs to the two frames. Therefore, it is found that *bioshi* tends to occur in the Statement and Evidence frames, but *biaoda* tends to occur in the Encoding and Evidence frames. This is a very important distinction because this phenomenon indicates that they undergo different processes of frame transferring, although they are near-synonyms.

Next, we will further analyze collocational associations in order to differentiate the Encoding frame and the Evidence frame, as illustrated from Table 12 to Table 13.

Table 12. Collocational Associations of *biaoda* in the Encoding Frame

	CA
1.	Aspectual modification: * < 1)aspect marker[<i>le/guo</i>] 2)[<i>zhengzai</i>] < *
2.	Speaker [>human] < * ¹⁵
3.	Preverbal Modification: modifier < *

(36) a. 那位學生正在表達意見

Nawei xuesheng zhengzai biaoda yijian

‘The student is expressing his opinion.’

b. 我們至少表達了立場

¹⁵ The speaker of *biaoda* tends to be human with 95%

Women zhishao biaoda le lichang

‘At least we expressed where we stand.’

c. 男生常覺得女生不能清楚地表達自己的感情

Nansheng chang juede nusheng buneng qingchudi biaoda ziji de ganqing

‘Men often think Women can’t express their feelings clearly.’

Table13. Collocational Associations of *biaoda* in the Evidence frame

	CA
1.	Aspectual modification: * <aspect marker[<i>le</i>]

(37) a. 這個口頭禪與過去流行一陣子的無力感一樣，具體的表達了一般人的心態

Zhege koutouchan yu guoqu liuxing yizhenzi de wuligan yiyang , juti de biaoda le yibanren de xintai

‘The verbal quirk was like the trend of the helpless feeling in those days, which express ordinary people’s mind.’

Based on the CAs of *biaoda* in the three frames, we also found that there is another distinguishing factor between the Evidence and Encoding frame. CA of aspectual modification indicate that *biaoda* in the Encoding frame can co-occur with the aspectual markers: *zhengzai*, *le*, *guo* and *wan*. This means that the event type of *biaoda* in the Encoding frame is a bounded process with an endpoint, while *biaoda* in the Evidence frame that only co-occurs with the aspect marker *le*, which profiles the event type of a stative event.

5.2.3 Analysis of *Biaolu*

As has been mentioned in Chapter 3, the corpus data show that *biaolu* tends to

take a NP as its complement. After tagging 300 sentences with the main verb *biaolu*, its basic patterns and collocational associations are listed in Table 14.

Table 14. Basic Patterns with Frame Elements of *biaolu*

	Core FEs	BP	Percentage
1.	[+Speaker] [+Medium_Sign] [+Message-as-encoded]	Speaker< Medium_Sign < *< Message-as-encoded	82%(246/300)
2.	[+Medium_Sign] [+Message-as-encoded]	(Speaker)< 透過/用+ Medium_Sign < 將+Message< * 無遺	18% (54/300)

Biaolu has two BPs. BP 1 and BP2 indicate the basic patterns of the Encoding frame because the core frame elements of it coincide with the conceptual schema of the Encoding frame.

(38) a. 我(Speaker)今天寫這一封信(Sign)就是要表露
[Communication_Encoding_Express]我對你的愛意(Message)

Wo jintian xie zheyifeng xin jiushi yao biaolou wo dui nideaiyi

‘I wrote to show my love towards you.’

b. 透過自己動手製作精美作品(Sign)，將您的心意(Message)表露

[Communication_Encoding_Express]無遺

Touguo ziji dongshou zhizuo jingmei zuopin , jiang ninde xinyi biaolou wuyi

‘By making the exquisite work by yourself, your sincerity was seen.’

Based on the observation of BPs of *biaolu*, it is clear that *biaolu* only belongs to the

Encoding frames, and is not as polysemous as *biaoshi* and *biaoda*. In addition, *biaolu* fails to co-occur with Topic as follows:

(39) a. *雖然你[Speaker]平常不表露[Communication_Encoding_Express]意見

[Topic]

suiran ni pingchang bu biaolou yijian

‘*Although you don’t express your opinion often.’

The meaning limitations of *biaolu* are an important finding for discussing the sense extension of the frame-based mechanism. Before we start exploring the question, we need to analyze the collocational associations of BP 1 and BP2, as illustrated in Table 15.

