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UNDERSTANDING CHINESE COMPOUNDS

By

Xiuhong Zhang

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE

DOCTOR OF PHILOSOPHY

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ABSTRACT

Understanding Chinese Compounds

by

Xiuhong Zhang

This dissertation investigates the relationship between word-internal structure of verbal compounds and the grammatical properties of the compounds, focusing on their transitivity. Adopting a functional point of view, it provides a syntactic as well as semantic account of the seemingly chaotic syntactic features that verbal Chinese compounds possess. By being able to predict the grammatical properties of newly created compounds, the findings of the present work can be used to help students of Chinese as a foreign language have a better grasp of the language, especially the compounding patterns. The results can also be applied in computational applications, such as natural language understanding and processing. In Natural Language Processing (NLP), information about the formation and syntactic behavior of compounds is necessary for a system to be able to understand and/or translate any sentence containing newly created compounds.

The method of investigation is that of general functional linguistics guided by cognitive considerations, and the study is mainly data-driven. In this work, compoundhood in Chinese is considered to reside in a continuum, i.e. there is no clear-cut boundary between words and phrases.
The properties, including transitivity where it is relevant, of the five types of Chinese verbal compounds -- Verb-Resultative, Verb-Noun, Verb-Verb coordinate, Subject-Predicate, and Modifier-Verb -- are explored and characterized, along with means of distinguishing the five types of compounds and the subtypes with similar formal appearances. The transitivity of Verb-Resultative compounds, a highly productive type, is explored in the most depth.
Acknowledgments

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To My Beloved Parents

Shukui Zhang and Suying Yang

And

My Husband

Jianjun Xiao
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Chapter 1

INTRODUCTION

1.1 Objective and Perspective

Mandarin Chinese is sometimes called a monosyllabic language, meaning that the vast majority of words are expressed by one phonological syllable (Alexis Rygaloff, 1973; cf Charles Li & Sandra Thompson, 1981: 13). In reality, however, the language has long been going through dramatic changes from a monosyllabic type to a disyllabic type through various kinds of word formation processes. While it lacks inflectional morphology, there are several devices which result in disyllabic words, including derivational affixes, compounding, and reduplication. Grammarians have written a lot about word formation processes in Chinese both synchronically and diachronically, in connection with word-internal structure, determination of wordhood, relations between phonology, prosody and morphology, transitivity, lexicalization etc. All these studies are valuable for understanding the development of Chinese morphology, but there are also areas that remain unexplored in depth, especially from a functional point of view. The relationship between the word-internal structure and the function of the complex word is one such area which is of great significance to understanding the cognitive process of new word formation, and one which, therefore, deserves its own place in Chinese morphological studies.

The present study is aimed at making contributions to this area. It investigates the relationship between word-internal structure of verbal compounds and the compounds’
grammatical properties including their transitivity, and provides a syntactic as well as semantic account of the seemingly chaotic syntactic features that verbal Chinese compounds possess. This account is based on analyses from a functional point of view, informed by cognitive considerations. This study is limited to two-morpheme complex verbs, which comprise the vast majority compounds.

Language serves as a means of communication among people. A participant in a conversation makes choices of words and produces utterances to achieve certain effects and functions. In functional linguistics, it is believed that no good understanding can be achieved of the cognitive linguistic patterns speakers have without consideration of both syntax and semantics. Syntax is not independent of semantics. However, most previous studies have analyzed Chinese word formation without much consideration of function and cognitive process. Not many have focused in depth on the semantic motivations of Chinese verbal patterns. In the present work, it is the cognitive patterns, motivated by functions, of verbal compounding in Chinese that we are exploring.

In Chinese linguistics, there have been discussions on the distinction between gou4-ci2 fa3 to build-word-law 'rules governing word structure' and zao4-ci2 fa3 to create-word-law 'rules governing word formation' (cf. Pan et al., 1990: 486). The difference between these two types of studies is that the former focuses on investigations of internal structures of existing complex words, while the latter focuses on ways of creating new words. In this dissertation, I accept this distinction, while observing also that the properties of existing compounds' internal structures are indications of how new compounds can be formed and what kind of properties the new compounds can possess. It is safe to say that no new compounds can be created without following certain
compounding patterns Chinese speakers share as common knowledge, especially the synchronically productive ones, which are manifested through the existing compounds. Therefore, the existing compounds are the starting point of our exploration as well as the focus of the present study.

To sum up, the objective of the present study is as follows:

(A). A thorough, synchronic examination conducted within a general functional linguistic framework of the correlations between word-internal structure and the grammatical properties of verbal compounds in Mandarin Chinese.

(B). As a natural consequence, the use of the findings of the examination to predict the properties of newly formed compounds, to some extent.

I say 'to some extent' because this kind of cognitive exploration, i.e. a human being's understanding of our own linguistic capabilities in forming compounds, is necessarily a limitless task, and one dissertation cannot possibly exhaust it. But I certainly believe that I have found meaningful answers to this question, guided by the functional linguistic orientation.

1.2 Basic Concepts

Before any investigations are done, we need to briefly elaborate the theoretical framework within which the concepts such as 'words', 'idioms', 'lexicalization', etc. are defined and used throughout the present work. This framework is based on Sydney Lamb's Relational Network Model elaborated in his Pathways of the Brain (1999).

The Relational Network Model holds that the mind is not a device for storing and rewriting symbols but a network system, whose information is in its connectivity. The linguistic structure can only be understood in the context of actual human beings, as an
information system present in a person, a cognitive system. The cognitive system contains no internal symbols, but is a system which interprets symbols coming to it from outside and which produces symbols. Taxonomic or generative linguistics, or rule-based artificial intelligence models, which “need places to store symbols and need a little homunculus to interpret rules or other symbolic representations” (Lamb, 1999), do not reflect the cognitive process of language users.

The present study will not delve into neurocognitive linguistics. However, some of the cognitive findings set forth in Lamb (1999) will be adopted as the theoretical basis for this dissertation. There are especially three dimensions about words in this model that concern the present work. They are: (1) lexeme vs. nonce-formation; (2) morphological word vs. morphological phrase; and (3) transparency vs. opacity.

1.2.1 Lexical word and Lexicalization

A lexical word in Lamb (1999) is called a lexeme, whose characteristic is that it is learned as a unit:

> "Lexemes are the units for which lexical/dictionary entries are needed, in conventional analytical descriptions. ... From a cognitive point of view, the analytical principles are usually arbitrary or irrelevant ... The neurocognitive criterion is that the lexemes are the units which are learned (hence present in the cognitive system) as units, therefore not constructed on the spot out of their constituent morphemes. Such units naturally vary in length from single morphemes on up. ... For example, red herring is a single lexeme but two words. An example of a single word corresponding to two lexemes is redistribute --- consisting of the lexemes re- and distribute (Lamb, 1999:30-31)."

There are some forms that can be interpreted alternately either as a lexeme or a combination of two or more lexemes, such as ‘look up’. It is a lexeme in ‘look up the
word in the dictionary', and is a combination of two lexemes in 'look up there in the sky' (Lamb, 1999:31).

According to Lamb (1999), an utterance of any length can be a lexeme as long as it is learned as a unit. Some examples of lexemes of different sizes are given in Lamb (1999: 31-32):

- Single morphemes, such as 'cat'.
- Word-length lexemes: polymorphemic words like 'blackbird', 'meaningful' etc.
- Phrasal lexemes, such as 'the light at the end of the tunnel', 'wake-up call', which are phrases in their internal composition.
- Clausal lexemes, such as 'give me a break', 'it was no laughing matter'.
- Sentential lexemes, as opposed to clausal lexemes, consisting of two or more clauses, such as 'you know what I mean', 'don't count your chickens before they are hatched'.
- Discourse lexemes, which are even longer. For a typical speaker of English, examples might include poems and other texts that have been memorized.

A concept closely related to lexeme is lexicalization. Lexicalization occurs in accordance with the frequency of a complex linguistic form's usage. A commonly occurring part of the everyday life of a linguistic system is the process of lexicalization (Lamb, 1999:163):

'... and so we have to recognize that whenever something is experienced many times it becomes learned as a unit. That is the way our cognitive systems seem to work; and so if we are trying to be realistic we have to recognize the fact.

... the process of lexicalization is typically a gradual one: The first time a new combination is formed by a speaker, it must be constructed as a combination of units previously learned; in this case it is a NONCE-FORMATION. But for subsequent uses it need not be constructed again if it is remembered as a unit.

... We should also recognize that the choice between (1) understanding a combination on the
basis of its components and (2) understanding it as a unit is not an either-or choice, since these two processes may both operate in the network, in parallel. That is one of the beauties of relational networks ...(Lamb, 1999: 164-166)'

According to Lamb's model, we should say that most compounds in Chinese have already been lexicalized. They are learned as units and used as units---not formed at the time they are used. Yet, a lexicalized complex form's internal structure is still of significance to us for many purposes including that of understanding the word formation process:

'... Even after a lexeme has reached a state that we might call fully lexicalized and idiomatized, its components can still operate as such to provide connotations based on the meanings they have when occurring in isolation. (Lamb, 1999: 164-166)'

Applied to Chinese, it has been shown from studies of Chinese aphasic patients (cf. Bates & Chen, 1991) that the constituents even of a well-established compound play an active role in speech production. Such findings support the argument that even if lexicalized compounds are learned as units, it does not prevent the language speakers from creating new compounds with the same internal structure and similar functions as the ones learned as units. This means that, while picking up existing compounds as units, language speakers somehow also acquire the cognitive patterns based on which the compounds have been formed. In brief, it is a cognitive fact that Chinese speakers have knowledge of the cognitive patterns of compounding in addition to learning existing compounds as units.

The concept of lexicalization is necessary in the sense that we need to distinguish a lexicalized word and a morphological word in defining compoundhood (cf. Chapter 2). Compounds as morphological words, not lexemes, are the main focus. The cognitive
patterns behind the compounds are our real interest in the present work.

1.2.2 Idiomaticity; lexicalization vs. idiomatization

As time goes on, a lexicalized complex form may acquire its own distinctive semantics, which is beyond the composition of the meanings of its components. Such a process in Lamb (1999) is called idiomatization.

"The term IDIOM may be used for those lexicalized forms whose meanings are not predictable from those of their constituents; that is, for a lexicalized form whose meaning is not transparent. (Lamb, 1999: 164)"

An example of idiomatized lexeme is 'blackboard' whose meaning cannot be predicted by those of its components—a blackboard is not necessarily black. The meaning of such complex forms is called non-transparent or opaque. Lamb (1999) then illustrates the correlations between lexicalization and idiomaticization:

"... lexicalization comes about simply as a result of repeated occurrences, whether or not the combinations are semantically transparent.

... To sum up this argument, complex lexemes must be recognized in a cognitively realistic model regardless of whether or not they are semantically transparent, for semantic obscurity is only a sufficient criterion for such recognition, not a necessary criterion---complex lexemes may or may not be semantically obscure. (Lamb, 1999: 164-169)"

In other words, lexemes can be transparent or opaque. If a complex form is opaque, then it follows that such a form is a lexeme; if it is transparent, then it may or may not be a lexeme. The transparency principle is useful in the present work in helping us recognize lexicalized compounds, along with other criteria (cf. 2.3, 2.4).
1.2.3 Morphological Word

A morphological word in Lamb (1999) is generally what 'word' is referred to in discussions of wordhood (see Chapter 2.2)—a combination of morpheme(s). A morphological word is formed by a morphological construction, while a phrase is formed by a syntactic construction. In the present work, where 'word' appears by itself, it means a morphological word.

There has been much argument concerning the distinction between a word and a phrase in Chinese, especially about the wordhood of separable Verb-Object (i.e. VO) and Verb-Resultative (i.e. VR) forms. In reality, in terms of wordhood, compounds form a continuum, i.e. there is no clear-cut boundary between phrases and words. Some complex forms clearly show properties of single words, while others have properties of phrases in addition to those of single words. The contentiousness of the wordhood of VO and VR compounds proves that different standards of 'wordhood' may lead to different conclusions. The different criteria of wordhood will be discussed in Chapter 2 in detail. In general, we believe that, while there are some significant differentiating properties, there is no definition of wordhood that can satisfy all aspects.

1.2.4 The Relationship of the Three Dimensions

It is important to make clear the interrelations among the three dimensions when discussing compounds: (1) lexeme vs. nonce-formation; (2) word vs. phrase and (3) transparency vs. opacity. The following figures summarize the relationships among the three dimensions. Figure 1.1 applies to non-transparent complex forms, whereas Figure 1.2 applies to transparent complex forms. While we distinguish transparent and non-transparent compounds, it is necessary to bear in mind that transparency/opacity of
compounds is also a continuum.

<table>
<thead>
<tr>
<th>Lexeme</th>
<th>New-formation</th>
<th>Opaque</th>
<th>Translucent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WORD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'blackboard'</td>
<td>?</td>
<td>OPAQUE</td>
<td>TRANSPARENT</td>
</tr>
<tr>
<td><strong>PHRASE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'break a leg'</td>
<td>?</td>
<td>OPAQUE</td>
<td>TRANSPARENT</td>
</tr>
</tbody>
</table>

**Figure 1.1 With opaque semantics**

<table>
<thead>
<tr>
<th>Lexeme</th>
<th>New-formation</th>
<th>Transparent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WORD</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'reconstruct'</td>
<td>'re-design'</td>
<td></td>
</tr>
<tr>
<td><strong>PHRASE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'sit back and relax'</td>
<td>'eat three pieces of apple pie'</td>
<td>TRANSPARENT</td>
</tr>
</tbody>
</table>

**Figure 1.2 With transparent semantics**

In Figure 1.1, 'blackboard' is both a morphological word and a lexeme. In contrast, although 'break a leg' is a lexeme, it is not a morphological word. It is a phrase. Both 'blackboard' and 'break a leg' are opaque in the sense that their meanings are not the composition of those of their components. In Figure 1.2, 'reconstruct' is both a morphological word and a lexeme. On the contrary, 'sit back and relax' is morphologically a phrase although it is a lexeme. Both 'reconstruct' and 'sit back and relax' are transparent in meaning. 're-design' is an example of a new, transparent morphological word.

Similarly, these two figures can be expressed by Chinese examples which will be part of our discussion in the following chapters. Consider Figure 1.3 and Figure 1.4. In Figure 1.3, pao4-niul (to immerse-girl) 'to be indulged with girls' is both a morphological word and a lexeme. On the contrary, yi4 zhaol bei4 she2 yao3, shi2 nian2 pa4 jing3 sheng2 (one-morning-BEI-snake-bite, ten-year-afraid of-well-rope) 'once
beaten, twice shy' is both a lexeme and a morphological phrase. Both pao4-niu1 and yi4 zha01 bei4 she2 yao3, shi2 nian2 pa4 jing3 sheng2 are opaque. In Figure 1.4, xi3-zao3 (to wash-bath) 'to take a bath' is both a lexeme and a morphological word. In contrast, guan1 yun2 chang2 qian1 li3 zou3 dan1 qi2 (Guan Yunchang-thousand-li-walk-alone-ride) 'Guan Yunchang rode alone for a thousand miles' is a lexeme for Chinese speakers because it is the title of a well-known chapter in the popular novel 'Three Kingdoms'. But it is not a morphological word. Both xi3-zao3 and guan1 yun2 chang2 qian1 li3 zou3 dan1 qi2 are transparent. In Figure 1.4, da3-fei1 (to beat-to fly) 'to beat away' is a newly created verb-resultative form [by me] and it is included as a morphological word in the present work, the reason of which will be illustrated in Chapter 2 in detail. On the contrary, chi1 le san1 ge4 ping2 guo3 (to eat-LE-three-CL-apple) 'to have eaten three apples' is a newly created phrase.

![Diagram](image1.png)

![Diagram](image2.png)

Figure 1.3 With opaque semantics

Figure 1.4 With transparent semantics

1.3 Semantics-driven Approach

Several points need to be elaborated:
i. Different from proposals which maintain that language is composed of different modules that are relatively independent of each other, we believe that syntax cannot be independent from semantics. Function motivates syntactic behavior.

ii. This is not to undermine historical influence in word formation in Chinese. We are aware that the phenomena are not all to be explained only by a synchronic analysis because the properties of compounds derive from the evolution of their structures. Nevertheless, the present study will be mainly synchronic although some diachronic evidence will be mentioned where it is relevant.

iii. A semantics-driven approach does not have to ignore all the other forces that promote compounding in Chinese, such as phonological, prosodic, rhetorical as well as language contact factors. As a matter of fact, motivated by the need of making distinctions between homophones as well as for some other reasons, the preference for disyllabic combinations is so prominent that phonological motivations play an important role in compound formation in Mandarin Chinese.

iv. Of all the factors involved, in new compound formation following productive patterns, the semantic ones are still the major driving force in determining the grammatical properties of the newly created compounds.

1.4 Background Principles

The following background principles will be the basis of the present study:

(i) Formally, the internal structure of Chinese complex verb formation by compounding is largely analogous to that of phrase formation and syntax. A minor part violates syntactic rules.
(ii) Some word formation patterns, as relics of history, are no longer productive. For example, most VO compounds in Chinese are intransitive except for a small number of transitive ones, such as huai2-yi2 to hold-doubt 'to doubt; to suspect'. In such a compound, due to historical developments, the components are so fused that the compound can almost be viewed as a bi-syllabic morpheme instead of a combination of two morphemes. Another example of this kind is the coordinative compound gong1-zuo4 labor-to work 'to work; job'. Some linguists consider it as a bisyllabic morpheme. Obviously, these archaic compounds' properties do not necessarily accord with what we can find from the rest in general, based on a synchronic study. Therefore, although these historic relics will be pointed out where relevant, they will not be the focus of our study. The model proposed in this work will treat as exceptions a number of historic relics that do not fit in the currently working cognitive patterns.

1.5 Coverage of the Thesis

First, this is a synchronic study of cognitive patterns of Chinese compounds.

Second, the scope is limited to verbal compounds. Basically this study is about the relationship between the internal structure of a verbal compound and the functions of the compound as a whole.

Third, productive patterns of verbal compounds will be given major attention, based on the types of new compounds that come into being in Mandarin Chinese. As a result, the present study is intended to be able to predict the syntactic properties of potential new compounds. Therefore, Verb-Object (i.e. VO) and Verb-Resultative (i.e. VR) patterns are within the range of my interest even if some VO or VR forms arguably have properties of both compounds and phrases.
Fourth, the study will be limited to investigations of only two-morpheme complex verbal forms.

Fifth, The study will focus on verb formation patterns and their correlations with, in particular, the complex verb’s transitivity, where it is worthy of deep investigation.

1.6 Applications

By being able to predict the grammatical properties of newly created compounds, students of Chinese as a foreign language can have a better grasp of the language. The results can also be applied in computational applications, such as natural language understanding and processing. In Natural Language Processing (NLP), information about the formation and syntactic behavior of compounds is necessary for a system to be able to understand and/or translate any sentence containing newly created compounds.
Chapter 2

LITERATURE REVIEW AND DISCUSSION OF COMPOUNDHOOD

Early Chinese language studies focused mainly on 'characters' along with their shapes, pronunciations and meanings. This practice continued until almost half a century ago, when influenced by linguistic trends in the West, many Chinese linguistic studies have begun to shift focus from studying 'characters' to 'words'. These studies also have progressed through the frameworks of structuralism to generative linguistics to functional linguistics.

Wengu Pan et al. (1993) give a very thorough and detailed review of studies on Chinese word formation mainly by Chinese linguists, from 1898 to 1990. This work mainly covers five orientations of Chinese word formation studies: Word Analysis, Word Borrowing, Word Coinage, Word Differentiation, and Word Employment. Word Analysis, which Pan et al. (1993) call synchronically static descriptions, refers to structural analysis of existing compounds. A representative of this approach is Zhiwei Lu (1957). Word Coinage or word formation focuses on the dynamic processes of forming compounds and leans toward diachronic studies. Pan et al. consider Ren (1981) to be an example of this type. Word Differentiation refers to distinctions between words and phrases, and between words and morphemes. Many linguists have participated in arguments on this issue. Word Employment refers to changes that occur during usage in different contexts. Word Borrowing studies how borrowed words are made more
Chinese-like by going through a word formation process. In this chapter, I will mainly consider some of the discussions on word differentiation, i.e. the definition of compoundhood in our terms, as treated by Pan et al. (1993).

Before discussing compoundhood, let’s take a brief look at how Chinese morphology is viewed as a whole.

2.1 Previous Discussions on Chinese Morphology

2.1.1 Li & Thompson (1981) : Chinese as an Isolating but not a Monosyllabic Language

Li & Thompson (1981) argue that Chinese is an isolating but not a monosyllabic language. An isolating language is a language in which “each word consists of just one morpheme and cannot be further analyzed into component parts” (Li & Thompson, 1981:11). Li & Thompson (1981) contend that Chinese does not manifest a high degree of morphological complexity in terms of several types of grammatical morphemes and is not inflectional (cf. Li & Thompson, 1981:13). Those grammatical morphemes include case markers and number markers occurring with nouns as well as agreement markers and tense/aspect markers occurring with verbs in other inflectional languages. Chinese has none of these except aspe ctual markers –le ‘perfective’, -guo ‘experienced action’ and –zhe ‘durative’. However, as Li & Thompson (1981) point out, Chinese is rich at compounding, which is one type of morphological combination.