Table 15. Collocational Associations of *biaolu* in the Encoding Frame

CA	
1.	Aspectual modification: * < 1) aspect marker [le/guó] 2) [zhengzai] < *
2.	Speaker [>human] < *

(40) a. 胡布小範圍會談後見記者，就重點正在表露中美對台灣問題的立場、態度

Hu bu xiao fanwei huitan hou jian jizhe , jiu zhongdian zhengzai biaolou zhongmei dui Taiwan wenti de lichang taidu

‘After the meeting, Bush and Hu Jintao had a press conference and they focused on the position of China and America towards Taiwan’s problem.’

b. 我今天寫這一封信就是要表露我對你的愛意。

Wo jintian xie zheyifeng xin jiushi yao biaolou wo dui nideaiyi

‘I wrote to show my love towards you.’

CA of aspectual modification indicates that *biaolu* in the Encoding frames can co-occur with the aspectual markers, *zhengzai*, *le*, *guo* and *wan*. It shows that the event type of *biaolu* in the Encoding frame is a bounded process with an endpoint.

To sum up, from the variation of grammatical patterns of the three verbs, we observe that *biaoshi* and *biaoda* are polysemous. How can a frame-based approach provide a unified analysis of a multiple sense distinction? The determining factors are: frame membership and distributional frequency. As a polysemous verb, *biaoshi* belongs to three frames-- Statement, Encoding, and Evidence. It is a prototypical verb of Statement (51% comparing with *biaoda* 1.7% and *biaolu* 0%) used mainly to perform speech acts. On the other hand, *biaoda* has two senses as a cross-frame member and it is used predominantly as a verb of Encoding. It is a less typical verb of Statement. As for *biaolu*, its syntactic pattern testifies that it is not as polysemous as the others, but rather a verb of Encoding used mainly to convey a Message-as-encoded by a Sign.

5.3 Frame Transferring and Cross-frame Comparison

We know that the three near-synonymous verbs are different in their polysemous development, as shown in Table 16.

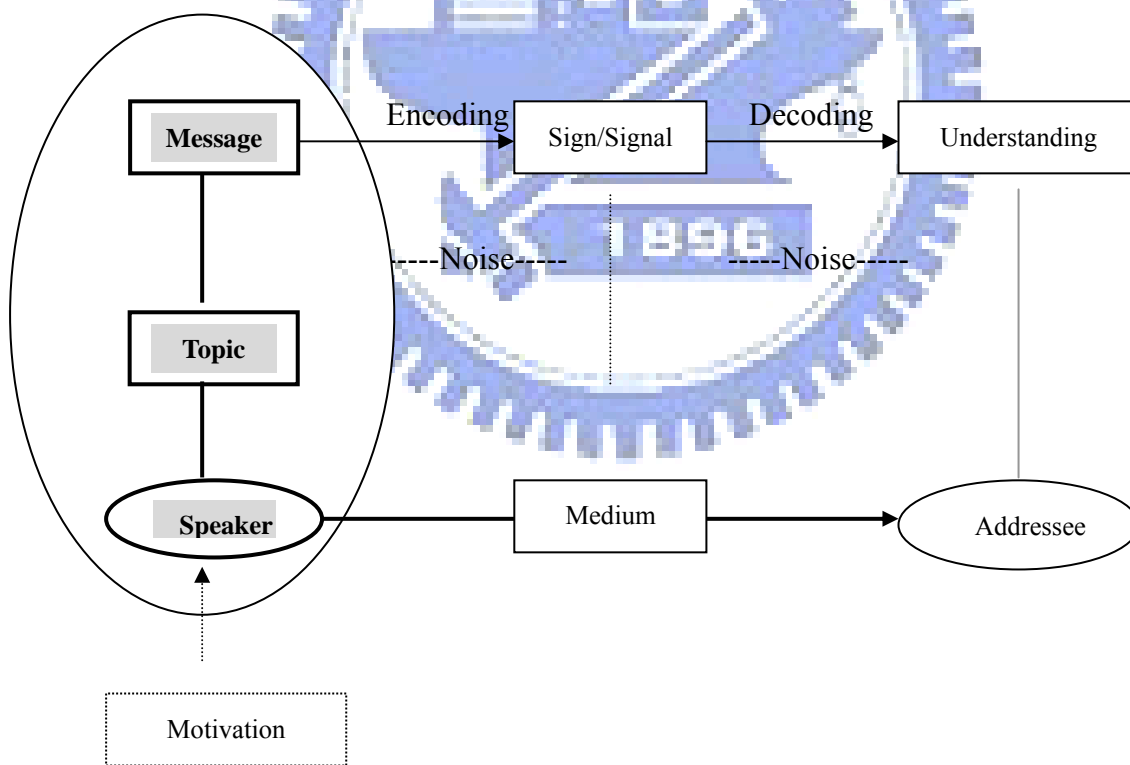
Table16. Polysemous Development of the Three Verbs

	Statement Frame	Encoding Frame	Evidence Frame
<i>Biaoshi</i>	Yes	Yes	Yes
<i>Biaoda</i>		Yes	Yes
<i>Biaolu</i>		Yes	

According to the data in Table 16, two interesting questions are raised: the first being what the relationship among the three frames are and secondly why the three near-synonyms are different in their polysemous development. In this section, these two questions will be answered.

As for the first question, the statement and Encoding frames are discussed first because they belong to the communication domain. The Statement frame is recognized as a primary frame because of its discourse-based characteristic that is experientially basic and because it describes an event that we experience directly in our everyday life. In short, it means that its message is expressed in an oral way.

Figure 11. Defining Schema of the Statement Frame



Based on the Statement frame, the Encoding frame is derived from highlighting different frame elements. The Encoding frame focuses on the interaction between sign and message as specified from the Statement frame. Much attention

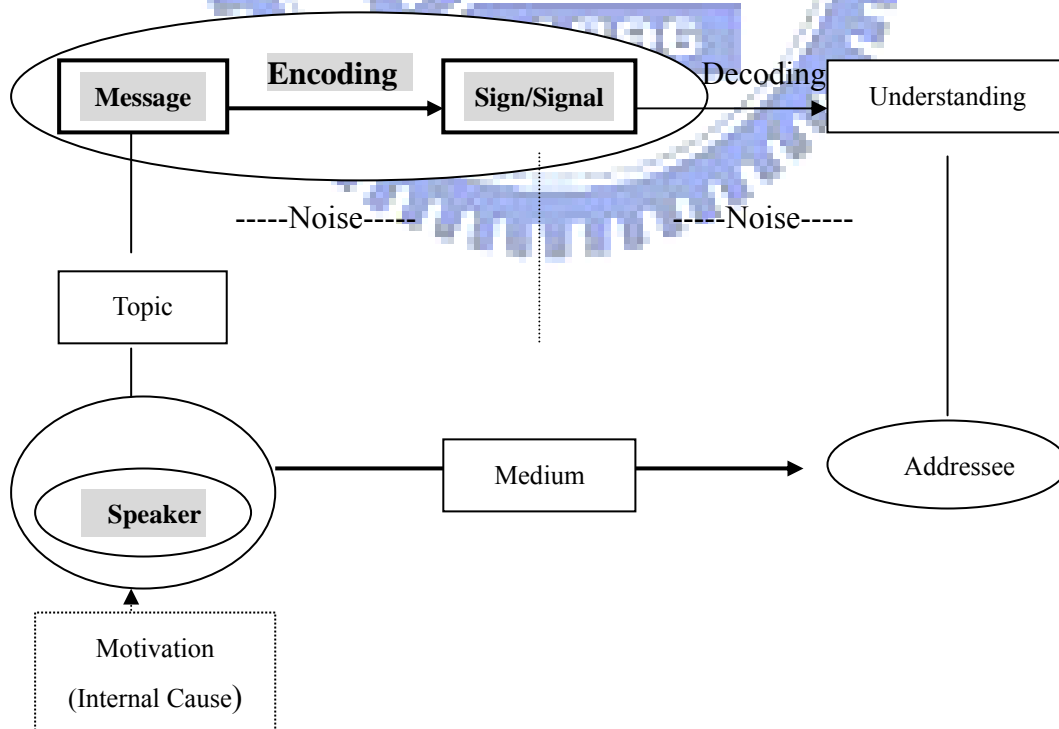
should be paid to the frame element “Sign” because it is what is used to separate the two frames. The motivation for the frame transferring from the Statement frame to the Encoding frame is triggered by the requirement of a Message-as-encoded and Topic. According to the data, semantic attributes of the two types of messages tend to be mental or emotional and which are abstract in cognition, as mentioned in 40. Therefore, some concrete signs are utilized to express there abstract messages, as exemplified in Figure 11:

(41) a. 部屬只能熱烈的鼓掌表示支持 [Message-as-encoded](abstract)

Bushu zhineng relie de guzhang biao shi zhichi

‘The subordinates can only clap loudly to show the support.’