Li & Thompson’s claim that Chinese is isolating but not monosyllabic needs to be refined. As a matter of fact, it is more accurate to say that morphemes in Chinese are basically monosyllabic. As Lilly Chen (1993) points out, as far as modern Chinese is concerned, “in the course of history the emergence and development of an aspe ctual
system, causative patterning, the resultative verb construction, deictive verbal expressions, verbal complementation, passives, the disposal construction, etc. have led the once isolating language away from its relatively pure analytic state ..." (Chen 1993:286). Chen (1998), quoting Shuxiang Lu (1984), points out that words in modern Chinese are mostly disyllabic.

'... Words in Ancient Chinese were overwhelmingly monosyllabic, whereas words in Modern Chinese are mostly disyllabic (Lu 1984: 422). The nature of Chinese morphology is not derivational but compounding. According to Zhiyi Zhang (1987: 18) percentages of multisyllabic (essentially disyllabic) words in the Chinese lexicons throughout the stages are: (1) 10% before the 2rd century BC, (2) 20% from the 2nd century BC to the 5th century AD, (3) 40-70% between the 6th and 19th centuries, and (4) 70-80% in Modern Mandarin. Disyllabicization increases specification' (Chen 1998)

2.1.2 Dai (1992): Poverty of Chinese Morphology as an Illusion

Counter to what is generally believed in Chinese linguistics, that Chinese is poor at inflectional morphology, Xiangling Dai (1992) claims in his dissertation *Chinese Morphology and its Interface with the Syntax* that there are three misconceptions about Chinese:

- Chinese has little or no morphology except for compounding; Chinese has been cited as among the most isolating or analytical languages of the world, i.e., with a putative one-to-one mapping between morphemes and words.

- The internal structure of compounds in Chinese is simply a reflection of the structure of its phrasal syntax

- Chinese has no inflectional morphology

The author states:
"... The putative poverty of Chinese morphology is simply an illusion." (1992:2)

"... The inquiry is made as to whether syntax, without morphology, can independently describe compounds in addition to phrases. The purpose of this work is to study in depth the word structure of Standard Chinese (or Chinese morphology) in order to justify these three distinctions as universals of grammar: syntax vs. morphology, compounds vs. phrases, and derivational vs. inflectional morphology". (1992:2)

Dai (1992) believes that principles governing word structure and phrase structure in Chinese are distinct. This distinction is based, to use Dai’s terminology, on alternative ordering of constituents, the ability to change lexical categories, reference to phonology, acceptance of optional dependents, suppression of constituents, and tolerance of exceptions to rules. He believes that a compound behaves differently from a phrase in that a compound may exhibit lexical, semantic or phonological idiosyncrasies, and its constituents observe lexical integrity.

In general, I agree with Dai’s claim that, in Chinese, there are distinctions between syntax and morphology, including between compounds and phrases. But I oppose his methodology in arguing about these claims. First, he adopts an utterly theory-driven approach. His work gives an impression of trying to force Chinese into a mold of Universal Grammar. In his view, Chinese is actually very inflectional. He lists a number of functional markers in Chinese as inflectional markers. In fact, some of them are not completely grammaticalized even to the present time. In contrast, the present study is basically data-driven, under a general framework of functional linguistics. Second, Dai’s work implies a clear-cut boundary between compounds and phrases. In contrast, we believe that, from compounds to phrases, there is actually a continuum with no clear boundary. It is more proper to say that while, in many cases, the internal structure of
compounds resembles the structure of its phrasal syntax, the compounds acquire properties of words different from those of phrases. In this sense, it is correct to say, along with Dai (1992), that "the internal structure of compounds is not simply a reflection of the structure of its phrasal syntax".

2.1.3 Packard's View of Chinese Morphology


**Level 1:** compounding only. This level includes restrictive resultatives such as

\[ gai3-shan4 \] to correct-proper 'to improve'

and exocentric compounds such as

\[ zuo3-you4 \] left-right 'to influence'.

**Level 2:** compounding and affixation. This level includes all other endocentric nominal compounds, e.g.,

\[ zhuo1-qiu2 \] table-ball 'table tennis'.

regular resultatives such as

\[ tan2-wan2 \] to talk-to finish 'to finish discussing'.

derivational affixation with -zi, -r, -tou operating on heads, e.g.

\[ zhuo-zi \] table-ZI 'table'

as well as potential affixation -de/bu, e.g.

\[ tan2-de-wan2 \] to talk-DE-finish 'to be able to finish talking'.

**Level 3:** compounding and affixation. This level includes endocentric verbal compounds, e.g.,

\[ tao3-lun4 \] to discuss-to speak 'to discuss'.
VO-verbs, eg.

\[\text{chul-ban3} \quad \text{to emit-edition} \quad \text{‘to publish’}\]

and reduced A-not-A questions operating on head, e.g.

\[\text{x3i-bu4-xi3-huan1} \quad \text{to like-not-like} \quad \text{‘to like or not’}\]

**Level 4**: inflectional affixation only. This level includes aspect markers \textit{le, che, guo}, e.g.

\[\text{kan4-zhe} \quad \text{to look-PROGRESSIVE} \quad \text{‘looking’}.

plural forms –\textit{men}, e.g.

\[\text{ren2-men} \quad \text{person-plural} \quad \text{‘people’}\]

I have the following comments on Packard’s classification.

First, this classification recognizes a distinction between exocentric and endocentric compounds, but does not incorporate the transparency principle (cf. chapter 1).

Yuenren Chao (1965) distinguishes exocentric compounds from endocentric compounds: “A compound, like any other construction, is endocentric or exocentric according as it functions similarly or differently from one of its constituents, the center” (Chao 1965: 491). In other words, if neither of the two constituents of a compound function as the head of the compound, then this compound is exocentric. Exocentric compounds are usually opaque, such as \textit{fu2-shou3} to hold-hand ‘a hand support’. Among endocentric compounds, some are opaque and some are transparent. For example, verbal VO compounds with specialized meanings are considered to be endocentric and opaque, e.g. \textit{chil-dou4fu}, eat-tofu, ‘to take advantage of’ or \textit{pao4-niu1} soak-girl ‘be indulged with a girl’. The others are endocentric and transparent, e.g. \textit{xi3-zao3} to wash-bath ‘to take a bath’.
Second, there seems to be no reason to put 'restrictive' resultative compounds in level 1 and 'regular resultative' compounds in level two while VN compounds and the others in level three. I assume that this classification of Packard is based on a VO or a VR compound's separability: a restrictive resultative compound contains one or two bound morphemes and therefore belongs to level 1; a VO compound can be discontinuous at a 'longer' distance than a VR compound in form, therefore a regular VR compound belongs to level two; and VO compounds belong to level three. However, the problems are that, (i) there are 'restrictive' VO compounds with bound morpheme components, too; (ii) in meaning, some VR compounds are certainly more transparent than some VO compounds. Therefore, the claim that all VO compounds are one level above VR compounds is not justified.

The works cited above are concerned with Chinese morphology as a whole. In general, it is believed that Chinese is poor in inflectional markers, yet is rich in compounding. This dissertation is restricted to investigations of verbal Chinese compounding only.

### 2.2 Traditional Classification of Chinese Compounds

I will summarize the commonly-accepted classes of Chinese compounds in the following paragraphs and in later chapters will organize my discussion around these traditional classifications.

Chao (1965), Lu (1957) and many other Chinese grammarians recognize three formats of compound formation in terms of whether its components are free or bound morphemes. That is to say, a compound can be a combination of a bound morpheme +
free morpheme; or a free morpheme + bound morpheme or a free morpheme + free morpheme. Incorporating the distinction between bound and free morphemes, traditional work on Chinese word formation has principally described Chinese compounds classifying them according to a structural analysis. Based on their internal structures, then, there are five types of compounds, which are listed below (accordingly, there will be five types of verbal compounds in Chinese).

A. Coordinate Compounds

(1)

Bound morpheme + Free morpheme (BF):

\[ \text{ran2-shao1} \] to burn-to burn ‘to burn’

Free morpheme + Bound morpheme (FB):

\[ \text{jiao4-shou4} \] to teach-to transit ‘professor’

\[ \text{qu3-shi3} \] to take-to give ‘to select’

\[ \text{wang4-ji4} \] to forget-to remember ‘to forget’

B. Subordinative Compounds

(2) FB: \[ \text{niao3-kan4} \] bird-to look down ‘to look down’

FF: \[ \text{gu1-suo1} \] tortoise-to shrink ‘to hole up’

C. Verb-Object Compound

(3) FF: \[ \text{dan1-xin1} \] to load-mind ‘to worry about’

FB: \[ \text{ru4-wu3} \] to enter-rank ‘to join the army’

BF: \[ \text{zhil-yin1} \] to know-sound ‘bosom buddy’
BB: \textit{yan4-shi4} \quad \text{to tire-world} \quad \text{‘to be world weary’}

D. Resultative Compounds

\begin{itemize}
\item[(4)] FF: \quad \textit{da3-bai4} \quad \text{to beat-to lose} \quad \text{‘to defeat’}
\item FB: \quad \textit{shuo1-ming2} \quad \text{to say-clear} \quad \text{‘to illustrate’}
\item BF: \quad \textit{ju4-jue2} \quad \text{to resist-to stop} \quad \text{‘to reject’}
\item BB: \quad \textit{fa1-xian4} \quad \text{to find-to appear} \quad \text{‘to discover’}
\quad \textit{da3-dao3} \quad \text{to hit-down} \quad \text{‘to overthrow; down with’}
\quad \textit{gai3-shan4} \quad \text{to correct-proper} \quad \text{‘to reform, to improve’}
\quad \textit{tui1-guang3} \quad \text{to push-wide} \quad \text{‘to extend, to propagate’}
\end{itemize}

E. Subject-Predicate Compounds

\begin{itemize}
\item[(5)] FF: \quad \textit{tou2-teng2} \quad \text{head-to ache} \quad \text{‘to have a headache’}
\item FB: \quad \textit{hai3-xiao4} \quad \text{sea-to scream} \quad \text{‘seismic sea wave’}
\quad \textit{di4-zhen4} \quad \text{earth-to quake} \quad \text{‘(to have) earthquake’}
\quad \textit{er3-ming2} \quad \text{ear-to sound} \quad \text{‘(to have) ear buzzing’}
\end{itemize}

All the above compounds are combinations of one monosyllabic morpheme with another. But there is another type of compound derived from simplification of phrases. The longer forms such as \textit{tu3di4 gai3ge2} or \textit{zhen4yal fan3ge2ming4} shown in (6) came into being in Chinese first, and the shorter, simplified forms such as \textit{tu3-gai3} or \textit{zhen4-fan3} appeared later on. A language speaker has to know the meaning of the longer form in order to understand the meaning of the corresponding shorter form, which is different from all the other five types discussed above. This kind of word formation will not be
our focus in this thesis. The following are some examples of this type of compounds.

(6) \textit{tu3 (tu3di4) - gai3 (gai3ge2)}

soil (soil-field) change (reform)

‘land reform’

\textit{zh\text{\`e}n4 (zh\text{\`e}n4ya1)- fan3 (fan3ge2\text{\`e}ming4)}

suppress (suppress-press) counter (counter-revolutionary)

‘to suppress the counter-revolutionary’

To discuss how to classify Chinese compounds, it is necessary to be clear on what the definition of a compound is and the criteria for distinguishing a compound from a phrase. In fact, the definition of wordhood in Chinese has long been a topic of argument (cf. 2.3), and so far there has been no general agreement on this issue. In the next section, I will review different views of this topic and in section 2.4 I will elaborate the perspective I take in the present work.

2.3 Previous Discussions on Properties of Compounds

How to define compoundhood, i.e. to distinguish words from phrases, is a controversial topic. As noted in Pan et al. (1993), some well-known methods to determine wordhood are: the meaning test (Wang Li, 1943-44; Chao, 1965), the insertion test (Wang, 1943-44; Lu, 1957; Lu Shuxiang, 1979), the test of expansion into sentence (Wang, 1943), and the stress/tone test (Chao, 1965) etc. Pan et al. (1993) reviewed more than ten types of methods proposed respectively by Wang (1943-44), Lu (1957), Lin (1942), Yi (1956), Peng (1954), Lu (1979), Liu (1982), Chao (1965), etc. All of them contribute much to clarifying this issue. While there are things in common to all the
proposals, there are also contradictory aspects.

The various criteria proposed by different linguists can be summarized and classified into phonological, morphological and syntactical criteria, most of which also appear in Duanmu San (1998) and Telee Chi (1984)'s summaries of tests for wordhood in Chinese.

2.3.1 Phonological Criteria

Stress has been used to determine compoundhood by Chao (1965) and Yin (1982) (cf. Pan et al., 1993). In some cases, neutral tone can be a distinguishing factor between compounds and phrases. Pan et al. (1993), citing Yin (1982), gives the following two examples.

(7)a. *mai3-mai4*  
*buy-sell*  
*to trade*  

(7)b. *mai3-mai* (neutral tone)  
*buy-sell*  
*a business*

(8)a. *qi1-zi3*  
*wife-son*  
*wife and son (family)*

(8)b. *qi1-zi* (neutral tone)  
*wife-suffix*  
*wife*

According to Yin, in the above examples, the (a) forms are phrases and the (b) forms are words, in accordance with the difference in stress of the second syllable. But there might be disagreement about these forms. I would like to consider (7a) a verbal coordinate compound. One reason is that its meaning is not simply a composition of 'buy' and 'sell' just as *hui1-xi1* exhale-inhale 'breathe' is a compound. The other reason is that the order of (7a)'s components cannot be changed, which is a differentiating criterion between
coordinate compounds and coordinate phrases. As for (8a), unlike fu4-zi3 father-son ‘father and son’, qi1-zi3 wife-son ‘wife and son’ is seldom used in modern Chinese although it appears in classic Chinese\(^1\). As a matter of fact, (9) is a better example to illustrate this point.

(9)a.  
\[
\begin{array}{ll}
\text{xian1} & \text{sheng1} \\
\text{first} & \text{born}
\end{array}
\]

b.  
\[
\text{xian1-sheng}
\]

‘born first’

‘Mr./teacher’

While the stress criterion can help distinguish and determine the wordhood of some complex forms, it does not work in all cases. There are two restrictions to this criterion. First, many compounds have both of their components stressed and are still compounds. For example: ling3-shi4 to lead-thing ‘consul’ is a compound without any syllable bearing neutral tone. Second, Chao (1965) acknowledges that there is a geographical variation in using neutral tone among Chinese speakers. This is true. Mandarin speakers in Taiwan tend not to use neutral tone in the second syllable for many forms where speakers in the northern part of China do. I personally hear that many speakers from Taiwan pronounce xian1-sheng in the case of (9b) in exactly the same way as in the case of (9a) when they actually mean ‘teacher/Mr.’. In this case, their xian1-sheng1 with a stressed second syllable can mean both ‘born first’ and ‘Mr./teacher’ depending on the context. Therefore, this criterion of stress will only apply to standard Mandarin (in Mainland China) and will be used in the present study in a restricted way when it is relevant but not as a major criterion.

2.3.2 Morphological Criteria
Chao (1965) defines a compound as a form whose two or more constituents are either free or bound morphemes, but not affixes. By affixes, he means 'the meaningless, the frequent, the unstressed, the phonetically more neutral and the listable empty morphemes' (Chao, 1965: 280). Thus, this definition will rule out, from being compounds, cases like:

(a) Derived words: e.g. *zhuo1-zì ‘table-suffix, table’ with a suffix -zi, or *wan2r ‘to play-er, to have fun’ with a non-syllabic suffix -r, or *zhan4 zhe ‘stand-ZHE, standing’;

(b) Polysyllabic morphemes: e.g. *ha2ma ‘toad’.

Chao (1965) shows that a compound can be formed in four possible ways:

(a) FF: e.g. *chìlìfan4 ‘to eat-rice, ‘to eat’

(b) FB: e.g. *gài3ge2 ‘to change-get rid of, ‘to reform’

(c) BF: e.g. *chéng2rèn4 ‘to receive-to recognize, ‘to admit/recognize’

(d) BB: e.g. *qún/zhu2 ‘to drive-to pursue, ‘to chase away’

Complex constructions formed in these ways are not all compounds. Some are phrases. But, as Chao (1965) and Lu (1957) both point out, when one of the constituents is bound, the whole construction will necessarily be a compound, not a phrase. In addition, a morpheme can be both free and bound depending on its multiple senses. The form *shàng4 (to go up; up) is one example. However, when both of the components are free morphemes, the combined form may be either a phrase or a compound.

2.3.3 Syntactic Criteria

A. Separability of Components

The issue of separability of compounds is where the most controversy arises among linguists. The inseparable combinations are usually considered to be compounds².
For examples:

(10)  
\begin{align*}
  \text{meng}4-\text{xiang}3 & \quad \text{dream-to think} \quad \text{‘to dream about’} \\
  \text{mian}4-\text{tan}2 & \quad \text{face-to talk} \quad \text{‘to talk face to face’} \\
  \text{pai}1-\text{da}3 & \quad \text{to tap-to beat} \quad \text{‘to tap’} \\
  \text{gual}1-\text{fen}1 & \quad \text{melon-to dissect} \quad \text{‘to dissect’} \\
  \text{chil}1-\text{xiang}1 & \quad \text{to eat-delicious} \quad \text{‘to be in favor’} \\
\end{align*}

On the other hand, among the separable ones, some are still considered as compounds without much argument in accordance with traditional Chinese linguistics, while others are more controversial. Separable compounds can be found in each of the five types of traditionally accepted verbal Chinese compounds—Subject+Predicate (SP), Verb+Object (VO), Verb+Resultative (VR), Subordinate+Verb (MV) and Coordinate construction (VVcoordinate), expandable compounds. But once separated, as some linguists such as James Huang (1984) suggest, some of them obviously can no longer be considered as words. The (a) forms in the following examples from (11-16) are compounds while the (b) forms should be considered as phrases or clauses:

Subject+Predicate:

(11a)  
\begin{align*}
  \text{hai} \quad \text{mei} \quad & \text{tian}1-\text{liang}4 \\
  \text{yet} \quad \text{not} \quad \text{day-bright} \\
  \text{‘Not dawn yet.’} \\
\end{align*}

b.  
\begin{align*}
  \text{tian}1 \quad \text{hai} \quad \text{mei} \quad \text{liang}4 \\
  \text{day} \quad \text{yet} \quad \text{not} \quad \text{bright} \\
  \text{‘It’s not dawn yet.’} \\
\end{align*}
Verb+Object:

(12)a. \( ta \ ai \ da3-ren2 \)

he love beat-person

‘He is used to beating people.’

b. \( ta \ da3 \ le \ hendo \ ren2 \)

he beat LE many person

‘He has beaten many people.’

Verb+Result:

(13)a. \( wo \ kan4-wan2 \ zhe \ ben \ shu \)

I read-finish this CL book

‘I’ve finished reading this book.’

b. \( zhe \ ben \ shu \ wo \ kan4 \ bu \ wan2 \ le \)

this CL book I read NOT finish LE

‘I cannot finish reading the book (by sometime).’

Surbordinate+Verb:

(14)a. \( ta \ qiang1-shal \ le \ zi4ji3 \)

he gun-kill LE self

‘He killed himself.’

b. \( ta \ yong \ qiang1 \ ba3 \ zi4ji3 \ shal \ le \)

he use gun BA self kill LE
‘He killed himself with a gun.’

(15)a. \[ \text{women } \text{he2-xie3 } \text{yi } \text{ben } \text{shu} \]
we together-write one CL book

‘We co-author a book.’

b. \[ \text{women } \text{he2 } \text{zhe } \text{xie3 } \text{shu} \]
we together ZHE write book

‘We are co-authoring this book.’

**Coordinate Verb:**

(16)a. \[ \text{bu } \text{xu } \text{da3-ma4 } \text{ren} \]
not allow beat-scold person

‘No mistreating allowed.’ (It is not allowed to beat and scold people.)

b. \[ \text{bu } \text{xu } \text{da3 } \text{ren } \text{ma3 } \text{ren} \]
no allow beat person scold person

‘No mistreating allowed.’ (It is not allowed to beat people and scold people)

Before further exploration of separability of compounds, it may be necessary to clarify some concepts. The so-called ‘expansion’ we are talking about here is a test of the separability of compounds. The term ‘simplification’ that appears in section 2.2 in this thesis means a different thing. It is an opposite process of what we have just illustrated in (11-16). But there is more than that. Simplification is one means of word formation, i.e. a compound derives from simplification of a phrase. Although the (b) sentences from (11) to (16) can be considered as expansions of the compounds in their (a)
counterparts, it is not appropriate to consider those compounds in the (a) examples to be simplifications of the (b) forms. A compound formed through simplification has a one-to-one mapping relationship with the phrase it is simplified from in general. For example, if *tu3-gai3* toil-to change ‘land reform’ is going to be expanded, it can only turn into *tu3di4 gai3ge2* land-to reform, otherwise nothing else. That is to say, both *tu3-gai3* and *tu3di4 gai3ge2* are lexemes, i.e. learned as units. The compound and the phrase basically name the same thing, analogous to the case in which one person has two names. Wherever the compound can appear, the phrase can, and vice versa. In contrast, this is not the case with the compounds and the expanded sentences represented by (11-16). One such compound, once separated, can be expressed in numerous sentences in many cases. And the most important point is that the compound and the expanded sentence never mean the same thing. For example, *da3-ren2* ‘to beat people’ does not mean the same thing as *da3 le ren2* with an aspectual marker in between indicating a perfective sense or change of status. The environment where the compound and the expanded sentence can appear is not identical. For example, we cannot put (11b) into where *tian1-liang4* occurs in (11a) as shown in (17c), in contrast with (18), in which *zhen4 ваl fan3 ge2-ming4* and its simplified version *zhen4-fan3* can appear in the identical environment.

(17)a. \(hai\) \(mei\) \(tian1-liang4\)

yet not day-bright

‘Not dawn yet.’

b. \(tian1\) \(hai\) \(mei\) \(liang4\)

day yet not bright

‘It’s not dawn yet.’
c. *hai mei tian1 hai mei liang4
yet not day yet not bright

(18)a. tade shushu zai shen4-fan3 yundong zhong bei
his uncle at suppress-counter campaign amid BEI
qiangbi le
execute LE

'His uncle was executed during the campaign of Suppress the Counter-revolutionaries.'

b. tade shushu zai shen4 val fan3 ge2-ming4
his uncle at suppress-oppress-counter-revolutionary
yundong zhong bei qiangbi le
campaign amid BEI execute LE

'His uncle was executed during the campaign of Suppress the Counter-revolutionaries.'

Chao (1965) proposes inseparability of constituents as one condition to
distinguish compounds and phrases, among other criteria, such as neutral tone, bound
morpheme constituent, exocentricity, specialization of meaning, etc. Chao observes that
some compounds can be separated by certain morphemes. But he does not discuss this
fact in detail. Others have focused discussion on the separability of specific categories of
compounds. In this section, I will review discussions that pertain to nominal and verbal
compounds.

Lu (1957) proposes a criterion called the insertion test or expansion test of
compoundhood. It is believed that in general a compound is restrained from being
separated or expanded. He discusses the distinction between nominal compounds and nominal phrases by the possibility of inserting de ‘of’ into [Modifier Noun]. According to Lu, a compound word can either disallow such an insertion or allow it without being able to keep its original meaning, i.e. it is no longer a compound. For example, \textit{xin4-zhi3} in (19) and the forms in (20-21) are examples of inseparable compounds.

\begin{center}
\begin{tabular}{lll}
(19)a. & \textit{xin4-zhi3} & b. & *\textit{xin} & \textit{de} & \textit{zhi} & (Duanmu, 1998) \\
letter-paper & letter & DE & paper & \\
‘letter paper’ & & & & \\
\hline
(20)a. & \textit{huo-che} & b. & \textit{*huo} & \textit{de} & \textit{che} \\
fire-car & fire & DE & car & \\
‘train’ & & & & \\
\hline
(21)a. & \textit{qi-che} & b. & \textit{*qi} & \textit{de} & \textit{che} \\
gas-car & gas & DE & car & \\
‘automobile’ & & & & \\
\end{tabular}
\end{center}

On the other hand, \textit{yang2-rou4} in (22) and others in (23-24) are examples with meanings different from those of the compounds when \textit{de} intervenes.

\begin{center}
\begin{tabular}{lll}
(22)a. & \textit{yang2-rou4} & b. & \textit{yang2} & \textit{de} & \textit{rou4} \\
lamb-meat & lamb & of & meat & \\
‘mutton’ & ‘flesh/meat of lamb’ & & & \\
\hline
(23)a. & \textit{gui3-lian3} & b. & \textit{gui3} & \textit{de} & \textit{lian3} & (Lu. 1957:20) \\
ghost-face & ghost-DE-face & \\
‘grimace’ & ‘a face of a ghost’ & & & \\
\end{tabular}
\end{center}
(24)a. *tie3-lu4  iron-road
   b. **tie3 de lu4  iron DE road
   ‘railway’  ‘iron road’

By the insertion test, we see that *xin4-zhi3 ‘letter paper’, *yang2-rou4 ‘mutton’,
gui3-lian3 ‘grimace’ and tie3-lu4 ‘railway’ are nominal compounds while gui3 de lian3
‘a face of a ghost’ and tie3 de lu4 ‘road of iron’ (if there exists such a thing) are nominal
phrases.

Huang (1984), repeated in Duanmu (1998), suggests that a Conjunction Reduction
test can also show the distinction between coordinated phrases and coordinated words.
The following examples are taken from Duanmu (1998:137–138).

(25)a.  [jiu de shu]  gen  [xin de shu]
   old DE book  and  new DE book
   ‘old books and new books’
   b.  [jiu de gen xin de]  shu
   old DE and new DE  book
   ‘old and new books’

(26)a.  [huo-che]  gen  [qi-che]
   fire-car  and  gas-car
   ‘train and automobile’
   b.  *[huo gen qi] che
   fire  and gas car

According to Huang, the Conjunction Reduction rule is a phrasal rule and can only be
applied to phrases, not to compounds. The coordinate structures in (25) are phrases, therefore they can have 'conjunction reduction'. The coordinate structures in (26) are compounds, therefore they cannot be reduced as shown in (26b).

There has been more argument as to the separability of verbal compounds. Verbal compounds can vary from not separable at all to separable only in certain conditions, to separable in several kinds of limited ways. The focus of the argument has been on whether VO or VR forms should be considered as compounds or categorized as phrases.

Chao (1965) believes that VO compounds can be separated in limited ways. Lin (1953), Yi (1956) and Wang (1943-44) do not consider separable VO or VR forms to be compounds, as noted in Pan et al. (1993). Huang (1984) believes that non-separated compounds are compounds; that the separable ones, when they are not separated, are compounds; otherwise, they are phrases. According to Pan et. al. (1993), Liu (1982) holds the same view. He calls VO forms 'split' verbs. He believes that when they appear as units, they are compounds, but when they are separated, they are phrases. Shuxiang Lu (1979) calls such constructions 'Phrasal-words', by which he means that they are in between words and phrases, i.e., as I understand, half-compounds.

For example, Pan et al. (1993) quotes Wang's (1943-44) treatment of shuo1 hua4 speak-word, 'to speak' as a non-compound because, according to Wang, it can be expanded into:

(27)   shuo1   da4   hua4   speak-big-word   'to boast'.

and lao3 ren2, old-man, 'old person' is a non-compound because it can be expanded into a sentence such as:
(28)  zhe ren shi lao3 de

This person BE old DE.

‘This person is old.’

Huang (1984) calls this a problem that both the Phrase Structure Condition Theory (PSC) and the Lexical Integrity Hypothesis (LIH) encounter in explaining the separability of VO and VR compounds. The author summarizes the problem as a paradox:

‘...We thus have a paradox again, where some verb-result strings must be regarded as words under some circumstances, but as phrases under others.’ (1984: 68)

Then he proposes a way to resolve the paradox:

‘...The most plausible idea, apparently, is to say that the kinds of verb-object and verb-result sequences that we have seen have a dual status, either as words or as phrases. Whether it is actually a word or a phrase is determined by independent principles of the grammar and by the context of its occurrence. In particular, when such a sequence is followed by an object, the independent principle PSC requires it to be a word and to exhibit properties consistent with the LIH. When it is not word, and it may exhibit phrasal properties inasmuch as the LIH is irrelevant. This idea appears to be right, leaving us with the question of how to execute it.’

‘There are three possible ways to instantiate the idea. First of all, we may assume that all so-called verb-object and resultative compounds are listed in the lexicon as both words and phrases.

... A second possible solution is to list all V-O and V-R combinations as words in the lexicon, and invoke a rule of reanalysis which relabels them as phrasal categories in appropriate environments, specifically, when they occur sentence-finally.

... The third possible solution ... we list all the V-O and V-R combinations only as phrases in the lexicon. ... Then, when these phrases are inserted into sentence-final position, nothing need take place. But if inserted into sentence-medial position, with an object following, they would undergo a process of lexicalization, by which a V-one-bar category is reanalyzed as a V-zero category, namely a phrase becomes a word. ...’
... Nevertheless, we would like to suggest that the third solution appears to be the most plausible. ...’

‘... Lexicalization, on the other hand, has the effect of regularizing a more complex structure into a simpler one: making a simple word out of a phrase ... I would, in other words, claim that what is often called a V-O compound and resultative compound is really basically a phrase in the lexicon, often an idiom phrase. It is only in certain limited environments that such phrases become compounds.’ (1984:68-71)

Another slightly different way of stating the conclusion drawn by Huang (1984) is that when VO or VR sequences are not separated, they are compounds; when they are separated, they are phrases (Lin, 1994, cf. Pan et al. 1993).

For Subordinate+Verb and Sub+Pred types, scholars like Lin (cf. Pan et al. 1993) and Yi (cf. Pan et al. 1993) propose a list of criteria to tell compounds and phrases apart, which I will not review in detail here.

B. Exocentric vs. Endocentric Compounds

Chao (1965) states ‘a compound, like any other construction, is endocentric or exocentric according as it functions similarly or differently from one of its constituents, the center (1965: 491)’. If a compound functions similarly as its center, then it is endocentric; otherwise, it is exocentric. That is to say, in an exocentric structure, neither of its members functions as the head of the expression. Other conditions being equal, expressions with exocentric structure are more easily to be recognized as compounds. Here are the examples given by Chao (1965:347):

(29)  fu2-shou3 support-hand ‘a hand support, e.g. a balustrade’

which functions neither like fu2 ‘support’ or like shou3 ‘hand’. The following are more
examples of exocentric compounds:

(30)  huo3-shao1 fire-to burn   ‘baked wheat cake’
(31)  tian2-fang2 to fill-room  ‘second wife’
(32)  kai1-guan1 to open-to close  ‘switch’

In the above example, (30) is a nominal compound with a logical subject+predicate relationship; (31) is a nominal compound with a logical verb+object relationship, and (32) is also a nominal compound with a logical coordination relationship. None of them functions as any of their components. These compounds are exocentric compounds. An example of endocentric structure would be (33).

(33)  bai2 mian4 white-flour  ‘white flour’

which has mian4 ‘flour’ as its head.

C. LIH Theory vs. PMFS Theory

The Lexical Integrity Hypothesis (LIH), proposed by Huang (1984), states that no phrase-level rule should affect a proper subpart of a word. The LIH is very similar to the Principle of Morphology-Free Syntax (PMFS) proposed by Zwicky, which Dai (1992) cites as follows: syntax is blind to morphology, i.e., syntactic rules cannot make reference to the internal morphological composition of words or the particular rules involved in their morphological description. The only properties of a word accessible to syntax are its syntactic category, subcategory, and morpho-syntactic properties, such as gender, number, case, person etc. (Zwicky 1989). The other principle is the Principle of Phonology-Free syntax, stating that the syntactic module has no recourse to phonology.
and phonological information plays no part in the operation of a syntactic rule. Dai (1992) believes that Modularity entails a syntax-morphology division, but rejects the notion of morphology as "the syntax of words". That is to say, principles governing word-structure and phrase-structure are distinct, with respect to the order of constituents, the formal operation of rules, locality conditions, reference to phonology, and agreement between heads and their arguments.

The modularity claim proposed in the PMFS model is both cognitively unrealistic and unmotivated. Such a claim declares an absolute boundary between words and phrases and ignores a gradation from words to phrases in Chinese.

Huang (1984) claims that most of the criteria proposed by Chao (1965) and other linguists can be reduced to LIH, therefore LIH can be considered as the universal criterion in distinguishing words and phrases. Just as Chi (1984) points out, it is true that all the criteria mentioned above imply single word status or lexical integrity as a characteristic for compounding. This is what LIH proposes. Yet, according to LIH, Huang (1984) has to treat all separated VN or VRs as phrases. Chao's (1965) claim is more reasonable that non-phrasal VN and VRs can only be separated in limited ways, but some of them are indeed separable yet compounds, because some separable VN and VRs manifest properties of words too.

2.3.4 Semantic criterion

Chao (1965) proposes that if the meaning of the FF (free morpheme-free morpheme) construction is not derivable or not completely derivable from those of the constituents, then the construction is more likely to be a compound than a phrase. As discussed in 1.2.2, this notion of 'semantic composition' is called 'meaning transparency'
in Lamb (1999). The following are examples.

(34)  
\text{\text{tian2-fang2}} \quad \text{to fill-house} \quad \text{‘a widower or a divorced man’}

\text{\text{xiao4-hua}} \quad \text{to laugh-word} \quad \text{‘to laugh at’}

\text{\text{zai4-juan4}} \quad \text{again-to see} \quad \text{‘to bid goodbye’}

\text{\text{niu2-rou4}} \quad \text{cow-meat} \quad \text{‘beef’}

As discussed in Section 2.3.3, \text{\text{niu2-rou4}} is different from \text{\text{niu2 de rou4}} ‘the flesh of cattle cut up for food’ whose meaning is compositional.

Huang (1984) does not believe that non-transparency of meaning should be considered a criterion in defining compounds because there are phrasal idioms. For example, \text{\text{tie3 mian4 wu2 sil}} iron-face-no-self ‘to be fair, to be just’ and \text{\text{yuan2 mu4 qiu2 yu2}} along-wood-seek-fish, ‘to climb tree to catch a fish—a fruitless approach’ are phrasal idioms. However, this argument does not suffice to exclude semantics as a criterion. The difference between compounds and phrasal idioms can be illustrated in two aspects\(^3\). First, compounds follow certain compounding constructions/patterns while phrasal idioms tend to be idiosyncratic and have no reproducible patterns. For example, \text{\text{chao2ji2-shi4chang3}}, super-market, ‘supermarket’ is a compound. You can substitute forms into a compound and still make sense (it may change to another compound) but not so in a phrasal idiom. For example, a newly created \text{\text{chao1ji2-guang3chang3}} ‘super public square’ is acceptable, but \*\text{\text{tong2 mian4 wu2 sil}} copper-face-no-self or \*\text{\text{tie3 mian4 you3 sil}} iron-face-have-self does not seem to work. Second, due to its idiosyncrasy, a phrasal idiom is usually fixed and cannot be expanded. For example, it is not acceptable to say \*\text{\text{tie3 mian4 zhen1 wu2 sil}} iron-face-really-no-self. In contrast, as
we know, some VN compounds are splitable. That is to say, some numerals and classifiers, at least, are allowed to be inserted in between the verb component and the noun component. For instance, *pao4-niul* soak-girl 'to indulge oneself with girls' can be expanded into *pao4 le duoshao niul* soak-LE-how many-girl 'How many girls have you played with?'

With compounds and phrasal idioms differentiated, apparently opacity in semantics can be used as one criterion in defining compoundhood.

2.4 Thesis Orientation and My Criteria for Defining Compoundhood

2.4.1 Defining Compoundhood

Having reviewed all these discussions about compoundhood, I now present my perspective on this issue.

The general definition of a morphological word vs. a morphological phrase depends on the grammar. A morphological word is formed by a morphological construction, while a phrase is formed by a syntactic construction. The trouble is that, in some languages such as Chinese, there are constructions that can be construed as either morphological or syntactic. Most compounding constructions in Chinese have internal structures in accord with syntactic structures.

The fact that Chinese in general lacks complexity in word formation except for compounding makes it especially difficult to define the boundary between words and phrases. From a neurocognitive point of view (Lamb. 1999), it may very well be that different speakers treat certain forms differently. The linguistic system *cum* conceptual system of every person is different from those of every other person. There is thus no possibility of perfect communication through language.
Li & Thompson (1981) state their view compoundhood in Chinese as follows:

'There is, however, a great deal of disagreement over the definition of compound. The reason is that, no matter what criteria one picks, there is no clear demarcation between compounds and noncompounds.

... ...

Fortunately, though, the definition of a compound is really not a crucial issue for students of Mandarin. It is important only to linguists analyzing the Mandarin lexicon because it serves to delimit the domain of their studies. Thus, we may consider as compounds all polysyllabic units that have certain properties of single words and that can be analyzed into two or more meaningful elements, or morphemes, even if these morphemes cannot occur independently in modern Mandarin (Li & Thompson, 1981: 45-46).'

I totally agree with Li & Thompson on this issue. Arguing about the definition of 'compound' is really, in a sense, a matter of delimiting the domain of studies. This issue becomes even simpler for the present study since it is limited to studies of only two morpheme compounds.

**Idiomaticity**

In chapter 1.3, we illustrated two dimensions concerning a morphological word and a morphological phrase: lexicalization as well as idiomaticity. In the present work, we do not distinguish idiomatized compounds from idiomatized phrases, i.e. as long as a two-morpheme complex form is opaque in meaning, it is considered as a compound. It is very common that in Chinese dictionaries and other literature, two-morpheme opaque forms, such as gua-l fen1 melon-to dissect 'to carve up', are listed as compounds while three or four-morpheme opaque forms are called idioms, such as xin1 xue3 lai2 chao2 heart-blood-to come-tide 'on the impulse of the moment', let alone phrases even longer such as yi4 ('one') zhao1 ('morning') bei4 (BEI) she2 ('snake') yao3 ('bite'), shi2 ('ten') nian2 ('year') pa4 ('fear') jing3 ('well') sheng2 ('rope') 'once bitten, twice shy'.

Idiomaticity in Lamb (1999) refers to opaque lexicalized linguistic elements. As for nonce-creations, they are generally transparent in meaning for the purpose of communication. Opaque nonce-formations could occur. A form that is not opaque for the producer could be opaque for the listener. So, the term ‘opaque’ in terms of a complex form’s meaning is more accurate than ‘idiomatized’.

**Lexicalization**

From a cognitive point of view, lexicalized complex forms, be they compounds or phrases, are all learned as units (cf chapter 1.3). But not all lexemes are compounds. First, in the present work, we distinguish non-generic lexemes from the generic ones. Compounds are supposed to be generic, naming either a type of entity or a type of process or state. An example of a non-generic lexeme would be a title of a book, an article or a play etc. Such titles are learned as units and therefore are lexemes according to Lamb (1999), but they only represent specific entities or events in reality, and they are not treated as compounds in this study. For instance, ling2 shan1 spirit-mountain ‘mountain with spirit’ is the title of a book and it only functions as a symbol of the book. ling2 shan1 does not name a generic type in reality. It is not part of every Chinese speaker’s lexicon. It is a non-generic lexeme.

Second, for some types of compounds such as VO compounds, provided that all the other grammatical criteria discussed in 2.3 fail, opacity in meaning is considered to provide a demarcation line between compounds and phrases. That is to say, complex forms with both components as free morphemes are considered as phrases if transparent. For instance, it may very well be the case that hel shui3 to drink-water, ‘to drink water’ is learned as a unit by speakers of Mandarin Chinese. But since it is transparent in
meaning, it is considered as a lexicalized phrase and will not be within the scope of our discussion. The semantic criterion, as a matter of fact, does not work for all types of compounds. For instance, in case of VR compounds, most of them are transparent. As a matter of fact, not only are all the lexicalized VR forms considered as compounds, newly formed VR compounds are also considered as compounds in the present work.

Table 2.1 summarizes what will be included as compounds (only two-morpheme ones) in the present work.

There has been much argument on whether VO or VR forms should be considered as compounds at all or should be categorized as phrases. Huang (1984) has called the problem a paradox.

Here are my arguments to include VO and VR complex forms as compounds in the present study. For the VO type, as mentioned above, if both components of a VO form are free morphemes, only those whose meanings are not totally transparent are considered compounds. That is because such compounds manifest properties of single words clearly. For the VR type, not many of them are opaque in meaning. However, a VR combination manifests properties of single words in the sense that (1) it is separable in a very restricted way: (2) in interaction with aspectual markers such as le (perfective) and guo (experienced action), a VR combination functions as a unit. The fact that VO and VR forms are separable in limited ways may remind us of characteristics of phrases. However, at most, we can say that they are on the border of compounds and phrases. The significance of debating the compoundhood of VO and VR forms does not lie in how they should be labeled to make linguists feel comfortable. The significance of comparing them with phrases and words lies in our understanding of the cognitive process of their
<table>
<thead>
<tr>
<th></th>
<th>Compounds</th>
<th>Phrases</th>
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<tbody>
<tr>
<td><strong>Opaque</strong></td>
<td>two-morpheme compounds which are opaque are considered as compounds in this study no matter whether they are separable or not. e.g <em>gual-fen</em> melon-to divide ‘to carve up’</td>
<td></td>
</tr>
</tbody>
</table>
| **Transparent**  | • Subject-Predicate forms that can be modified by intensifiers such as *hen* ‘very’.  
                   • Verb-Object forms that have at least one component that is a bound morpheme, such as *xi3-zao3* to wash-bath ‘to take a bath’  
                   • Verb-Verb coordinate forms with fixed word order  
                   • Modifier-Verb complex forms including Noun(modifier)+Verb, Noun(modifier)+Adjective, Adjective+Verb etc.  
                   • All Verb-Resultative forms | • non-generic phrasal lexemes, such as the title of a book called *ling2-shan1* spirit-mountain ‘mountain with spirit’:  
                   • free morpheme-free morpheme VO forms are considered as phrases, such as *he1-tang1* to drink-soup |
production. They are of great interest to us from a cognitive point of view because they are more productive. Traditionally, they have always been identified as compounds in Chinese linguistics. We still include them in our discussions of Chinese compounds, as important chapters.

While exploring synchronic cognitive patterns, the effect of historical changes on the Chinese language should also be observed. For example, while most VO compounds cannot take objects, some VO compounds can function as transitive verbs and take an object. The form *dan1-xin1*, lift-heart, ‘to worry’ and *huai2-yi2*, hold-doubt, ‘to doubt’ are such examples.

**Opacity vs. Separability**

In reality, from opaque to transparent is a continuum in terms of whether a complex form’s meaning is compositional --- from completely opaque items such as *wu4-se4*, thing-color, ‘to scout for’ to less opaque forms such as *chi1-fan4*, eat-rice, ‘to eat, to have a meal’, to transparent ones such as *ti1-si3*, to kick-dead, ‘to kick to death’, which can often be produced by speakers on the fly. In the present work, the term ‘opaque’ means not totally transparent.