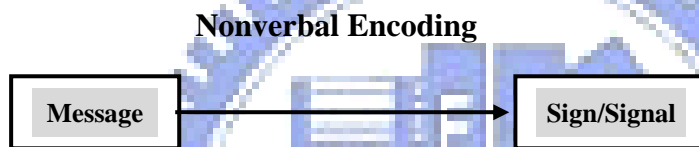
Figure12. Defining Schema of the Encoding Frame



The Evidence frame, on the other hand, is viewed as a frame not belonging to

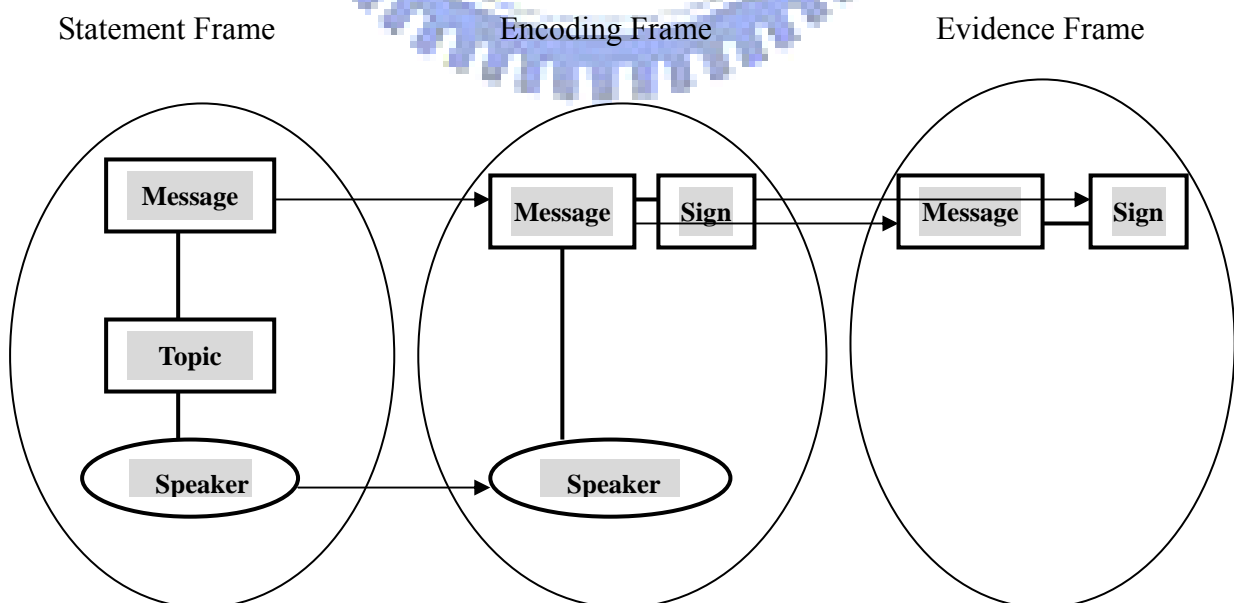
the Communication domain. The Evidence frame describes a process in which the two concepts (realized as a sign and a message) are combined, and it is derived from the Encoding frame by transferring the two frame elements of Message and Sign to the Evidence frame. This means that the Evidence frame is structured further by means of correspondences with selected elements of the Encoding frame. The derived process is thus from verbal to non-verbal, so the element Speaker in the Encoding frame is backgrounded.

Figure13. Defining Schema of the Evidence Frame



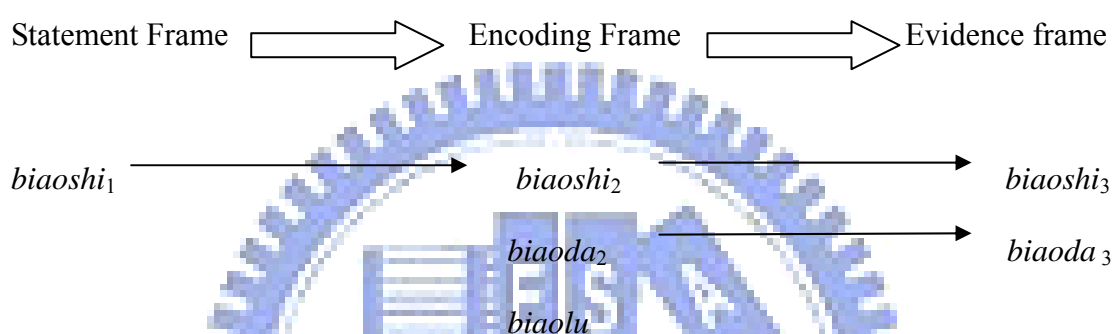
In a nutshell, Figure 14 below offers an illustrated view of the frame transferring processes among the 3 frames.