Chinese compounds are traditionally classified according to their ‘internal syntax’. The internal structure of most Chinese compounds mimics that of a sentence. According to the principle of Iconicity, the closeness in form accords with the closeness in meaning. Compounds lie in a continuum in terms of opacity and separability. This correlation is only a tendency, not an absolute one. For example, some separable compounds are not transparent in meaning. Yet such separability is usually limited in
certain ways. Consider the following group of examples:

(35)a.  
\[ ta \text{ chil-} cu4 \]
he eat -vinegar

'He is jealous.'

'He eats vinegar.'

b.  
\[ cu4 \text{ ta chi le} \]
vinegar he eat LE

'Vinegar, he has eaten.'

* 'He has been jealous.'

The form chil-cu4 in (35) is a compound. The acceptability of the specialized meaning in (35a) and the unacceptability of that in (35b) show that, although separable, a compound may not have its specialized meaning when the noun constituent is in certain positions in a sentence separate from the verb constituent—in this case, it is topicalized.

It is hard to give an uncontroversial and clear-cut definition for compoundhood. The best definition may be, as Li & Thompson describe, that compounds include all polysyllabic units that have certain properties of single words and that can be analyzed into two or more meaningful elements. By and large, there are some criteria for compoundhood that most linguists can accept, and for some cases, grammatical criteria discussed in Section 2.3 will be enough to tell if a complex form is a compound or not, such as stress patterns, bound morpheme components, exocentric structure, inseparability of components etc. For other cases, we need the semantic criterion as in the case of VO compounds. The criteria discussed in 2.3 really work on a type-by-type basis in some
sense. In section 2.4.2, I will illustrate the features that are likely to be associated with compounds in general and also those associated with specific types of compounds.

2.4.2 Specific Criteria

Neutral tone in a minimal pair

The criterion of neutral tone does not always work. Many compounds do not bear neutral tones, yet they are still compounds. For example, *chil-fan4 eat-rice* 'to have a meal' does not sound correct with either one of its constituents neutralized. However, the neutral tone criterion is critical in cases when there are minimal pairs. For example,

(36)a. long2-tou dragon-head 'faucet'
b. long2 tou2 dragon-head 'dragon's head; leading role'
c. long de tou dragon of head 'dragon's head'

(36a) is necessarily a compound while (b) is a phrase when it means 'dragon's head' and a compound when it means 'leading role'. (36a) is inseparable without changing its meaning, as shown in (c); (b) is not when it means 'dragon's head'. In such cases where there is a contrast, neutral tone can be used as a test of compoundhood. Therefore, neutral tone is a sufficient factor not a necessary one for compoundhood.

From this example, it is apparent that not only can neutral tone be sometimes used to detect compoundhood, it can also be used to distinguish the meaning, and sometimes the parts of speech, of a minimal pair when the pair are both compounds. In the case of (36), when (36b) means 'leading role', it is a compound. The presence of neutral tone indicates that the meaning is 'faucet' rather than 'the leading role'.

Compounds with bound morpheme constituents

Following Chao's (1965) definition of compounds, and in keeping with standard practice, compound constituents have to be roots or root words, not affixes. Also, when one of the constituents is bound morpheme, the complex form is necessarily a compound, because the bound morpheme cannot be independent in an utterance.

Compounds with no separability

Complex forms that are not separable at all are compounds. Lu (1957) gives some VR examples of this kind (1967:76):

(37)  
\[ ju4-jue2 \]  
\[ fa1-ming2 \]  
\[ gai3-shan4 \]  

to reject-cease to exist  \( \rightarrow \)  
to give off-bright  \( \rightarrow \)  
to change-good  \( \rightarrow \)  
‘to reject’  
‘to invent’  
‘to improve’

Compounds with non-derivable meaning

Chi (1984), in discussing VO compounds, considers specialization of meaning of the compound as a whole to be the only criterion for determining compoundhood. This claim neglects cases like \[ xi3-zao3 \] which is transparent in meaning yet is a compound.

(38)  
\[ xu3-zao3 \]  
\[ he \]  
\[ wash-bath \]  
‘He takes a bath.’

In this case, the bound morpheme \[ zao3 \] is the factor that makes language students accept the compoundhood of \[ xi3-zao3 \]. Therefore, the specialization in meaning cannot be the
only criterion. But, without doubt, when the meaning is not transparent, this property can be used as a criterion in recognizing compounds. This is especially the case when a complex form has two meanings: one compositional and one specialized. Consider the following examples:

(39)a. *chil-cu4* to eat-vinegar ‘to be jealous’

b. *chil cu4* to eat-vinegar ‘to have vinegar’

(39a) is a compound while (b) is a phrase. The different interpretations depend on contexts.

*Some other factors with expandable compounds*

There are some other factors that can help determine a complex form’s status as a compound. I will briefly list them.

A. **Sub+Pred** type

When the construction as a whole unit can be modified by the modal verb *neng* ‘can’ or adverbs *ye* ‘also’, *tai* ‘too (much)’, *hai* ‘still’, *bu* ‘no’, *name* ‘that (much)’, *mei* ‘not’, etc., then this construction is usually a compound (Yi, 1956). For example, the (a) forms are different from the (b) forms in (40–41). The nouns in the (b) forms are real subjects of the sentences while *tian1* ‘day’ and *tou2* ‘head’ in the (a) forms are just noun constituents in verbal compounds *tian1-liang4* and *tou2-teng2*.

(40)a. *hai mei* tian-liang

Yet not daybreak
b. 

\[\text{tian hai mei liang}\]

\[\text{day yet not bright}\]

\[\text{‘The day has not dawned.’}\]

(41)a. 

\[\text{ta ye tou-teng}\]

\[\text{he also head-ache}\]

\[\text{‘He also has a headache.’}\]

b. 

\[\text{ta tou ye teng}\]

\[\text{he head also hurt}\]

\[\text{‘He also has a headache.’}\]

B. Surbordinate+Verb type (MV)

As Pan et al. note (1993), Dahan Lin’s (1952) lists the following criteria:

\text{Noun+Verb} and \text{Noun+Adj}: if a noun modifies a verb as an adverbial, then the construction is a compound (Lin, 1952, cf. Pan et al., 1993), since this is not in accordance with Chinese syntactic rules. that is to say, in Chinese, a noun cannot be used as a pre-modifier of a verb. This means that such a NV construction has obtained its own special lexical status in the language (Yi, 1956, cf. Pan et al., 1993). e.g. \text{mian4-tan2}. face-talk, ‘to talk face to face’.

\text{Adv+Verb}: Among this type, Lin (1952) only considers those which are opaque as compounds. such as \text{zai4-jian4 ‘goodbye’}.

C. CoordinateVerb

Chao (1965: 500) states: “A coordinate compound is one in which the immediate
constituents are in coordinate construction. It differs from a coordinate phrase in that apart from a few exceptions it cannot be reversed, and differs from a subordinate compound in that each constituent is a center while in a subordinate compound only the second constituent is the center.” The position of the constituents here, or the order of components, is crucial—it cannot be changed. Such examples are: chui1-da3, to blow-to hit, ‘to play (music instrument)’, ku1-jiao4, to cry-to scream, ‘to cry and shout’, da3-nao4, hit-querrel, ‘to play/amuse oneself’ and tui1-sang3, to push-to push, ‘to push around’.

D. VO & VR types

Lu (1979) proposes that VO and VR constructions be called Phrasal-words, by which he means that they are in between words and phrases. In the present study, I will include ‘phrasal-verbs’ as compounds for discussion. Some examples are: da3-dao3, to beat-down, ‘to beat down’, diu1-lian3, to lose-face, ‘to lose face’, chi1-fan4, to eat-rice, ‘to eat; to have a meal’ etc.

The frequency of occurrence of a complex form is an important issue. Those often used and well-established complex forms have a tendency to be considered as whole units by speakers while some relatively newly created ones following the same formation pattern may sound like phrases to them. The degree of entrenchedness of the compounds forms a continuum. As time goes on, the relatively established compounds may obtain their own sense independent of those of the constituents, and also develop closeness in form. So, testing the transparency (Lamb, 1999) of compounds in meaning and testing the separability in form are two ways to tell how fixed a compound is.

Chi (1984) considers meaning to be the only criterion in testing a VO form’s
wordhood. This is true for VO forms with two free-morpheme constituents. For example, jing⁴-jiu³, to offer (respectfully)-wine, ‘to propose a toast’ is a separable compound while jing⁴ cha², to offer-tea, jing⁴ shui³, ‘to offer-water’, jing⁴-yun¹, ‘to offer-cigarette’, jing⁴-tang² ‘to offer-soup’, etc. are not. The difference lies in that jing-jiu has developed a specialized meaning which is not equal to the composition of those of its constituents.

The meaning criterion does not work well with VR compounds, on the other hand. la¹-kail in (42) does not have a specialized meaning except the composition of the meanings of its parts. Yet many linguists still talk about expressions like this as VR compounds.

(42)  ta la-kai   le men    (Lu, 1977)

He pull-open    LE door

‘He pulled the door open.’

Lu (1957) proposes a criterion that only inseparable or partly separable VR forms are compounds, not freely separable ones. For example, he takes chi¹-bao³ ‘to eat-full, to be full’ as a phrase while da³-dao³ ‘to hit-down, to hit down’ as a compound. The reason he offers is that the former one can be expanded freely while the latter one can only be expanded in limited ways. For example (Lu, 1957:76), in (43a), da³-dao³ can only have two alternatives: da³ bu⁴ dao³ and da³ de dao³, while, in (43b), chi¹-bao³ has more.

(43)a.  da³-dao³       da³ bu⁴ dao³       da³ de dao³

hit-down       hit-not-down       hit-able-down
‘to hit down’    ‘cannot be hit down’    ‘can be hit down’

b. *chi-l-bao3    *chi-l bu hen bao3    *chi-l de bao bao de
eat-full         eat-not-very-full       ‘eat-able-full-full-de’
‘to be full’      ‘cannot eat very full’  ‘to be very full’

*chi de bu shi hen bao

eat-de-not-very-full
‘be not very full’

In the present work, I will not distinguish these two types of VR and will include all VR forms in the discussion.

2.4.3 Functional Approach

Now, much of the work on Chinese word formation among the references is conducted under various versions of generative linguistic theory. For instance, transformational analyses necessarily use processes such as ‘verb-raising’, ‘tree-pruning’, and then either ‘the Aspect Movement or the Pot Movement’ to eventually achieve an utterance like the following (Lu, 1977):

(44) ta la-kai le men    (Lu. 1977)

He pull-open LE door

‘He pulled the door open.’

Categorial grammar, on the other hand, applies the hierarchy of thematic roles in terms of interaction between verbs and its arguments. Although there are many good and enlightening points in those works, those studies are mainly confined to formal morpho-
syntactic analyses and rules. Not too much attention has been paid to what roles semantics and function have played in word formation. I take a different perspective in the present study. I believe that to fully understand the cognitive process involved in word formation, a functional perspective is the most appropriate guide to follow. The function that an utterance is intended to achieve plays a crucial role and therefore sheds light on differences observed in syntax. The functional motivations of syntactic patterns are, therefore, too important to be ignored.

2.5 Verbs vs. Adjectives

Generally speaking, the word *hen3* 'very' can be used to distinguish Chinese adjectives and verbs.

(45)a. *huar*  *hen3*  *hong*  
flower  very  red  
‘Flowers are very red.’
b.  *ta*  *hen*  *pao*  
he  very  run

Adjectives are also called state verbs. That is why the present work also covers discussions of SP compounds most of which are adjectives. State verbs contrast with process verbs in that the former name states while the latter indicate processes and actions. In accordance with this, adjectives are compatible with stative adverb *hen3* and action verbs are not. Consider the following examples:

Yet there are some exceptions to this rule. Verbs indicating mental states such as *ai4* ‘to love’, *hen4* ‘to hate’, *xiang3* ‘to miss’, *xi3huan1* ‘to like’, etc. can be modified by
hen3 'very' (Jiannan Zhang, 1991). These verbs can have objects and at the same time be preceded by hen3 'very'. This is reasonable because these mental verbs really lie in between adjectives and action verbs in terms of the 'verbiness', i.e. how much action is involved. Except for this group of verbs, hen3 'very' can be used as a good test criterion to distinguish adjectives and verbs.

2.6. Contents of the Thesis

In brief, the contents of the thesis are as follows. The first two chapters have been the introduction and literature review, presenting the basic concepts involved in compounds, the author's understanding of linguistic orientations, and reviews of existing literature. The third chapter discusses VR compounds and illustrates four sub-classes of VR compounds according to functions of the R element. The fourth chapter discusses how nominal VN compounds are differentiated from verbal VN compounds and how many kinds of verbal VN compounds there are. The fifth chapter discusses V+V coordinate compounds. The sixth chapter discusses SP compounds and the seventh chapter, Subordinate+Verb (also called Modifier+V; MV) compounds. The eighth chapter presents the conclusion of the study.

1. One example of qi1 zi3 appears in one of the poems by the famous poet Dufu in the Tang Dynasty:

   que4 kan4 qi1 zi3 chou2 he2 zai4
   however look wife son worry where at
   man4 juan3 shil shul xi3 ru4 kwang2
   randomly roll books happy as crazy

   'When I look at my wife and son, their worries are all gone. They are unconsciously stroking books and look crazily happy.'

2. This criterion will only be effective to native speakers.

3. Thanks for Dr. Lilly Chen's advice on this issue.
Chapter 3

VR COMPOUNDS

3.1 Introduction

According to the usual classification, VR compounds are usually those compounds in which the second element, which is either a verb or an adjective, indicates the result of the process represented by the first verbal element; hence the second element is called the Resulative ('R') element.

Besides describing Verb-Resultative compounds (hereinafter VR compounds), this chapter discusses the questions of their transitivity; to be more specific, the relationship of the composition of VR compounds to the properties of the compounds as a whole. The present study of VR compounds is organized around the interrelations between the R element as the describer, and the described participants.

In the literature on Chinese compounds, VR compounds have received the most attention. To list just a few sources, there are Yannong Wang et al.'s (1987) dictionary on Chinese VR structure, James Huang (1984), John Lu (1977), Sandra Thompson (1973), and Edward McDonald (1990) etc. However, although so many studies have been done on VR compounding, not too much work has been oriented in the direction of predicting their transitivity on the basis of their composition.
**R Alone as Predicate?**

In many cases, the R element can occur alone as a verb, functioning as predicate. For instance, *si3* 'to die' in the VR compound *da3-si3* to beat-to die/dead 'to beat to death' functions as predicate in sentence (1b).

(1)a. \[zh\text{angsan} \quad da\text{3-si3} \quad le \quad Lisi\]
Zhangsan beat-die/dead LE Lisi

‘Zhangsan killed Lisi.’

b. \[Lisi \quad si3 \quad le\]
Lisi die LE

‘Lisi died/is dead.’

On the other hand, not all R elements in VR compounds can function alone as predicates. In the present section, I will briefly discuss the factors involved when the R element cannot function alone as predicate.

One case is that the R element is a bound morpheme such as *shan4* 'nice' in *gai3-shan4* to change-nice 'to improve'. A second case is that the morpheme that occurs in the R position in a VR compound expresses a meaning in the VR compound that is a metaphorical extension of the meaning it has when occurring separately. Therefore, even if an R element can function alone as a main verb, it may not necessarily have the same meaning that it has in the VR compound. This is shown by example (2). For this reason, the resultative state which an R element indicates is not always paraphrasable into a sentence with R alone as predicate. For example, *dao* in *kan4-dao* to look-to arrive 'to
see’ cannot be a predicate with the same meaning when it is in isolation. *dao in *kan4-dao to look-to arrive ‘to see’ does not mean ‘to arrive’. Instead, it indicates an achievement/accomplishment of the action ‘look’ and therefore *kan4-dao means ‘to see’.

(2)a. wo *kan4-dao le Zhangsan
    I look-arrive LE Zhangsan

    ‘I saw Zhangsan.’

b. Zhangsan *dao* le
    Zhangsan arrive LE

    ‘Zhangsan arrived.’

A third case is that the R element is really not describing any nominal participant in the relevant event. Instead, it indicates a degree of the action itself. This is shown by example (3), in which *wan2 ‘to finish’ is a degree or accomplishment of *kan4 ‘to see’. It is not describing a state of any noun participant.

(3)a. wo *kan4-wan1* le na *ben3 shu1*
    I look-finish LE that CL. book

    ‘I finished reading that book.’

b. *na* *ben* *shu1* *wan2* (le)
    that CL. book finish (LE)

This question is interesting because, first, we are interested in knowing whose state of being an R element is describing. Second, this question helps recognize the cognitive patterns of VR compounding. Thompson (1973) argued that not all R elements “also
occur as main verbs with meanings matching those which they carry in the RV compound" (Thompson, 1973: 363) to rebut Baron (1971) and Hashimoto's (1965) transformational claims about VR compound formation. Although the transformational hypotheses are not cognitively realistic and will not be endorsed in the present study, Thompson's argument is problematic. The fact is that there is more than one VR compounding pattern in Chinese and we do not have to come up with just one rule to cover all the instances. The several subtypes of VR compounds will be illustrated in detail in section 3.3.

Separability of VR Compounds

It is important to note that there is a distinction between separable VR compounds and inseparable ones, and that most studies of VR compounds including the present one focus on separable VR compounds. The reason is that the compounding pattern for separable VRs is synchronically very productive: in contrast, there are only a small number of inseparable VR compounds in Chinese, some of whose components are so fused that they can no longer be recognized as VR compounds without careful study. Lu (1957) distinguishes inseparable VR forms from separable VR forms. Separable VR compounds can be separated by the morphemes de ‘to be able’ or bu ‘not’. and inseparable VR compounds cannot be separated by any morpheme. Example (4) lists some inseparable VR compounds.

(4)  
gai3-dong4 to change-to move ‘to change (something in a text); to correct’

gai3-shan4 to change-nice ‘to improve’

fa1-ming2 to emit-bright ‘to invent’
Among these several examples, *ful-ming2* ‘to invent’ is the least transparent one in meaning. The VR relationship between the two components is no longer evident. It is not immediately obvious that *ming2* ‘bright’ indicates a result of *ful* ‘to emit’.

There is no necessary correlation between a bound R element and whether the VR compound is inseparable. Some inseparable VR compounds have both of their components as free morphemes such as *gai3-dong4* to change-to move ‘to change’. The VR construction is productive, and most VR compounds are separable. In the rest of this chapter, we will only treat separable VR compounds. The general term VR will still be used but from now on it covers just separable compounds.

### 3.2 Characteristics of VR Compounds

A VR compound indicates an action and a result. This has two implications: (i.) a VR compound (when it is not separated) necessarily names a perfective process, i.e. a completed action; (ii) most VR compounds are compatible with the so-called ‘potential mode’, i.e. compatible with the insertion of *de* ‘to be able to’ or *bu4* ‘not’.

**"The Potential Mode"**

Thompson (1973) states that “A generally accepted diagnostic for RV’s (resultative verb) is whether they can occur in the ‘potential mode’. The ‘potential’ form of an RV involves the insertion of -de- or -bu- between the two parts, -de- adding the meaning ‘be able’, -bu- ‘be unable’” (Thompson, 1973: 361). This is used as a differentiating criterion of VR compounds from other types of compounds in Thompson...
(1973:361): “Other Compound-verb types in Mandarin Chinese do not permit the insertion of these two morphemes”. Consider examples in (5).

(5)a. chi-bao                                        to eat-full            ‘to feel full’
    chi-de-bao                                   ‘to be able to eat till full’
    chi-bu-bao                                   ‘to be unable to eat till full’

VO type:

b.      tiao4-wu3                                      to dance-dance         ‘to dance’      (Thompson, 1973)
      *tiao4 de wu3                                      dance-to be able to-dance
      *tiao4 bu wu3                                      dance-to be unable to-dance

Subject-Predicate (SP) type:

c.      lian3-re4                                        face-hot                ‘shy’
      *lian3 de re4                                        face-to be able-hot
      lian3 bu re4                                        face-not-hot           ‘face not hot’

VV coordinate type:

d.      la1-che3                                         to pull-to pull ‘to pull; to drag’
      *la1 de che3                                        to pull-to be able to- pull
      *la1 bu che3                                        to pull-not-to pull

Modifier+V type:

e.      leng3-xiao4                                    cold-to laugh          ‘to sneer’
      *leng3 de xiao4                                    cold-to be able to-to laugh
      *leng3 bu xiao4                                    cold-not-to laugh
So, any complex verbal form compatible with *de or *bu can be considered as a VR compound.

*Perfective*

A second property that distinguishes VR compounds from other types is that a VR compound is perfective. Since a VR compound denotes resultative state, it is necessarily perfective, i.e. it is telic. Accordingly, one formal distinct property that a VR compound has is that it cannot co-occur with progressive markers such *zai* or *zheng* or *zheng zai*. e.g.

(6) *wo zai xi3-hao3 yifu
     I ZAI wash-well clothes

(7) *wo zheng xi3-hao3 yifu
     I ZHENG wash-well clothes

(8) *wo zhengzai xi3-hao3 yifu
     I ZHENGZAI wash-well clothes

On the contrary, VR compounds are compatible with the perfective aspectual marker *le*. Of course, they are also compatible with adverbs such as ‘already’. e.g.

(9) wo yijing xi3-hao3 yifu le
    I already wash-well clothes LE

    ‘I have washed my clothes.’

(10) wo zao jiu chi1-bao3 san le
     I early then eat-full rice LE
‘I had my meal quite a while ago.’

In contrast to VR compounds, all the other types co-occur with progressive markers. e.g.

**VO type:**

(11) wo zai/zhengzai kan4-shu1
    I ZAI/ZHENG ZAI read-book

    ‘I’m reading a book.’

**MV type:**

(12) qiqiu zhengzai huanhuan shang4-sheng1
    balloon ZHENG ZAI slowly up-rise

    ‘The balloon is in the process of rising up slowly.’

**VV coordinate type:**

(13) heshui pai1-da3 zhe he’an
    river water pat-hit ZHE river bank

    ‘The water beats/is beating against the bank of the river.’

**SP type:**

(14) ta zheng xin1-fan2 ne, quanquan ta
    he ZHENG heart-annoyed NE advise-advise him

    ‘He is feeling down. Talk to him (to make him feel better).’

Not all SP compounds are compatible with zheng or zai. For example, sentence (15) feels awkward.
(15)  ?ta  zai  tou2-teng2
       he    ZAI    head-ache

But, after all, it is easy to distinguish VR compounds from SP compounds just on the basis of their constituents, because SP compounds have to start with a noun component and VR with a verbal component.

*Interacts with Aspect as One Unit*

The VR compound acts as a simple verb rather than as a sequence of two verbs. One piece of evidence of the compoundhood of a VR form is that no object can be inserted between V and R even if the V element is transitive, as shown in example (16). Another piece of evidence would be that VR form interacts with aspect as one unit, as shown in (17).

(16)a.  da-ren    to beat-person    ‘to beat somebody’
       b.  *da-ren-si  to beat-person-dead
       c.  da-si-ren  to beat-dead-person  ‘to beat somebody to death’

(17)a.  ta  da3-si3  ren  le
       he  beat-dead  person  LE
       ‘He’s beaten somebody to death.’
       b.  ta  da3-si3  le  ren
       he  beat-dead  LE  person
       ‘He’s beaten to death somebody.’
       c.  ta  da  le  si  ren
       he  beat  LE  dead  person
‘He’s beaten dead people/person.’

d. *ta da le si le ren
   he beat LE dead LE person

Among the sentences in example (17), the difference between (17a) and (17b) is that (17a) has le marking a sentential aspect while (17b) has le marking a verbal aspect. While there is difference in emphasis of the two sentences, both of them describe the fact that somebody has been beaten to death. In sharp contrast, sentence (17c) with le in between da and si simply leads to the grouping of si and ren as a noun phrase. In this case, si no longer indicates the resultative state of the event da. It is true that some serial verb constructions can appear in the same form as (17b), but there are substantial differences between VR compounds and serial verb constructions. Consider example (18).

(18)a. ta lai2 da3 le ren
   he come beat LE person
   ‘She came and hit somebody.’

b. ta lai2 (dao) sheng tushuguan da3 le ren
   he come (arrive) province library beat LE person
   ‘He came to the Province Library and beat somebody.’

Sentence (18a) is an example of a serial verb construction. When a Chinese serial verb construction is in the VV form, a locative phrase can be inserted, as shown by (18b). While de or bu can be inserted in a VR compound, no other morphemes or phrases, such
as locative phrases, can be inserted. Therefore, occurrences like (18a) will not confuse serial verb constructions with VR compounds.

The fact that da3-si3 as a unit can be followed by le with si signaling a result and that it sharply contrasts with its counter form shown in (17c) indicates that da-si is much tighter than two separate verbs. The ungrammaticality of sentence (17d) further proves this point.

**Other Characteristics**

A VR compound functions differently from a stative verb, although the R element indicates a state. It is a combination of an action and a state. Therefore, a VR compound is not compatible with adverbs such as hen3 ‘very’, or ji2le ‘very much’, as pointed out by Thompson (1973). Also, VR compounds are not compatible with reduplication either.

### 3.3 Four Subtypes and Their Transitivity

#### 3.3.1 Three Major Subtypes

VR compounds can be sub-classified into three major types: Agent-resultative, Patient-resultative and Process-resultative. This classification is based on the fact that the result described by the second component can apply to either of two different nominal roles or to the verb element in the utterances in which the VR compound occurs. In the case of **Agent-Resultative**, the Resultative element refers to a state of the agent of the action represented by the first element of the compound. In the case of **Patient-Resultative**, the R element refers to a state of the patient of the action represented by the verb component of the VR compound; and as for **Process-Resultative** compounds, the
Resultative element describes a state of the event itself in a sentence. There is also a minor type, the Locative-Resultative.

Examples (19a), (20a) and (21a) represent the three subclasses, respectively. Examples (19b), (20b) and (21b), on the other hand, are respectively paraphrased glosses of what the R elements are describing the states of, in the (a) sentences. That is to say, the (b) glosses show the logical subjects of the R elements in the (a) sentences. To compare the (b) sentences, in which the R elements function alone as predicates, is not to and will not necessarily show the differences between the R elements themselves; instead, this comparison is about the differences between the three sub-classes of VR compounds. To illustrate this point, take (*20c) as an example. Sentence (*20c) is a perfect sentence in Chinese, yet it is marked unacceptable in this context because it is not an acceptable interpretation of the sentence (20a). Therefore, recognizing the logical subject of the R element in a VR compound is the way to tell which sub-category this VR compound belongs to. This will be used as a test criterion in the present study.

(19)a. \[ta \quad {{\textit{chi1}}}-pang4 \quad le\]

he eat-fat LE

‘He is fatter.’

b. \[ta \quad (\textit{ben3-ren2}) \quad {\textit{pang4}} \quad le\]

he (self) fat LE

‘He (himself) is fatter.’

The word \textit{pang4} ‘fat’ in sentence (19a) describes a state of the agent \textit{ta1} ‘he’ as a result of \textit{chi1} ‘to eat’.
(20)a.  \( ta \quad da3\text{-si3} \quad le \quad Wangwu \)

He beat-dead LE Wangwu

‘He killed Wangwu.’

b.  \( Wangwu \quad si3 \quad le \)

Wangwu die LE

‘Wangwu died.’

c.  \( *ta \quad si \quad le \)

he die LE

‘He is dead.’

The word \( si3 \) ‘dead, to die’ in sentence (20a) illustrates a state of the patient \( ren2 \) ‘person’ as a result of \( da3 \) ‘to beat’. The one who is dead is not \( tal \) ‘he’ but \( ren2 \) ‘person’ –somebody.

(21a)  \( ta \quad chil\text{-wan2} \quad fan \quad le \)

he eat-finish meal Le

‘He’s finished his meal.’

b.  ‘The action of eating is done.’

c.  \( *\)‘He is done/over.’

d.  \( *\)‘The meal is done/over.’

Different from both (19a) and (20a), \( wan2 \) ‘to finish, done’, in (21a) does not refer to agent \( ta \) ‘he’ nor the patient \( fan \) ‘meal’. Instead, it indicates the accomplishment of the action \( chil \) ‘to eat’. No other interpretations are possible.
In Li & Thompson (1981), VR compounds containing the following morphemes as second component are called "Phase" VR compounds: hao3 'good', dao 'to arrive', zhao2 'to be on target', zhu4 'to hold on', and wan2 'to finish', etc. Li & Thompson state: "... the second verb expresses something more like the type of action described by the first verb or the degree to which it is carried out than its result" (Li & Thompson, 1981: 65). This view of Li & Thompson is accepted here. This third type—Process-resultative VR compounds --- can also be called the Achievement-resultative type. In our definition, this group should also include compounds having diao 'to drop' and guang1 'to be empty' as the second element, such as chil-diao4 eat-drop 'to finish eating the whole thing' or chil-guang1 to eat-to be empty 'to eat up'. Where our category differs from Li & Thompson's is that VR compounds of this sub-type are not only characterized by the above commonly-used morphemes, it also includes VR compounds with infrequently occurring morphemes in the R position, such as qing1 'clear' in kan4-qing1 look-clear 'see clearly'. To sum up, as long as the R element indicates a degree or accomplishment of the action itself, instead of a state of a nominal participant, this VR compound belongs to the third sub-type---Process-Resultative.

Some related questions arise at this point. How are the types of VR compounds correlated with nominal roles in a sentence? Which types tend to be transitive? Is this transitivity obligatory or not? What VR compounds tend to be Agent-Resultative, Patient-Resultative or Process-Resultative? Are there any patterns? Is it the case that every possible VR compound has only one reading? These questions will be investigated in the following sections.
3.3.2 Correlation of Subclasses of VR Compounds with Their Transitivity

Passivization

The difference in transitivity among Patient-Resultative, Process-Resultative and Agent-Resultative VR compounds can be shown in passive constructions or other constructions with object preposition, such as the BA construction. Patient-Resultative VR compounds are the ones most compatible with the passive construction. Of course, they are compatible with BA constructions, too. Patient-Resultative VR compounds are necessarily transitive. Process-Resultative compounds can occur in passive in theory, but most often, the preposed object functions as topic and at the same time as the pre-posed object without the passive marker BEI, or they occur in BA constructions. Process-Resultative VR compounds are transitive too, but very often, the objects are omitted. Agent-Resultative VR compounds either cannot be passivized, or the agent of the action represented by the VR compound is the subject of the passive construction. That is to say, Agent-Resultative VR compounds of this type are like middle-voice verbs. Mostly, Agent-Resultative VR compounds are intransitive. In the following paragraphs, I will illustrate what has been stated above in detail. First, let's consider Patient-Resultative VR compounds.

Patient-Resultative

Patient-Resultative VR compounds are transitive. Formally, they either have following objects in canonical SVO sentences or pre-posed objects in the so-called disposal BA constructions or the passive constructions marked by BEI4, RANG4, GEI3, JIAO4, ZAO1 or WEI4 etc. Consider the following examples:
(22a. dashui chong1-kua3 le na zuo qiao
flood flow-collapse LE that CL bridge
'The flood has shattered that bridge.'

b. *dashui chong1-kua3 le
flood flow-collapse LE

(23a. didi yinian chuan1-lan4 le san shuang xiezi
brother one year wear-broken LE three CL shoes
'Little brother wore out three pairs of shoes in one year.'

b. *didi yinian chuan1-lan4 le
brother one year wear-broken LE

c. yinian zhinei, san shuang xiezi dou rang4
one year within three CL shoes even Passive
didi bei chuan1-lan4 le
brother give wear-broken LE
'Within one year, little brother wore out three pairs of shoes.'

d. didi yinian ba san shuan xiezi dou gei
brother one year BA three CL shoes even give
chuan1-lan4 le
wear-broken LE
‘Little brother worn out three pairs of shoes in one year!’
e. didi ba xiezi (gei) chuan1-lan4 le
brother BA shoes (give) wear-broken LE
‘Little brother worn out his shoes.’

As shown in sentences (22) and (23), an object of Patient-Resultative VR compounds can appear in the O position in an SVO sentence, and it can appear in passive constructions which vary in using different passive markers, and it can also appear in BA constructions in which the object follows right after the subject. In any form of these, there has to be an object.

But we wonder whether it is true that all object-like noun phrases following transitive VR compounds are homogeneously patients. In most cases, they are. But there are exceptions. So far, the exceptions I have found are compounds composed of verb followed by V-sheng4/ying2 (‘to win’).

The form zhan4-sheng4 and da3-bai4 are an interesting pair of compounds in Mandarin, in that if either zhan4-sheng4 ‘to fight-to win’ or da3-bai4 ‘to fight-to lose’ is used, it always means ‘to crush the enemy’ provided that there is an object like ‘the enemy’ in the sentence.

(24)a. women zhan4-sheng4 le diren
we fight-win LE enemy
‘We have defeated our enemy.’
b. women  da3-bai4  le  diren
        we     fight-lose     LE  enemy
        ‘We have defeated our enemy.’

Applying the agent/patient category test, we see that (24a) should not entail (25a), instead it should entail (25c) and implies (25b). That is to say, although formally appearing as Patient-Resultative, (24a) is actually Agent-Resultative. The result sheng4 ‘to win’ describes a state of the agent women ‘we’, not the patient di2ren2 ‘enemy’. In contrast, in (24b), the result bai4 indicates a state of the patient di2ren2. So (24b) is Patient-Resultative. It entails (25b).

(25a).  *’The enemy has won.’
b.    ‘The enemy has lost.’
c.    ‘We have won.’

Similarly, for sentence (26a), it is not the opponents who won. On the contrary, the result ying2 ‘to win’ indicates a state of the agent wo3men ‘we’. So (26a) is Agent-Resultative. In contrast, (26b) and (26c) are Patient-Resultative VR compounds.

(26a). women  da3-ying2  le  duifang
        we     play/fight-win     LE  opponent
        ‘We have defeated our opponent.’
b. women  ba  diren  da3-shui  le
        we     BA  enemy     fight-lose     LE
        ‘We have defeated our enemy.’
c.  

\[ ?\text{women} \quad da3\text{-shul} \quad le \quad diren \]

we  fight-lose LE  enemy

We have already shown that, interestingly, when there is an object such as 'the enemy', 'the opponent', etc., the use of either V-\text{sheng4/ying2} 'to win' or V-\text{bai4/shul} 'to lose' would make no difference: the agent has won. But when the object 'the enemy' is left out, V-\text{sheng4/ying2} and V-\text{bai4/shul} will resume their different meanings. Consider the examples in sentence (27).

(27)a.  

\[ \text{women} \quad da3\text{-sheng4} \quad le \]

we  fight-win LE

'We have won.'

b.  

\[ \text{women} \quad da3\text{-bai4} \quad le \]

we  fight-lose LE

'We have lost.'

Both (27a) and (27b) are Agent-Resultative V-R compounds. So, to sum up, \text{da3-bai4} can be either Agent-Resultative or Patient-Resultative depending on context. On the other hand, the VR compound with \text{sheng4} as the R element will always be Agent-Resultative, i.e. it is always the agent that has won.

In addition to the cases of V-\text{ying2/sheng4} 'to win' cases discussed above, there are two other examples which were discussed in Yueyuan Huang's dissertation (1991).

(28)a.  

\[ ta \quad chil\text{-bao3} \quad le \]

he  eat-full LE
'He is full.'

b. \[\text{ta} \quad \text{chil-bao3} \quad \text{fan} \quad \text{le}\]

he eat-full meal LE

'He is full.'

(29)a. \[\text{ta} \quad \text{he1-zui4} \quad \text{le}\]

he drink-drunk LE

'He is drunk.'

b. \[\text{ta} \quad \text{he1-zui4} \quad \text{jiu} \quad \text{le}\]

he drink-drunk alcohol LE

'He is drunk.'

All the instances in sentences (28-29) are Agent-Resultative compounds. But as Huang (1991) points out, the objects following \textit{bao3} and \textit{zui4} are only limited to \textit{fan4} 'meal' and \textit{jiu3} 'alcohol'. It is not accepted to have other nouns in their replacement. For instance:

(30) \[\text{ta} \quad \text{chil-bao3} \quad \text{shiwu/wufan/mandanglao} \quad \text{le}\]

he eat-full food/lunch/Macdonald LE

(31) \[\text{ta} \quad \text{he1-zui4} \quad \text{pijiu/baijiu/fenjiu} \quad \text{le}\]

he drink-drunk beer/alcohol/FEN alcohol LE

\textit{Agent-Resultative}

Most \textit{Agent-Resultative} compounds are intransitive, with the above exceptions. Generally speaking, Agent-Resultative VR compounds cannot occur in passive constructions. Consider example (32).
(32)a. ta  
    
    *ta  bei  chil-pang4  le
     he  BEI  eat-fat  LE

    ‘He is fatter.’

b. *ta  bei  chil-pang4  le
     he  BEI  eat-fat  LE

There are some other Agent-Resultative VR compounds which function like middle-voice verbs. In such cases, the agent itself occurs in a passive construction as the subject, i.e. patient. Agent-Resultative VR compounds with bai4/shu1 ‘to lose’ are such examples. In addition, there are some other examples. This is in contrast with Patient-Resultative compounds, whose agents will never occur as grammatical subjects in a passive construction. Consider examples (33-34).

(33)a. Zhangsan  lei4-bing4  le
     Zhangsan  tire-ill  LE

     ‘Zhangsan is sick from being overstressed.’

b. Zhangsan  bei  lei4-bing4  le
     Zhangsan  BEI  tire-ill  LE

     ‘Zhangsan is sick because of stress.’

c. X  ba  Zhangsan  lei4-bing4  le
     X  BA  Zhangsan  tire-ill  LE

     ‘(Something) tired Zhangsan to the degree of being ill.’

(34)a. women  da3-bai4  le
     we  fight-lose  LE
‘We have lost.’

b. women beǐ da3-bai4 le
   we BEI fight-lose LE

‘We have been defeated.’

c. X ba women da3-bai4 le
   X BA we fight-lose LE

‘(somebody) defeated us.’

Here are more examples of Agent-Resultative compounds which have middle-
voice verb components.

(35) ta zhuang4-si3 le
   he hit-dead LE

‘He was run over and died.’

(36) sudu jian3-man4 le
    speed decrease-slow LE

‘It has been slowed down.’

(37) tiaojian fang4-kuan1 le
    condition put-loose LE

‘The limits have been loosened.’

(38) ren jiu4-huo2 le
    person save-alive LE

‘The person’s life has been brought back.’

(39) huiyi tui1-chi2 le
meeting push-late LE

'The meeting has been postponed.'

All sentences in (33a), (34a) and (35-39) can be rephrased as passive sentences. The subjects in these sentences are not the agents of the actions. For example, 他 'he' in (35) is the patient of the action chuang4 'to hit', yet the resultative element in the compound si3 'dead' indicates a state of the subject, therefore this type of sentence still falls in the category of Agent-Resultative V-R compounds.

**Location-Resultative**

There is another type of VR compound which formally looks like Patient-Resultative, but is actually Locative-Resultative. This type of VR compound is characterized by occurring in inverted sentences with pre-posed location phrases with post positions such as li3 'in', xia4 'under', etc., followed by verb and subject. VR compounds composed of V-man ('full') typically appear in such sentences. Consider the following examples:

(40) wuzi li ji3-man3 le ren

room in squeeze-full LE person

'The room is full of people.'

(41) tude kouqi zhong chong1-man3 le jidu

his tone within fill-full LE jealousy

'He sounded very jealous.'

(42) zhainpai xia zh4-man3 le deng che de ren
bus stop board under stand-full LE wait bus DE person

'The place under the bus stop sign was full of people waiting for buses.'

(43)  tade yan li bu4-man3 le xuesi

his eye in distribute-full LE blood

'His eyes are full of blood.'

(44)  gang li cheng2-man3 le shui

urn in hold-full LE water

'The urn is full of water.'

Such VR compounds cannot occur in passive constructions, as shown in (45) in connection with example (41).

(45)a.  *ji4du bei4 chong1-man3 le

jealousy BEI fill-full LE

b.  *kou3qi4 bei4 chong1-man3 le

tone BEI fill-full LE

Interestingly, different from Patient-Resultative VR compounds, whose agents can be omitted in passive constructions, a passive construction with Locative-Resultative VR compounds, as shown in (45), will sound a little less awkward when both the pre-posed locative phrase and the inverted subject are present as shown in (46).

(46)  ?wuzi bei ren ji3-man3 le

room BEI person squeeze-full LE

'The room is full of people.'
For Locative-Resultative VR compounds, the inverted subject is the FILLER and the locative phrase represents the FILLEE. If ever passivized, both the FILLER and the FILLEE have to be present.

**Process-Resultative**

Resultative elements in Process-Resululative compounds indicate the degree of accomplishment of a process. Usually, words like *wan2* ‘to finish’, *hao3* ‘complete/well’, *cheng2* ‘to succeed, to accomplish’, *jian4* ‘to see’, *dao4* ‘to arrive’, *dia04* ‘to drop’, etc. are in the resultative position. The R elements listed above are more like grammaticalized particles than the verbal or adjectival R elements that occur in Agent-Resultative and Patient-Resultative VR compounds. Take *dao4* ‘to arrive’ for example. In a VR compound, *dao4* very often does not mean ‘to arrive’. Instead, it indicates the achievement of the action and bears more of a temporal sense rather than a state or quality. Li & Thompson (1981) state that these R elements indicate phase of action. In contrast, the R elements in Agent-Resultative and Patient-Resultative compounds indicate quality and state. For example, *wo lei4-si3 le I-tire-die-LE ‘I’m tired to death.’* refers to my physical/mental state. Likewise, *wo fei1 da3-si3 ta1 bu4ke3 I-must-beat-die-him ‘I have to kill him.’* conveys a change of state to the point that he dies—stops breathing.

Process-Resultative compounds are more variable with respect to having an object. That is because the achievement of the action is more salient than the rest. The patient plays a less important role in a Process-Resultative compound. In context, the object of a Process-Resultative V-R compound can often be omitted. E.g.
(47)  wo  chih-wan2  le  !
I  eat-finish  LE
‘I have eaten it up!’

(48)a.  nimen  zuotian  kan4-cheng2  dianying  le  ma?
You (pl)  yesterday  see-succeed  movie  LE  Question
‘Did you manage to see the movie last night?’
b.  kan4-cheng2  le
see-succeed  LE
‘Yes.’

Correlated with the above characteristics. Process-Resultative compounds are prototypically less often associated with passive constructions marked by BEI. Instead, they are often seen in sentences with the patient pre-posed at the beginning of a sentence functioning as a topic.