Figure14. Frame Transferring Processes among the three Frames



The question of the relationship among the three frames has been solved and now we can move to answer the second question: why are the three near-synonyms different in their polysemous development? To get a better understanding of the question, (41) illustrates the frame transfers of the three verbs undergoing the polysemous development.

(41) Polysemous Development of the Three Verbs



According to (41), *biaoshi* is a verb which can undergo the full frame transferring among the three frames, in other words, it is said to exist in the 3 frames and therefore processes the 3 senses. On the other hand, the polysemous development of *biaoda* starts from the Encoding frame to the Evidence frame. Finally, *biaolu* is a verb which only exists in the Encoding frame. Since the three verbs co-exist in the Encoding frame, it allows us to observe the difference among them and explain the operating process of frame transferring from the Encoding frame to the Evidence frame.

Therefore, when we compare BP of *biaoshi* and *biaoda* in the Encoding frame with that of *biaolu*, we found that the salient distinction between the two of them is the occurrence of Topic. As mentioned in (31), (35) and (38), *biaoshi* and *biaoda* can co-occur with Topic, while *biaolu* cannot. This phenomenon then raises the question of whether Topic is an important factor for influencing the polysemous development of *biaoshi* from the Encoding frame to the Evidence frame.

To answer the question, we hypothesize that a verb in a frame can experience the process of frame transferring if it satisfies the requirement of the conceptual schema of that frame. Referring back to *biaoshi*, *biaoda* and *biaolu* in the Encoding frame, the basic patterns of *biaoshi* and *biaoda* coincides with the conceptual schema of the Encoding frame, so that they are allowed to be transferred to the Evidence frame. On the other hand, the basic pattern of *biaolu* is limited and partially satisfies the conceptual schema of the Encoding frame because of its restriction on Message-as-encoded. Therefore, *biaolu* can not undergo the process of frame transferring from the Encoding frame to the Evidence frame.

The hypothesis not only explains the difference of polysemous development between *biaoshi*, *biaoda* and *biaolu*, but it also indicates that the process of the frame-based semantic extension involves two stages. The first stage is that the frame-to-frame transferring is triggered. The second stage is a lexical-based process that allows an individual verb to be transferred into another frame if it fits in with the conceptual schema of that specific frame.

In the case of the ‘express’ verbs, the verbal-to-nonverbal extension goes across different semantic frames (cf. Fillmore and Atkins 1992): from the most direct communicative event of Statement (a Speaker delivers a quoted Message, to the process of Encoding (a Speaker conveys a Message by a Sign, and then to the relational frame of Evidence (a Sign signifies a Meaning)). Among the three verbs, only *biaoshi* is a fully representative member of the source domain, i.e., the Statement frame, and thus capable of being extended to other domains, i.e., the Encoding and the Evidence frames. Here, lexical membership in the source frame or *frame-representativity* is the key to semantic extension.

5.4 Summary

This section explores sense extensions as well as the distinction of near-synonymous pair *biaoshi*, *biaoda* and *biaolu* by defining their distributional differences of basic patterns and collocational associations in terms of frame-based approach and the collocational evidences. Three frames, including the Statement frame, the Encoding frame and the Evidence frame are proposed to define the senses that the three verbs have. The sense classification of the three verbs indicates that *biaoshi* and *biaoda* are polysemous because they can exist in the three or two frames, while *biaolu* is limited to only exist in the Encoding frame only, without any further extensions to the Evidence frame. *Biaolu* is viewed as a verb that always takes a Message-as-encoded as its object. To explain the different semantic range among the three verbs, we discussed the process on how the Encoding frame is derived from the Statement frame, and how the Evidence frame is derived from the Encoding frame. Under the frame-to-frame transferring, the three verbs undergo the polysemous development according to our hypothesis, so we are able to explain why *biaoshi* and *biaoda* in the Encoding frame can be transferred to the Evidence frame, while *biaolu* cannot.