That is because BEI prototypically reflects a speaker’s attitude towards a particular event as ‘adversative’ or unexpected (cf. Lilly Chen, 1994). The prototypical BEI “is supposed to express that the grammatical Subj is involuntarily affected by an outside force encoded in the VP” (Chen, 1994: 113). “The term ‘adversative’ is to be understood as ‘affected’ and ‘beyond the control’ of the grammatical Subj, thus often is adverse” (Chen, 1994: 114). Most R elements in Process-Resultative compounds, such as wan2 ‘to finish’, or dao4 ‘to arrive’, tend not to imply a strong sense of ‘affected’ or ‘adversative’; hence Process-Resultative compounds are less often associated with BEI. On the contrary, Patient-Resultative compounds, typically with animate agents, action
verbs and 'affected' objects, occur with BEI more often. We say 'typically' because the usages of BEI are very complicated. Among Patient-Resultative compounds, some have to co-occur with BEI in passive sentences, while others do not, depending on the subcategory of the verb element as well as other factors. For example, BEI in *zhangsan bei da3-si3 le* (Zhangsan BEI beat-dead le) 'Zhangsan was killed' is obligatory, whereas BEI in *zi4 xie3 cuo4 le* (character-write-wrong-le) 'The character was written incorrectly' is not necessary. From Patient-Resultative compounds to Process-Resultative compounds, we actually observe a gradation from compulsory usage of BEI to optional, and to unacceptable use of BEI marking as shown in (49b). Therefore, in many cases, the passive marker BEI can help distinguish Patient-Resultative from Process-Resultative compounds, but we need to bear in mind that it is not a clear-cut dichotomy in terms of their co-occurrence with this passive marker. In the following examples, the VR compound in (49) is Process-Resultative and the VR in (50) is Patient-Resultative, which requires a BEI marker in passive.

(49a. *nei ben shu wo kan4-wan2 le*  
that CL book I read finish LE  
'I have finished reading that book.'

b. *?nei ben shu bei wo kan4-wan2 le*  
that CL book BEI I read-finish LE

c. *wo ba nei ben shu kan4-wan2 le*  
I BA that CL book read-finish LE  
'I finished reading that book.'

(50a. *??nei ge ren wo da3-si3 le*  
'I have finished showing off to the people.'
b. *nei* ge ren *bei* wo *da3-si3* le

that CL person BEI I bead-dead LE

‘That person was killed by me.’

c. wo *ba* nei ge ren *da3-si3* le

I BA that CL person beat-dead LE

‘I killed that person.’

While both Process-Resultative and Patient-Resultative VR compounds are compatible with the BA construction, the Process-Resultative is more often used in sentences like (49a) than in passive constructions marked by BEI, as shown in (49b). Here are some more examples of this comparison:

(51)a. wode *hua* yijing *shuo1-wan2* le

my words already speak-finish LE

‘That’s all I want to say.’

b. wo *ba* *hua* *shuo1-wan2* le

I BA words speak-finish LE

‘I finished what I wanted to say.’

c. *hua* *bei* wo *shuo1-wan2* le

words BEI I speak-finish LE

(52)a. *pingzi* *til-fan1* le

bottle kick-turn down LE

b. wo *ba* *pingzi* *til-fan1* le
I BA bottle kick-down LE

'I kicked the bottle upside down.'

c. pingzi bei wo ti1-fan1 le
bottle BEI I kick-down LE

'The bottle was kicked upside down by me.'

From the above examples (49-52), we see that Patient-Resultative compounds such as da3-si3 'to beat to death' in (50) and ti1-fan1 'to kick upside-down' in (52) are not compatible with objects pre-posed plainly without a BA or BEI-like marker. On the contrary, while Process-Resultative compounds can sometimes occur in passive constructions, they are very often present in sentences with the object pre-posed to the beginning of the sentence to serve as the topic. This difference between Patient-Resultative and Process-Resultative compounds is due to the difference in semantics of these two types of VR compounds. For prototypical Patient-Resultative compounds, the R element describes the states of the patient, i.e. the patient is in most cases physically affected or at least conceptually so. When the patient is preposed before the VR compound, a salient marker of this transitivity is often needed, i.e. either BA or a passive marker BEI is needed. For Process-Resultative VR compounds, the R elements indicate the phase of the action represented by the V element instead of the state of the patient of the VR compound. Therefore, the R element and the patient are not so closely related to each other. When the patient is preposed to the beginning of the sentence, no passive marker BEI is necessary in many cases, if not all.

Process-Resultative compounds can also contain middle-voiced verbs. Consider example (53). The difference between such a Process-Resultative compound from an
Agent-Resultative compound is that the R element wan2 ‘to finish’ in the Process-Resultative compound, as shown in (53), does not indicate a state of the subject shu1 ‘book’, which is a characteristic of Agent-Resultative compounds; instead, wan2 ‘to finish’ indicates the accomplishment of mai4 ‘to sell’.

(53) \[ shu \quad mai4{-}wan2 \quad le \]

book sell-finish LE

‘Books have been sold out.’

Summary

To sum up, the formal features of Agent-Resultative, Patient-Resultative and Process-Resultative compounds respectively can be characterized as follows: Agent-Resultative compounds are intransitive in general with a few exceptions; Patient-Resultative compounds are transitive and can appear in different formats: active sentences, BA sentences, passive sentences etc., but not often in topicalizations. Process-Resultative compounds are typically characterized by verbal particles wan2 ‘to finish’, cheng2 ‘to succeed’, hao3 ‘good’, jian4 ‘to see’, dao4 ‘to arrive’, diao4 ‘to drop’ as the resultative elements representing achievement or accomplishment and are optional in terms of requiring an object. Process-Resultative compounds do appear in topicalizations. We also mentioned a fourth type of V-R compounds, which are Locative-Resultative, such as V-man compounds in inverted constructions.

3.4 Factors Relevant to the Transitivity of VR Compounds

3.4.1 Constituents That Occur in the First vs. Second Position
The most salient feature of the R element in Agent-Resultative and Patient-Resultative VR compounds is its intransitivity. This element denotes a state of either the agent or the patient and does not name actions or processes. In contrast, the first element of the compound can be either transitive or intransitive. It can either name a process or an action or just represent a state.

As far as the first element V is concerned (hereinafter the ‘V’ element), both transitive and intransitive verbs can form either Agent-Resultative or Patient-Resultative compounds. The following examples are excerpted from Lu (1977), which the author uses to represent four underlying tree structures:

(54)a.  
\[
\begin{array}{l}
ta \quad la1-kai1 \quad men \quad le \\
he \quad pull-open \quad door \quad LE
\end{array}
\]

‘He pulled open the door.’

b.  
\[
\begin{array}{l}
ta \quad ku1-pao3 \quad le \quad keren \\
he \quad cry-run \quad LE \quad guest
\end{array}
\]

‘He cried and as a result the guest(s) left.’

c.  
\[
\begin{array}{l}
ta \quad he1-zui4 \quad jiu \quad le \\
he \quad drink-drunk \quad wine \quad LE
\end{array}
\]

‘He was drunk.’

d.  
\[
\begin{array}{l}
ta \quad ed-bing4 \quad le \\
he \quad starve-sick \quad LE
\end{array}
\]

‘He became sick as a result of suffering hunger.’
Both *la1-kail* to pull-open 'to pull open' and *ku1-pao3* to cry-to run away 'to cry to the degree that somebody runs away' in (54a) and (54b) are Patient-Resultative, but they are different in that *la1* 'to pull' in (54a) is transitive and *ku1* 'to cry' in (54b) is intransitive. As for examples (54c) and (54d), both *he1-zui4* to drink-drunk 'to be drunk' and *e4-bing4* to starve-ill 'to starve to ill' are Agent-Resultative compounds, but they are different in that *he1* 'to drink' is transitive and *e4* 'to feel hungry' is intransitive. Note that we have already discussed the cases such as (54c) and pointed out that it is rare for Agent-Resultative compounds to be transitive as a whole.

In other words, intransitive verbs can form transitive compounds with a resultative element, whereas transitive verbs can also form intransitive compounds. In the following examples, every intransitive V element is marked at the right in parentheses.

(55a. *ta* *ku1* *le* (intransitive)

he cry LE

'He cried.'

b. *ta* *ku1-hong2* *le* *yanjing* (VR compound transitive)

he cry-red LE eyes

'He cried and his eyes are all red.'

(56a. *ta* *shui4* *le* (intransitive)

he sleep LE

'He has gone to sleep.'

b. *ta* *yijing* *shui4-huai4* *le* *yi zhang chuang* *le* (VR compound transitive)
he already sleep-bad LE one CL bed LE

‘One of his sleeping beds has been broken.’

(57)a. ta  kul  le  (intransitive)

he cry LE

‘He cried.’

b. ta  kul-teng2  le  duzi  (VR compound transitive)

he cry-ache LE stomach

‘He cried so much that his stomach ached.’

(58)a. duo  chil  shuiguuo  (transitive)

more eat fruits

‘You should have more fruits.’

b. ta  chil-pang4  le  (VR compound intransitive)

he eat-fat LE

‘He is fatter now.’

c. bie  chil-huai4  le  duzi  (VR compound transitive)

don’t eat-bad LE stomach

‘Don’t make yourself stomach-sick.’

d. ta  chil-wan2  le  wanfan  jiu  chuqu  le  (VR compound transitive)

he eat-finish LE dinner then go out LE

‘He went out right after he had dinner.’

(59)a. bu  neng  da3  wu  bawo  zhi  zhang  (transitive)

not able fight no sureness of battle
'One can not be engaged in a war without total confidence (to win).

b. **women** da3-bai4 **le** (VR compound intransitive)
   we fight-lose LE
   'We have lost.'

c. **ta** da3-si3 **ren** **le** (VR compound transitive)
   he beat-dead person LE
   'He's killed a person.'

3.4.2 The Role of Constituents in the Transitivity of VR Compounds

**R Element Plays Crucial Role?**

It is no mystery that compounds containing intransitive V elements form transitive VR compounds as shown in sentence (55-57). By examination of only these several examples, one might jump into a conclusion that the R element plays a crucial role here in directing the transitivity of the VR compound. It appears that, because of the addition of the R elements in these sentences, another nominal role becomes involved as the patient of the VR compound. Likewise, it also appears that the choices of R elements in sentences (58b) and (59b), which refer back to the agent/subject of those sentences, cause the VR compounds containing transitive V elements in (58b) and (59b) to be intransitive. By comparing (58b) with (58c) and (59b) and (59c), this point seems even clearer—the choice of the R element determines whether a VR compound is Agent-Resultative or Patient-Resultative, and if the latter, it requires an object. However, the problem is not this simple. While this is the case for verbs we see in examples (58-59), we also see examples in which just the opposite is true (see below).
V Element Plays Crucial Role?

In some utterances, the first element, i.e. the V element seems to play the key role in directing the compound’s transitivity. Consider the following sentences:

(60)a. *ta da3-si3 le
   he beat-dead LE
b. ta zhan4-si3 le
   he fight-dead LE
   ‘He died in the battle.’
c. jushuo, Linbiao shuai1-si3 le
   reportedly Linbiao fall-dead LE
   ‘It is said that Linbiao died in a plane crash.’
d. ta da3-si3 ren le
   he beat-dead person LE
   ‘He’s killed a person.’

(61)a.*women jil-bai4 le
   we strike-lose LE
b. women da3-bai4 le
   we fight-defeat LE
   ‘We have been defeated/we lost.’
c. women jil-bai4 le duishou
   we strike-lose LE opponent
   ‘We defeated our opponent.’

(62)a. *ta da3-dao3 le
We can see that in sentences (60-62), having the same resultative element, it is the first element, i.e. the V element, which determines whether a VR compound should have an object or not.

**V and R Elements Both Crucial, but not Equally**

It may seem confusing that some compounds have the first element as determinative while others have the second. The properties of a VR compound naturally result from the combination of both of the elements. The question is how the properties of each component play a role in the compound.

To answer this question, we have identified three factors: the properties of V, the properties of R, and the potential relationship between R and an argument based on the properties of both V and R. Before considering whether the V or the R is more important, we need to take into consideration that some verbs in Mandarin Chinese never occur in Agent-Resultative compounds no matter what resultative elements are attached to them. That is to say, no matter what the R element is, the compound is obligatorily
transitive. The form *ji1 'to strike; to attack' is such a verb. Consider the following comparison:

(63)a. **women** da3-bai4 le
    we fight-lose LE
    ‘We have lost.’
b. **women** da3-bai4 le diren
    we fight-lose LE enemy
    ‘We defeated the enemy.’
c. *women ji1-bai4 le
    we strike-lose LE
    d. **women** ji1-bai4 le diren
    we strike-lose LE enemy
    ‘We defeated the enemy.’

In example (63), da3 'to hit, to fight, to strike' shares a range of meaning with ji1 'to strike, to hit, to bump'. As a matter of fact, there is a verbal coordinate compound da3-ji1 beat-strike 'to beat'. But it has different syntax. While da-bai is acceptable as an intransitive verbal compound, ji-bai is ungrammatical without a potential object. An utterance of (63c) can only mean, to a native speaker's ear, an unfinished sentence with an object yet to come. That is to say, to be transitive with the upcoming object as the potential agent of bai4 is the only interpretation for a combination of ji and bai. Clearly, it is not because of bai4 that ji1-bai4 behaves this way. Any form of ji1-R that makes sense has to be transitive, for instance, ji1-kua3 (strike-collapse), ji1-hui3 (strike-
destroy), *ji1-zhong4 (strike-hit the target), *ji1-chen2 (strike-sink), *ji1-chuan1 (strike-penetrate), etc. Another verb like *ji1 is cai3 ‘to step on’, as in cai3-lan4 (trample-broken into pieces), cai3-huai4 (trample-broken/out of order), cai3-po4 (trample-broken) etc.

(64)a. *ta  cai3-si3  le  
    he   trample-die  LE

b.  ta  cai3-si3  le  mayi
    he   trample-broken  LE  ant

‘He stepped on an ant and killed it.’

c.  ta  bing4-si3  le
    he   sick-die  LE

‘He died of illness.’

The example (64) shows that cai3-si3 has to have an object. This is in contrast with cheng1-sil shown in (65), in which cheng1 ‘to overeat’ can occur in both intransitive and transitive VR compounds.

(65)a.  ta  cheng1-si3  le
    he   over-eat-die  LE

‘He ate too much and died.’

b.  ta  cheng1-huai4  le  wei
    he   overeat-broken  LE  stomach

‘He overate and hurt his stomach.’
It is apparent that some V elements can only form transitive VR compounds while others can form both transitive and intransitive ones. The three relevant factors discussed above can be arranged in a hierarchy. The verb category takes precedence over the R properties. Only when the verbs in question are flexible in terms of forming either transitive or intransitive VR compounds, do the properties of R element become relevant. It is clear that a dichotomy among verbs must be recognized. We shall name one category of V elements ji- verbs ('to strike'), and the other category chi- verbs ('to eat'). Based on this, a summary of what we have found is presented as follows:

\[ \text{Ji- verbs: } \text{the V element determines the transitivity of VR} \]
\[ \text{Chi-verbs: } \text{the R element determines the transitivity of VR} \]

When a verb is a ji- verb, a VR compound (always transitive) will be either a Patient-Resultative compound with the R element referring to the patient or a Process-Resultative. As mentioned, verbs in such VR compounds play the decisive roles. When a verb falls into the chi- category, which means that a verb can either form an Agent-Resultative, Patient-Resultative or Process-Resultative VR compound with a resultative element, it is the resultative component that determines the transitivity of the VR compound. Consider further examples:

(66)a.  
\[ \text{ta } shuai\text{-}dao3 \quad le \]
\[ \text{he fall-down } \quad \text{LE} \]
\[ \text{‘He fell down.’} \]

b.  
\[ \text{ta } shuai\_,\_,\_,\_,\_,\_,\_,\_,\_,\_,\_\text{-}sui \quad le \quad yi \quad ge \quad wan \]
\[ \text{he throw to the ground } \quad \text{broken LE} \quad \text{one CL bowl} \]
'He smashed a bowl.'

In example (66a), the resultative element dao3 indicates the result of shuai1 and a state of the experiencer ta1. In contrast, in (66b), sui4 indicates a state of the patient wan3 as a result of shuai1. The difference of between (66a) and (66b) depends on the resultative element.

There are cases when a VR compound can be interpreted in either way. They switch categories between Agent-Resultative and Patient-Resultative depending on the presence of an object. Some of the following examples have been discussed above.

(67)a. women da3-bai4 le
      we fight-lose LE
      'We lost.'

b. women da3-bai4 le tamen
      we fight-lose Le they
      'We defeated them.'

(68)a. ta shuai1 dao3 le
      he stumble-down LE
      'He fell down.'

b. ta shuai1 dao3 le duishou
      he stumble-down LE opponent
      'He knocked his opponent down.'

(69)a. ta lei4 le
      he tired LE
'He is tired.'

b. ta lei4-si3 le
   he  tired-dead LE

'He was tired to death.'

c. zhe zhong huor lei4-si3 ren
   this kind work tire-dead person

'This kind of job is very exhausting.'

Note that, without objects, the highlighted VR compounds are Agent-Resultative. With objects, they are Patient-Resultative. In most cases, Agent-Resultative compounds are intransitive. The only exceptions are with V-sheng/ying ('win') words. Example (24a) is repeated in (70).

(70) women zhan4-sheng4 le diren
    we  fight-win LE enemy

'We have defeated our enemy.'

To sum up, the transitivity of a VR compound depends on either the V element or the R element. In some cases, the V element determines the properties of the compound while in other cases, it is the R element that leads the usage of the compound. We have divided verbs into two large groups based on this discrepancy.

3.5 Verb-Directional (VD) Compounds

3.5.1 Introduction
In Chinese linguistics, V-direction compounds are also considered a special type of VR compounds. This section is not our focus of the present chapter. I will only give a brief sketch of the VD compounds to observe this linguistic phenomenon.

A motion verb in Chinese can be followed by a phrase denoting direction or termination. For instance,

(71) \textit{women pa2 shang4 le taishan}  
we climb go up LE Tai Mountain

‘We stepped onto Tai Mountain.’

(72) \textit{ta manman zou xia louti}  
he slowly walk get down stairs

‘He walked downstairs in a slow pace.’

One immediate display of the difference between V-Directional (hereinafter V-D) sequences and the VR compounds discussed in the previous sections is that the directional morphemes, if taken as verbs, are transitive, in contrast with the stative second-positioned resultative elements discussed above. The sentence final noun phrases, instead of being potential agents, are objects.

Derived from this nature of directional verbs, we have noticed that there are actually two readings about the above two examples. Namely, the sequence \textit{pa1-shang4} or \textit{zou3-xia4} can be either compounds or just sentence-level phrases. At least four pieces of evidence support this argument.
First of all, there is a phonological difference. The directional element in pa2-shang4 or zou3-xia4 varies in keeping its tone as in its isolated form or only bears a neutral tone as unstressed.

Secondly, VD compounds, as they are perfections, cannot co-occur with progressive aspectual markers, while V-D phrases can. For instance,

(73)a. ??women zheng zai pa2-shang Taishan
    we ZHENGE ZAI climb-up Tai mountain
b. women zheng zai pa2 shang4 Taishan
    we ZHENGE ZAI climb up Tai mountain

‘We are in the process of climbing up to the Tai Mountain.’

Thirdly, correlated to this phonological difference is a difference in meaning. With a stressed form of shang (‘to go up’) or xia (‘to get down’), it lays emphasis on the process of going up or getting down, whereas with an unstressed form, it is inclined to mean merely a result of the first verb pa (‘to climb’) or zou (‘to walk’). Shang or xia function more as adverbs such as ‘up’ or ‘down’ rather than as verbs.

Fourthly, this distinction becomes more significant when shang or xia is preceded by de/du: or when shang or xia is used metaphorically in VR-like compounds. For example,

(74)a. ta shenti tai ruo, pa2 bu shang taishan
    she body too weak climb no go up Tai Mt.

    ‘She is too weak to climb onto the Tai Mt.’
b. ta xianzai meiyou bieren chanfu
she now without others lead by hand

yijing zou\textsuperscript{3} bu xia louti

already walk no get down stairs

‘At present, she is already in such a state that she can not walk down stairs without help.’

c. shudao nan, nan yu shang\textsuperscript{4} qing tian

Shu roads difficult than go up blue sky

‘Shu (kingdom) roads are so rugged that riding on them seems harder than going up the sky.’ (Libo, Tang Dynasty)

d. wo bu xia\textsuperscript{4} diyu shei xia\textsuperscript{4} diyu? (Zhou, Enlai)

I not get down hell who get down hell

‘If I don’t go through the torment, who else should do that?’

In (74a) and (74b), shang and xia convey an obvious sense of result, which is quite different from what we see in (74c) and (74d) sentences in which shang and xia serve as main verbs. This discrepancy is different from what we have seen in VR compounds examples, which are repeated below.

(75a) ta da-si ren le

he beat-dead person LE

‘He’s killed somebody.’

b. ren si le

person dead LE

‘The person is dead/The person died.’
Of course *si* in (75b) sentence can be also interpreted as a process verb instead of a stative verb. But when *shang* and *xia* are used in circumstances including their metaphorical uses in which the following noun phrases do not name location or path, such as in *qu-xia* (fetch-down, 'to take off'), or in *tun-xia* (swallow-down, 'to swallow'), they can only be interpreted as resultative elements instead of potential transitive verbs.

(76)a. \(\text{ta qu-xia/dai-shang le tade yanjing}\)
he take-down/put on-up LE his glasses

‘He took off/put on his glasses.’

b. \(\text{ta zhai-xia le gua zai qiang shang de shuihu}\)
he pick-down LE hang ZAI wall on of kettle

‘He took off the kettle that was hung on the wall.’

c. \(\text{ta budebu tun-xia zhe ke ku guo}\)
he has to swallow-down this CL bitter fruit

‘He has/had to swallow down this bitter nut (bitter result).’

d. \(\text{na jian shi zai ta xin li mai-xia le}\)
that CL matter ZAI he heart in bury-down LE

\textit{chouhen de zhongzi}
hatred of seed

‘That event planted seeds of hatred in his heart.’

e. \(\text{tamen zhongyu zhu-shang le xin fangzi}\)
they finally live-up LE new house

‘They finally managed to live in a new house.’
In addition to *shang* and *xia*, other directional verbs are:

(77)  

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>tin</em></td>
<td>'to enter, into'</td>
</tr>
<tr>
<td><em>chu</em></td>
<td>'to go out, out of'</td>
</tr>
<tr>
<td><em>guo</em></td>
<td>'to cross, across'</td>
</tr>
<tr>
<td><em>hui</em></td>
<td>'to return, back to'</td>
</tr>
<tr>
<td><em>lai</em></td>
<td>'to come'</td>
</tr>
<tr>
<td><em>qu</em></td>
<td>'to go'</td>
</tr>
</tbody>
</table>

The choice of directional verbs goes in accordance with the internal directional sense of the first verb, which is called 'built-in direction' by Lu (1977). For example, *jiang* 'to descend' goes with *xia* 'down', and *sheng* 'to rise' is compatible with *shang* 'up', not the other way around.

### 3.5.2 Implications of Exchanging Positions in VD Compounds

The constituents of VD compounds can occur in both orders. Some pairs of examples are:

(78)a. *jiang-xia*  
to descend-down. 'to descend'

b. *xia-jiang*  
down-to descend, 'to decrease'

(79)a. *die-xia*  
to fall-down, 'to fall down from'

b. *xia-die*  
down-to fall, 'to drop, to decrease'

(80)a. *fang-xia*  
to place-down, 'to lay down'

b. *xia-fang*  
down-to place, 'to demote to the countryside, to lay off'

(81)a. *dun-xia*  
to squat-down, 'to squat'

b. *xia-dun*  
down-to squat, 'to squat'

(82)a. *sheng-shang*  
to rise-up, 'to rise'
b. *shang-sheng* up-to rise, 'to rise, to increase'

(83)a. *hua-xia* to slide-down, 'to slide down'

b. *xia-hua* down-to slide, 'to slide, to decrease'

(84)a. *gan-shang* to catch-up, 'to catch up'

b. *shang-gan* up-to catch, 'to go after, to offer'

(85)a. *fa-chu* to launch-out, 'to send out'

b. *chü-fa* go out-to launch, 'to start off'

(86)a. *shou-chu* to sell-out, 'to sell out'

b. *chü-shou* out-to sell, 'to sell'

(87)a. *xian-chu* to appear-out, 'to show appearance of'

b. *chu-xian* out-to appear 'to appear, to emerge'

(88)a. *zu-chu* to rent-out, 'to rent out'

b. *chu-zu* out-to rent, 'to rent out'

(89)a. *chan-chu* to produce-out, 'to produce'

b. *chu-chan* out-to produce, 'to produce'

(90)a. *du-guo* to spend-pass, 'to spend'

b. *guo-du* pass-to cross, 'to transit'

(91)a. *shou-hui* to collect-back, 'to take back'

b. *hui-shou* back-to collect, 'to recall, to recycle'

(92)a. *dao-lai* to arrive-to come, 'to arrive'

b. *lai-dao* to come-to arrive, 'to arrive'

(93)a. *chu-qu* to remove-to go, 'to remove, to get rid of'

b. *qu-chu* to go-to remove, 'to remove'
These are very interesting pairs. When directional words are in the second position, they can describe direction as well as result. But when they occur in the first position, they denote direction and manner of the second verb. We can see that the difference between the first and second position in a two-morpheme verbal compound plays an important role. To be more accurate, the position has its own semantics that contributes to the whole meaning of a V-V compound. So far, we have seen that intransitive or stative verbs in the second position describe the result of actions named by verbs in the first position, which are normally process and action verbs. Directional verbs in the second position denote direction as well as result. When directional verbs occur in the first position, however, the meaning is different. They indicate the direction as well as manner of verbs that occur in the second position, which are usually motion & manner verbs. It will be intriguing to further explore the difference between VR/VD compounds and compounds composed of D-V. Of course, not only directional verbs can occur in the position of D. There are also other manner verbs. This type of compound is named as MV compounds (surbordinate-V in traditional terms) and will be discussed in detail in chapter 7.

3.6 Conclusion

In this chapter, I have described the characteristics and subclasses of VR compounds. I have stated that VR compounds in nature are perfective and are not compatible with progressive aspectual markers. VR compounds can by and large be classified into three major types: Agent-Resultative, Patient-Resultative, and Process-Resultative. The R elements in the first two types are mostly adjectives or intransitive
verbs. The R elements in the third type are mostly grammatical particles indicating the phase of action and achievement of the action. Agent-Resultative compounds are in nature intransitive. The exceptions are the V-sheng/ying ('to win') verbs. Patient-Resultative compounds are transitive, and when occurring in passive constructions very often a passive voice marker BEI has to be present. Process-Resultative compounds are transitive too, but their objects can often be omitted. When occurring in passive constructions, very often no passive marker BEI is necessary. As far as which constituent is critical in determining the VR compound's transitivity, I have shown a hierarchy. namely, the subcategory of the V element has to be considered first. If the V element belongs to the jil-verbs, then the V element is the decisive element. Otherwise, it is the R element that determines the transitivity. In addition, I have also discussed a minor VR type—Location-Resultative and Agent-Resultative with middle-voice V elements.

1 But you can say: wo zheng xi-hao yifu zhunbei zuo-fan.
I ZHENG wash-well clothes prepare cook-rice
ta lai le he come LE
‘While I just finished washing clothes and was about to cook, he came.’
The aspectual marker ZHENG here actually marks zhunbei zuo-fan instead of xi-hao.

2 It is linguistically possible for sentence (14a) to have another interpretation:

   ta da si - ren le
he beat dead person LE
‘He’s beaten dead people.’
But in such a case, there will be a phonological contrast, i.e. si3 will get extra stress. Such an interpretation does not make much sense in reality.

3 The two examples wo lei4-si3 le and wo fei1 da3-si3 ta1 bu4 ke3 are from Dr. Lilly Chen.
4.1 Introduction

Compounds of the form VN can be either verbal (hereinafter V/VQ, namely a verbal compound comprised of verb-plus-object) or nominal (hereinafter N/VmodN). In the nominal compound comprised of verb+noun constituents, the verb constituent is the modifier of the noun constituent. There are also a few adjectival and adverbial compounds with the form VN; they will not be treated here. Although the focus of the present study is on verbal Chinese compounds, it is necessary to distinguish verbal VN compounds from nominal VN compounds as well as the other types.

Examples of nominal VN compounds (N/VN) are:

(1) 
\begin{align*}
\text{ling3-shi4} & \quad \text{to lead-matters} \quad \text{`consul'} \\
\text{jiao4-shi1} & \quad \text{to teach-teacher} \quad \text{`teacher'} \\
\text{fei1-jil} & \quad \text{to fly-machine} \quad \text{`airplane'} \\
\text{shai4-tai2} & \quad \text{to bask-platform} \quad \text{`flat roof for drying clothes, etc.'}
\end{align*}

Examples of verbal VN compounds are:

(2) 
\begin{align*}
\text{xi3-zao3} & \quad \text{to wash-bath} \quad \text{`to take a shower'} \\
\text{huai2-yi2} & \quad \text{to hold-doubt} \quad \text{`to doubt'} \\
\text{n ao4-bing4} & \quad \text{to suffer from-illness} \quad \text{`to fall ill'}
\end{align*}
Examples of adjectival VN compound are:

(3) \(de2-yi4\) to gain-mind 'elated'
\(que1-de2\) to lack-virtue 'mean'
\(zhi2-qian2\) to be worth-money 'valuable'

Examples of adverbial VN compounds are shown in (4). Although formally these examples are VN forms, they are used as adverbials in sentences.

(4) \(mai2-tou2\) to bury-head 'by immersing oneself in'
\(bian4-far3\) to change-way 'using different ways'

Of course, not every combination of verb and noun can form a VN compound. There are strict constraints on what VN combinations can form a compound that will be accepted. In addition, as indicated above, it is clear that the presence of a noun component or a verb component does not make the compound a noun or a verb. Further exploration of the properties of a compound’s components and the internal relationships between the components may shed some light on the properties of a compound as a whole.

The goal of this chapter is to investigate and find out what kind of nominal and verbal VN compounds are allowed, i.e. what are the cognitive patterns that a native speaker follows when producing a new VN compound, what VN forms are understandable and acceptable and how they make sense to native speakers. According to cognitive and functional linguistics, "the nature of language structure and use is not
entirely arbitrary but motivated in many cases by the general cognitive processes of analogical reasonings" (Hiraga, 1998). The goal is, then, to find out what are the underlying motivating patterns that govern VN compounds in Mandarin Chinese\(^1\) and the distinctions between the various patterns.

I will propose that VN compounds follow the principle of iconicity between their semantic and syntactic properties. "In cognitive terms, iconicity (i.e., images and diagrams in Peircean terminology) deals with a mapping between form (structure) and meaning (cf. Lakoff and Turner 1989) in various degrees of abstraction, from concrete attributive resemblance to abstract relational analogy." (Hiraga, 1998) As to VN compounds in Chinese, that means that there is a tendency that the looser the VN components are, the more transparent a compound's meaning is.

I will leave the discussion of the compound character of verbal VN forms to Section 4.3. Section 4.2 focuses on the subtypes of nominal VN compounds and their characteristics.

4.2 Nominal VN Compounds

There has been much argument as to what VN forms should be counted as compounds, as opposed to VN phrases. But there is often no doubt that a VN sequence is a compound because in most of the cases, the meaning of a nominal VN compound is opaque, and very often the structure of such a compound is exocentric.

4.2.1 Categories of Nominal VN Compounds
A distinction can be drawn among the nominal VN compounds based on whether the noun component is the center of the construction. This center is meant to be a semantic center, which also determines the compound’s grammatical category. This division among nominal VN compounds is therefore a division between exocentric and endocentric as discussed in Chao (1965). I will simply call these two subcategories the N/VO exocentric type, namely an exocentric nominal compound with its two constituents in a verb-object relationship, and the N/VmodN type, namely, a nominal compound with the verb constituent functioning as the modifier of the noun constituent. The reason for specifying N/VO exocentric type is that there are some N/VO compounds that are endocentric, i.e. the noun constituent functions as the head of the compound, even though it also appears to be in an object relation (as well as an modification relation) to the verb (see below).

**N/VO Exocentric Subtype**

Compounds of the N/VO exocentric type do not have a center. For such a compound, a process conveyed by a verb-object structure is typically lexicalized to refer to a person or a concrete object.

This exocentric V-O construction is not productive. There are only a small number of such compounds in Chinese. One group of them refer to human beings who perform the V-O process. The compounds in (5) are example of nouns of human beings named by V-O compounds:

(5)  

\[
\begin{align*}
\text{ling3-shi(4)} & \quad \text{to lead-matters} \\
\text{ling3-du4i} & \quad \text{to lead-team}
\end{align*}
\]

‘consul’

‘the leader of a team/group’
<table>
<thead>
<tr>
<th>Character</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>jian1-gong1</td>
<td>to supervise-work; 'supervisor (such as in construction fields)'</td>
</tr>
<tr>
<td>bang1-gong1</td>
<td>to help-work; 'a temporary worker, a helper'</td>
</tr>
<tr>
<td>bang1-chu2</td>
<td>to help-cook; 'a person who helps cook'</td>
</tr>
<tr>
<td>sil-yi2</td>
<td>to be in charge-ceremony; 'master of ceremonies'</td>
</tr>
<tr>
<td>sil-ling4</td>
<td>to be in charge-order; 'commander'</td>
</tr>
<tr>
<td>sil-jil</td>
<td>to be in charge-machine; 'driver'</td>
</tr>
<tr>
<td>sil-lu2</td>
<td>to be in charge-stove; 'fireman'</td>
</tr>
<tr>
<td>sil-yao4</td>
<td>to be in charge-medicine; 'pharmacist'</td>
</tr>
<tr>
<td>jiang1-jun1</td>
<td>to lead-army; 'a general'</td>
</tr>
<tr>
<td>guan3-jia1</td>
<td>to supervise-house; 'housekeeper'</td>
</tr>
<tr>
<td>gan4-shi</td>
<td>to do-things; 'a secretary in charge of something'</td>
</tr>
<tr>
<td>zhi1-yin1</td>
<td>to know-voice; 'a close friend who shares the same ideas'</td>
</tr>
<tr>
<td>zhi1-ji3</td>
<td>to know-self; 'close friend'</td>
</tr>
</tbody>
</table>

Some of the nouns above, but not all of them, bear a neutral tone on the noun constituent, such as ling3-shi 'consul', gan4-shi 'a secretary in charge of some aspect'.

Some of the above sometimes also occur as verb phrases in certain contexts, such as jian1-gong1 'supervisor', or ling3-dui4 to lead-team 'team lead'. For example,

(6) ta lai zher jian1-gong1

he come here supervise work

'He is here for supervising the work.'

(7) zhei ci daibiaotuan you shei ling3-dui4

this time delegation by who lead team
‘Who leads the team this time?’

The form *jiang1-jun1* ‘to lead army’ can also be used as a verbal compound which has the idiomatic meaning of ‘to checkmate’ in playing chess and can also be metaphorically extended to mean ‘to put somebody on the spot, to embarrass’. For example,

(8)a. *jiang1-jun1* ! to lead-army ‘to checkmate!’

b. *jintian zai hui shang laowu bei*
   today at meeting on Laowu Passive

*jiang le yi jun*
   embarrass LE one army

‘Today at the meeting, Laowu was checkmated (i.e. challenged and embarrassed).’

Another group of N/VO compounds refer to concrete objects that are made for the purpose of performing the V-O process. The compounds in (9) are examples of nouns of *concrete objects* named by V-O compounds:

(9) *kao4-bei4* to lean-back ‘back cushion’
    *gai4-tou* to cover-head ‘bridal veil’
    *ding1-zhen1* to push-needle ‘thimble’
    *hu4-wan4* to protect-wrist ‘wrist-pad’
    *hu4-xi1* to protect-knee ‘kneepad’
    *zhen3-tou* to rest head on-head ‘pillow’
As we can see, in either the human being group or the concrete object group of N/VO compounds, neither of the constituents of these V-O compounds functions as the center in terms of the interpretation of the compound. All of them have specialized meanings in the sense that such a compound, although it has a verb-object structure, does not name a process but a specific entity that either performs this process or is used for the purpose of performing the process. The N/VO construction is not productive and these compounds are lexemes and must be learned as units.

**N/VmodN Subtypes**

The N/VmodN type, which has the noun component as the center, can be subdivided into three smaller groups according to the way verb component modifies the noun component, i.e. based on the semantic relations between V and N components: the first group can be interpreted as ‘Noun-that-Vs’ (i.e. the noun identifies the agent); the second group can be interpreted as ‘Noun-for/of-Ving’ (i.e. the noun identifies instrument, purpose, manner etc.); the third group can be interpreted as ‘Noun-that-has-been-Ved’ (i.e. the noun identifies the patient).

A. **‘Noun-that-Vs’ subtype:**

(10) *fei1-jil* to fly-machine ‘airplane’

*fei1-chuan2* to fly-ship ‘airship’

*fei1-dan4* to fly-bomb ‘missile’ (a relatively new formation)

*fei1-chong2* to fly-insect ‘winged insect’

*you2-ke4* to travel-guest ‘visitor’
\[\text{you2-ting3} \quad \text{to wander-boat} \quad \text{‘yacht’}\]

\[\text{jiao4-shi1} \quad \text{to teach-teacher} \quad \text{‘teacher’}\]

\[\text{jiao4-lu2} \quad \text{to bray-donkey} \quad \text{‘donkey that shouts’}\]

\[\text{hu4-shi4} \quad \text{to protect-person} \quad \text{‘nurse’}\]

\[\text{wei4-bing1} \quad \text{to protect-soldier} \quad \text{‘guard’}\]

All the above examples can be paraphrased as relative clauses in which the noun is the agent of the verb. So this type is named Verb-Agent type. For example, \text{fei2-chong2} (to fly-insect) ‘winged insect’ can be interpreted as

\[(11) \quad \text{‘an insect that flies’ or ‘flying insect’}.\]

\[\text{B. ‘Noun-for/of-Ving’ subtype:}\]

\[(12) \quad \text{shai4-tai2} \quad \text{to bask-platform} \quad \text{‘flat roof for drying clothes, etc’}\]

\[\text{shi4-jiao3} \quad \text{to look-angle} \quad \text{‘visual angle’}\]

\[\text{jiao4-ju4} \quad \text{to teach-tools} \quad \text{‘teaching aid’}\]

\[\text{jiao4-an4} \quad \text{to teach-plan} \quad \text{‘teaching plan’}\]

\[\text{su4-she4} \quad \text{to spend night-living place ‘dorm’}\]

\[\text{jing4-yi4} \quad \text{to respect-idea} \quad \text{‘respect’}\]

\[\text{ran2-liao4} \quad \text{to ignite-material} \quad \text{‘fuels’}\]

\[\text{ti2-bao2} \quad \text{to carry-bag} \quad \text{‘handbag’}\]

\[\text{bu3-yao4} \quad \text{to nourish-medicine} \quad \text{‘tonic’}\]
The boundary between (A) and (B) sometimes is not clear. For instance, ran2-liao4 (to ignite-material) 'fuels' or bu3-yao4 (to nourish-medicine) 'tonic' may also be considered to belong to (A) by some scholars. And, in general, the examples under Noun-for/of-Ving subtype are different from the ones 'Noun-that-Vs' subtype. Instead of having a Agent-Verb relationship, the noun element participates in a verb-instrument relationship. So this type is named as Verb-Instrument type. For example, shai4-tai2 (sunbathe-platform) can be paraphrased as:

(13) 'a platform that is used for drying clothes etc.'

and shi4-jiao3 'view-angle' can be read as:

(14) 'an angle of viewing' or 'an angle from which one looks'

C. **Noun-that-has-been-Ved** subtype:

(15) chao3-mian4 to fry-noodle ‘fried noodles’

    zha2-jil to fry-chicken ‘fried chicken’

    pao4-cai4 to immerse-vegetable ‘pickles’

    ke4long2-ren2 to clone-person ‘cloned human being’ (relatively new formation)

    cun2-kuan3 to save-money ‘bank savings’

    xun1-rou4 to smoke-meat ‘smoked meat’

    kan1-wu4 to publish-material ‘printed materials’
Examples in this group have a Verb-Object relationship between their components, as shown in the translations. So this type is named **Verb-Object** type. This is what I have mentioned as endocentric N/VO type at the beginning paragraph of section 4.2.1.

4.2.2 How to Identify N/VmodN Compound

**A Special Member of N**

The semantics underlying all N/VmodN compounds is analogous to that of [M(odifier) N] discussed in 2.3.3 and can be clarified by the comparison and contrast between [M N] and [M de N] again.

Zhiwei Lu (1976) and many other linguists have discussed the difference between [Modifier N] (i.e. [M N]) and [Modifier de N] (i.e. [M de N]) (Lu:21) in Chinese. [M N] and [M de N] can mean very different things, for example, *heil-ban3* black-board ‘blackboard’ and *heil de ban3* black-of-board ‘black board’. The first one is a compound while the second is a phrase. This difference applies to VN and V-de-N as well. V-de-N is just an N modified by V, whereas the N/VmodN compound is a specific kind of N which is not necessarily characterized by V---just as ‘blackboard’ is a specific kind of board but ‘blackboard’ is not necessarily black.

[M N] and [M de N] share the properties of modification in general. That is to say, both of them indicate that the generic N element is delimited by the M element. But they differ in that in [M de N], N is characterized by M and [M de N] necessarily indicates a subset of the generic N. On the contrary, in [M N], N is not necessarily characterized by M and [M N] is a special member of N. In some cases, [M N] does not
even indicate a member of N, e.g. hualsheng1mi3 peanut-rice ‘peanut seed’ is not a subset of rice.

In the case of N/VmodN compounds, most of them indicate a special kind of N. For instance, chao3-mian4 to fry-noodle ‘fried noodle’ is a special kind of noodle.

**Semantically Natural Modification**

In discussing N/VmodN compounds, Telee Chi (1984) observes that the relationship between the two components is characterized by the verb component classifying and categorizing the second constituent, i.e. the noun component in a semantically natural way. I would like to refine his point here.

If we look at the verb elements modifying the noun constituents in the above N/VmodN compounds, it becomes clear that it is not the differences between the verb elements themselves that are responsible for the different subtypes of N/VmodN compounds. For example, it is not the difference between feil (‘to fly’) in feil-jil ‘airplane’, shai4 (‘to bask’) in shai4-tai2 ‘a platform for drying clothes etc.’ and chao3 (‘to fry’) in chao3-mian4 ‘fried noodle’ that makes the three compounds three different types. Instead, it is how the verb elements modify the noun elements, i.e. the semantic relationship between the verb and noun elements --- either a Verb-Agent relationship, a Verb-Instrument, or Verb-Patient relationship. In fact, it is the noun element that contributes by functioning as Agent, Instrument or Object in the action of the verb. And because of that choice, the nominal compound N/VmodN is ‘a certain or special kind of N’.