Chapter 6 Conclusions

This thesis discusses the two sets of near-synonyms: 1) *chusheng* and *dansheng*, and 2) *biaoshi*, *biaoda* and *biaolu* on a corpus-based approach with respect to their semantic extension. We found the semantic range of *chusheng* and *dansheng* to possess significance differences. Although the near-synonymous pair can co-occur with a subject NP carrying the sense of “Infant”, *dansheng* is less constrained in its metaphorical semantic extension than *chusheng*. As for the second near-synonym set *biaoshi*, *biaoda* and *biaolu*, the polysemous development is an important distinction for distinguishing them apart. It is found that *biaoshi* has three senses, *biaoda* has two senses and *biaolu* has one sense.

The two sets of near-synonyms involve two kinds of semantic extension, namely metaphor-based and frame-based mechanisms. When analyzing the data of the two sets of near-synonyms, we found that current theories have difficulties in explaining the different semantic range of near-synonymous pairs. Therefore, two hypotheses are proposed to explain the problem. In the near-synonymous set of *chusheng* and *dansheng*, the lexical-based rule is applied to illustrate why *dansheng* can be mapped onto the abstract domain, in the direction: Person>Physical Entity>Abstract Entity. This means that metaphorical theories will have to take into consideration the lexical semantic distinctions of near-synonymous verbs in applying metaphorical extensions, so the *lexical differentiation* principle is also proposed. In the near-synonymous set *biaoshi*, *biaoda* and *biaolu*, the hypothesis of frame-based semantic extension with the two stages are utilized to illustrate the polysemous development among the three verbs. The first stage concerns the frame-to-frame transferring and the second stage focuses on the conceptual schema requirement for triggering the individual verb in a frame to be transferred into another frame. Therefore, we are able to explain why *biaoshi* and *biaoda* are polysemous and also propose the *frame-representativity*

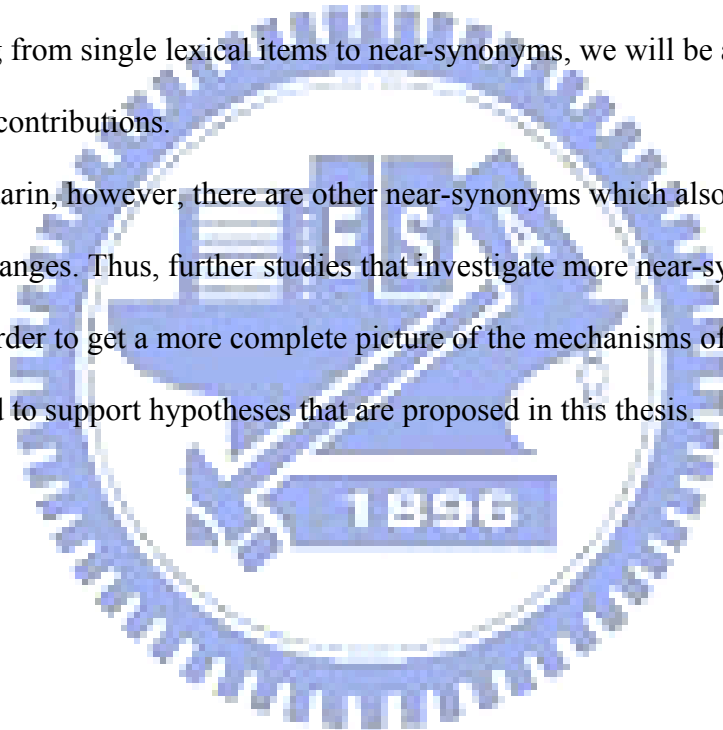
principle.

Although relatively limited in its research scope, this study, nevertheless, bears some broader implications:

1. In general, near-synonyms are discussed in finding their contractive features. In this thesis, we propose a new question concerning the meaning ranges of near-synonyms, and try to provide an explanation to some unanswered questions.

2. By analyzing different semantic ranges of near-synonymous verbs, we can further investigate the operating process of the two mechanisms. Therefore, with the focus shifting from single lexical items to near-synonyms, we will be able to get more findings and contributions.

In Mandarin, however, there are other near-synonyms which also show different polysemous ranges. Thus, further studies that investigate more near-synonyms is essential in order to get a more complete picture of the mechanisms of semantic extension and to support hypotheses that are proposed in this thesis.



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Website Resources

FrameNet. <http://www.icsi.berkeley.edu/~framenet/>

Google (online archive) <http://www.google.com>

Sinica Corpus (中研院平衡語料庫): <http://www.sinica.edu.tw/SinicaCorpus/>

WordNet: <http://www.cogsci.princeton.edu/~wn/>