**Why a Modification Reading?**
What forms can have modification reading? Why can N/VmodN forms be interpreted as exhibiting a modification relationship between the constituents? The answer in the case of the N/V-Agent and the N/V-Instrument compounds is straightforward: these two types of VN compounds can only have one modification reading. The reason is that, in general, V-Agent, and V-Instrument sequences are unacceptable syntactic structures in Chinese. The canonical order for Verb and Agent is Agent-Verb, and that for Verb and Instrument is Preposition-Instrument-Verb. Consider examples in (16-17).

(16)a.  lu2     jiao4
       donkey     shout
       'Donkey shouts.'
b.  jiao4-lu2     shout-donkey
       'loud donkey'
       *'Donkey shouts.'

(17)a.  *qie1  dao1     cut-knife     'to cut with knife'
b.  yong4  dao1  qie1      use-knife-cut     'to cut with knife'

Sentence (16a) is an example of the canonical Agent-Verb order in Chinese. Sentence (16b) shows that Verb-Agent cannot have an Agent-Verb reading. Sentence (17a) shows that Verb-Instrument sequence cannot have any interpretation of an action with the help of an instrument; (17b) indicates the canonical order to express an action with the help of an instrument.
Therefore, in such cases, V-Agent or V-Instrument can only have one interpretation, that is the modification relationship between the verb elements and the noun elements. This relationship also helps identify the compound nature of V-Agent and V-Instrument compounds.

As for N/V-Object type, the situation is more complicated. V-Object is in accordance with the syntactic as well as the compounding Verb-Object canonical order, so, in theory, there is a possibility for three readings of such a VN form: modification relationship, verbal V-O phrase and/or verbal V-O compound. For example, the sequence ti2-baol can be a nominal N/VmodN compound meaning ‘handbag’ or it can be a verbal phrase ‘to carry a bag’. So do diao4-deng1 ‘hanging lamp’ vs. ‘to hang a lamp’, and zha2-ji1 ‘fried chicken’ vs. ‘to fry a chicken’ etc. This issue is discussed in detail in the last section of 4.2.3.

To sum up, Verb-Agent and Verb-Instrument compounds only have a modification reading. In contrast, the Verb-Object type can have interpretations of verbal phrase or verbal compound in addition to more than one modification reading.

*Separability of N/VmodN Compounds*

In terms of separability, N/VmodN compounds can be classified into two groups: in one group, the components cannot be separated; in another group, de ‘of’ can be inserted in between the components. Most of the inseparable compounds at least have one bound morpheme as a component. The bound element is underlined in the following examples:

(18)  su4-she4 to spend night-living place ‘dorm’
Yet having a bound morpheme does not guarantee that a compound is inseparable. Examples of separable compounds are:

(19)a.  
\[ \text{cun2-kuan3} \] to deposit-money  
\[ \text{hui2-dian4} \] to return-telegraph  
‘bank savings’  
‘wire reply’

b.  
\[ \text{cun2 de kuan3} \] to deposit-of-money  
\[ \text{hui2 de dian4} \] to return-of-telegraph  
‘the money deposited’  
‘the telegraph reply’

As we have discussed, ‘V de N’ and ‘VN’ mean different things, just as ‘a red cap’ means ‘any cap that is red’ while ‘a red-cap’ is not necessarily ‘red’. Consider (20-21). The unacceptability of (20b) and (21b) shows the difference.

(20)a.  
\[ \text{wo you hen duo cun2-kuan3} \]  
I have very much deposit-money  
‘I have a lot of bank savings.’

b.  
\[ \ast \text{wo you hen duo cun2 de kuan3} \]  
I have very much deposit of money

(21)a.  
\[ \text{wo xiang kan Zhangsan de hui2-dian4} \]  
I want read Zhangsan of return-telegraph
‘I want to read Zhangsan’s wire reply.’

b. * wo xiang kan Zhangsan de hui2 de dian4

I want read Zhangsan of return of telegraph

**Interrelation between Modification and Separability**

In the above examples, it seems that it is a random phenomenon that some N/VmodN can be separated and some cannot. As a matter of fact, there are some correlations between the characteristics of N/VmodN compounds and the separability of their constituents. That is to say, among the three sub-categories of N/VmodN compounds, the N/Verb-Object subtype is more likely to be separable (except ji4-ri4).

In Chinese, any V-O form can be potentially expressed in V-de-O form in a proper context. The underlying reason is that V-de-O is the canonical order for a Chinese relative clause, associated with the V-O form. Consider example (22). The form chil de fan4 in (22b) is a relative clause associated with chil-fan4 in (22a).

(22)a. wo yao chil-fan4

I want eat-rice

‘I want to have the meal (now).’

b. wo chi de yan bi ni chi de fan dou duo

I eat of salt than you eat of rice even more

‘The (amount of) salt I have eaten is even more than the amount of meals you have eaten (meaning I’m more experienced and senior.)’
The correlation between V-O form and the V-de-O form usually fails to be acceptable when O functions as an instrument specifically as a body part. For example,

(23)a. *fu2-shou3 to hold-hand \(\text{‘handrail; armrest’}\)
b. \*fu2 de shou3 to hold-of-hand

(24)a. zhen3-tou2 to rest on-head \(\text{‘pillow’}\)
b. \*zhen3 de tou2 to rest on-of-head

The question of V-de-O forms for N/VO \textit{exocentric} compounds does not arise because it does not make sense to translate such compounds into V-de-O form, since such an N/VO as a whole is not a specific kind of N and O is not the head in N/VO.

In Chinese, it is possible to have a sequence of Verb-de-Agent provided that the verb is more than one morpheme, such as \textit{kul qi4 de wo3} (to cry-of-I) ‘a crying me’ vs. \textit{*kul de wo3} (to cry-of-I). So is with the Verb-Instrument sequence. It is not acceptable for a strict one-morpheme verb to occur in Verb-de-Agent or Verb-de-Instrument forms.

Figure 4.1 characterizes N/VmodN compounds in two dimensions: modification relationship between the compound constituents and their separability. It also shows the interrelation between modification and separability. In the figure, verbal V-O compounds are also listed (at the right) for the sake of comparison to the N/VmodN compounds.
<table>
<thead>
<tr>
<th>TIGHT</th>
<th>LOOSE</th>
</tr>
</thead>
</table>
| **N/Verb-Instrument**  
e.g. ran2-liao4  
‘fuel’ | **V/V-O**  
compound or phrase  
e.g. chil-fan4  
‘to have a meal’ |
| **N/Verb-Agent**  
e.g. hu4-shi4  
‘nurse’ | **N/V-Object**  
e.g. zha2-jil  
‘fried chicken’ or  
‘to fry chicken’ |
| **N/Verb-Object**  
e.g. kan1-wu4  
‘printed material’ | **N/V-Obj & N/V-Instrument**  
e.g. ti2-bao1  
‘handbag’ or  
‘to carry a bag’ |

**Only modifying reading**

**Question-ably separable**

**Separable VN’s: de insertion**

**Alternative modifying and V-O readings**

**No modification reading. Only V-O reading, as compound or phrase**

---

Figure 4.1 Interrelation between modification and separability of the constituents of N/VmodN compounds
4.2.3 Determining Whether Verb-Obj Forms Have a Modification Reading

*Necessity of ‘de’ as a criterion for non-modification VN*

It is necessary to explore further the criteria for determining whether a VN form qualifies as an N/VmodN compound and which V-Object forms cannot be interpreted as an N/VmodN.

As stated above, **N/V-Agent** and **N/V-Instrument** compounds allow a single semantic interpretation, such as *su4-she4* ‘dorm’ (V-Instrument), *you2-ke4* ‘visitor’ (V-Agent), etc. The **N/V-Object** type can have more than one interpretation such as *ti2-bao1* (to lift-bag, ‘handbag’ vs. ‘to carry a bag’) and *ti2-qin2* (to lift-musical instrument, ‘member of the violin family’ vs ‘to carry a violin’ (rare sense)).

However, it is important to note that not every Verb-Object form can have an N/VmodN interpretation. Many of them only allow verbal Verb-Object interpretations, which can be either verbal VO compounds or simply VN phrases, such as *chi1-fan4* ‘to have a meal’ as a compound and *zhong4-cai4* ‘to plant vegetables’ as a phrase. For those that only allow verbal Verb-Object interpretations, in order to achieve a modifying sense, a *de* ‘of’ must be inserted in between as shown by (22b).

In terms of achieving a modification relationship between a Verb element and a noun element, Figure 1 shows that there is a scale. **Verb-Agent** and **Verb-Instrument** forms name a modification relationship without *de* ‘of’. **N/V-Object** compounds have different modification relationships with or without *de*, and **verbal** Verb-Object forms require a *de*. This scale actually shows the tightness of V and N components in accordance with the modifying relationship between the two components.
A V-Object form can indicate an entity or a process. When the relationship between the verb and the noun is such that only the means of inserting *de* can be used to signify a modifying relationship between the two parts, there does not exist a modifying relationship in essence between the V and the N. In such cases, the semantics of verbs and nouns is such that without *de*, only an action verb-object relationship can be recognized. Furthermore, this kind of modifying relationship between verbs and nouns by means of *de* is such that it still keeps the semantics of the process denoted by Verb-object, although it has a surface of modifying structure. Lu (1976) makes a very brief comparison between the following two sentences:

(25) *the shi run de rou4, bu shi kao3 de* (Lu, 1976:38)

this be smoke of meat not be roast de

'This is smoked meat, not roasted.'

(26) *ta jintian run de rou4 bi zuo tian duo*

he today smoke de meat than yesterday more

'The meat he smoked today exceeds (that of) yesterday. i.e. He smoked more meat than yesterday.'

While both sentences (25) and (26) have a modifying structure *run de rou4*, the one in (25) is different from that in (26) in that *run de rou4* in (26) denotes a process performed by 'he'. Lu says (26)'s modifying structure is 'transformed' from its original V-O semantics.

**Difference between N/VmodN and V-de-N**
Consider the examples in (27).

(27)a. wo zuotian mai de pao4-cai4 zai nar?
I yesterday buy of soak-dish ZAI where

‘Where is the pickle I bought yesterday?’

b. * wo zuotian mai de pao4 de cai4 zai nar?
I yesterday buy of soak of dish ZAI where

c. wo zuotian pao4 de cai4 zai4 nar?
I yesterday soak of dish ZAI where

‘Where is the vegetable I soaked?’

d. * wo zuotian pao4-cai4 zai4 nar?
I yesterday soak -dish ZAI where

The unacceptability of (27b) shows the fact that pao4-cai4 and pao4 de cai4 have a difference and cannot always occur in the same context. pao4-cai4 is a special kind of dish while pao4 de cai4 is not.

The contrast between (27c) and (27d) shows that, in a structure like (27d), in the position following zuotian ‘yesterday’, just a noun or a noun phrase does not suffice; instead, a relative clause with a verb component is required, as shown by (27c). In a word, pao4 in (27c) names an action. The result of [V de N], pao4 de cai4 is not a special kind of dish. Instead, it refers to the noun that has been affected by the action pao4. In the case of (27c), pao4 de cai4 is expressed to contrast the dishes that I have fried, or I have bought, etc. The stress of the [V de N] structure is put on the verb element. It is about the action that affects the Noun. It describes a process.
Product-sense vs. Pre-Process Modification of V-de-N

Among V-de-N constructions, I propose that in the modifying relationship between a verb and an object two types can be differentiated: product-sense modifying, and pre-processing modifying. One pair of examples can help illustrate this point: *zhu2 de jil* and *chil de rou4*. Those V-de-N constructions are identified as the product-sense modification type, which can be abbreviated to VN and still mean a noun, such as (28a), which names a product of frying. In contrast, those that cannot indicate a noun when abbreviated to a VN construction are called pre-processing modification type, such as (29a), which names something entity that is ready for eating.

(28a. *zhu2 de jil* to fry-of-chicken ‘fried chicken’
b. *zhu2-jil* to fry-chicken ‘fried chicken’
or ‘to fry chicken’

(29a. *chil de rou4* to eat-of-meat ‘meat for eating’
b. *chil rou4* to eat-meat ‘to eat meat’

**‘eaten meat’ or ‘meat for eating’**

The result is that for the product-modifying, a new material denoted by the N/VmodN after the process of V affecting N comes into being, i.e. a specific kind of entity indicated by the Noun element comes into being. In (28a), ‘fried chicken’
represents a tangible material that comes into being. The Noun in the product-modification type is being modified and restricted in a certain way.

In (29a), no special kind of meat such as chil de rou4 comes into being. For example, wo chi de rou ‘the meat I have eaten’ is not a specific kind of rou ‘meat’, under the category of generic rou. There does not exist a certain kind of meat that is called ‘(wo) chi de rou’. No new material comes into being. Rather the sequence is a description of a process. The meat is not created, but will be destroyed.

The produce-sense [V de N] names a Noun resulting from [V de N], while that of the pre-processing-sense type of [V de N] names a noun that can be consumed in specific ways. In a word, the standards of modifying/classifying the noun element by the verb between the two types are different. Constructions like he1 shui3 ‘to drink water’, zhong4 cai4 ‘to plant vegetables’, shal ren2 ‘to kill people’, etc. cannot be interpreted as nominal forms. These constructions do not name an entity that is produced, nor an entity destroyed.

*The Iconicity Principle and my Hypothesis*

What underlies the scale shown in Figure 4.1 is a version of iconism in that tightness in form corresponds to tightness in meaning. From N/VmodN, to product-modification V-de-N, and to pre-processing-modification V-de-N, the principle follows. It is just like kinship terms in Chinese. wo3 jie3jie ‘my sister’ may optionally have the possession marker de ‘of’, while wo3 de gou3 ‘my dog’ obligatorily has the de particle. This is because the relationship between ‘me’ and ‘sister’ is perceived as closer than that between ‘me’ and ‘my dog’. The closeness in semantics can help explain the closeness in
form. This being the case, the closeness in form also sheds light on the closeness in semantics. From a functional point of view, any form difference would bear some difference in meaning. Speakers choose different forms to convey what they perceive as different.

As to which VN combinations form a produce-sense [V de N] type and which form a pre-processing type depends on the semantics of each component and the possible relations as well as the closeness between the verb and noun components based on each component's semantics. Here I want to emphasize the significance of the interaction between the two components. It is not possible to examine a list of verbs or nouns and predict that these verbs or nouns can only form this or that kind of VN form. For example, *chil-fan4 'to have a meal' cannot be interpreted as having a modifying relationship, but *chil-xiang4 (eat-appearance) 'the way one eats' can only be interpreted as a modifying structure in which xiang4 is inedible. The same difference holds for example pairs like:

(30)  

\[
\begin{array}{lll}
\text{mai}4 \text{ cai}4 & \text{to sell-vegetable} & \text{to sell vegetables'} \\
\text{(does not mean) } & \text{*vegetable sold'} \\
\text{mai}4-fang1 & \text{to sell-party} & \text{the selling party, seller'} \\
\text{pao}4 \text{ shui}4 & \text{to soak-water} & \text{to soak sth. with water'} \\
\text{(does not mean) } & \text{*water for soaking sth.'} \\
\text{pao}4-cai4 & \text{to soak-vegetable} & \text{pickles'} \\
\text{pao}4 \text{ cai}4 & \text{to soak-vegetable} & \text{to soak vegetable'} \\
\text{sha1 ren2} & \text{to kill-people} & \text{to kill people'}
\end{array}
\]
(does not mean) *murdered people*

si3-ren2 to die-people ‘dead people’
da3 ren2 to beat-people ‘to beat people’

(does not mean) *people beaten*

ke4long2-ren2 to clone-people ‘cloned human being’
xia4 mian4 down, to put in-noodle ‘to boil noodles’

(does not mean) *boiled noodles*

chao3-mian4 to fry-noodle ‘fried noodles’
chao3 mian4 to fry-noodle ‘to fry noodles’
zheng1liu2-shui3 to distill-water ‘distilled water’
he1 shui3 to drink-water ‘to drink water’

(does not mean) *water for drinking*

yin3-shui3 to drink-water ‘to drink water’
yin3yong4-shui3 to drink and use-water ‘drinking water/water for drinking’

There are many more such examples. What we can conclude is that neither the verb nor the noun element is the determining factor of whether a VN form can be a modifier-modified structure. It is indeed the mutual relationship between the verb and the noun, based on the semantics of each, along with other factors, that determines what a VN form will be.

To say that the determining factor is the relationship between VN components does not necessarily lead to a conclusion that nothing is predictable from the meanings of
the components. After all, the relationship is based on the meanings of the components. Every verb in Mandarin Chinese can be seen to have its own semantic field in a semantic network. A transitive verb necessarily has its own typical objects in this field that match the verb’s semantics neatly. I would like to hypothesize that when a verb is followed by one of its typical objects that are closely associated with the semantics of the verb, it is unlikely for the VN form to be a noun, except in the case of cooking verbs in Chinese. For instance, ren2 ‘person’ is a typical object of shal ‘to kill’, and shal ren2 is not likely to be a nominal compound. On the contrary, if a verb is followed by a noun which would otherwise be an atypical object, then there is a greater chance for the VN form to be a nominal compound, e.g. chil-xiang4 to eat-appearance ‘the way one eats’. This is because the more verbiness a VN form denotes, the less likely it has nominal properties. Verbs with typical objects definitely demonstrate strong verbiness seen in events and processes: therefore, such VN forms tend to lack nouny properties. Of course, we have shown in Section 4.2.1, that the N/VO Exocentric Subtype can be used to name people or things. But these are after all rare and non-productive. This hypothesis is illustrated as another continuum that exists among VN forms, which tries to predict what kind of VN forms are likely to be nominal and which are likely to be verbal. Figure 2 shows the Likelihood for a VN form to be a noun.

Although it is hard to predict the category of a VN compound from the grammatical categories of its components, as discussed in Huang (1998), we have shown that there are indications that can help make distinction between verbal VN and nominal VN compounds.
To sum up, the classificatory and non-process classification features constitute the core semantics of whether a verb-noun form appropriately forms an N/VmodN nominal compound. Cognitively, when a process has to be involved in a V-N form, a native speaker will not consider this VN form as a nominal compound. A product-sense modification relationship of a noun has to imply that a special kind of entity comes into being.

It is important to note that the nominal-ness of VO compounds that we are exploring here is different from the nominalization of verbal VO compounds--something like a gerund form of a verb *blackmail-ing* in English--, which I will discuss in Section 4.6. Examples are *guan1-xin1* ‘to care’, *huai2-yi2* ‘to doubt’, *liu2-yi4* ‘to pay attention’. All of them can be used as nouns in certain contexts just as the gerund forms of English verbs. In contrast, many of the nominal VO compounds we are discussing in this section represent historical nominalizations. As illustrated in the whole section, a nominal VO form is an independent compound whose meaning is different from that of a literary interpretation of VO.
Figure 4.2  Likelihood for a VN form to be a noun
4.3 Verbal VN Compounds

There are three principles involved in identifying verbal VN compounds.

First of all, as discussed in Section 4.2, the verb component in a combination of a verb and a noun cannot be interpreted as a modifying attribute of its following noun component in any way. That is to say, the VN form does not lead to any nominal interpretation (of being an entity) without an inserted de. A clear image of process or a state is conveyed through such a combination. The verbs followed by their typical objects demonstrate strong verbiness and lack nouny properties. None of the examples of (31), which are verbal compounds, can be interpreted as a noun.

(31) chi1-fan4 to eat-rice ‘to have a meal’
    zuo4-lao2 to sit-prison ‘to be imprisoned’
    dan1-xin1 to bear-heart ‘to worry’
    xiang3-jia1 to miss-home ‘to be homesick’

Second, in general, as Chi (1984) notes in his dissertation, most VN compounds have a meaning somewhat different from the combined meaning of its two components. except for some VN compounds with bound morpheme components, such as xi3-zao3 to wash-bath ‘to take a bath’. According to this criterion, hel-jiu3 ‘to drink-wine, to drink liquor’ is a compound while hel shui3 ‘to drink water’, or hel tang1 ‘to drink soup’ is not. The form hel-jiu3 has developed a sense that is more than the combination of ‘to drink’ and ‘liquor’. In many cases, it implies a derogative sense referring to bad manners.
The aspect of specialized meaning does not apply to most compounds with
cognate objects, e.g. shui4-jiao4 'to sleep-sleep, to sleep' and xi3-zao3 'to wash-bath, to
take a shower'. These cases follow the principle, already stated, that if one component is
a bound form, then the VN form is a compound (see Chao, 1968). The form shui4-jiao4
('to sleep') and xi3-zao3 are such examples. The form jiao is a bound morpheme and
cannot be used independently.

Third, a combination of verb and noun functioning as a verbal compound has to
make sense in the most natural way. This point is also illustrated in Chi (1964). To be
more specific in my terms, the semantic fields of the verb component and the noun
component have to intersect—they have to be related to each other. The semantics of the
verbal components set limitations of noun components that are qualified to make sense,
either to express some reality or some thought, etc.

We should always bear in mind that a speaker speaks or understands an utterance
according to his/her knowledge of the world. In the case of newly formed verbal VN
compounds (for already existing compounds, the speakers learned them as units), his/her
world knowledge will be the decisive factors of what combinations of verbs and nouns
are acceptable and what are not. This knowledge of speakers can be described as abstract
schemas, i.e. the patterns which speakers and listeners follow when they form or
understand compounds.

The major verbal VN patterns are illustrated below. In a VN form, the 'N' is
usually considered to be an 'object' position, although it depends on how 'object' is
defined. For example, many 'N's in this position name locations instead of prototypical
patients, such as lao2 'prison' in zuo4-lao2 to sit-prison 'to be prisoned'. In addition, to
have a verb-object-like relationship between the two components does not necessarily mean that the object position has to be a noun element. Similar to phrasal syntax, the grammatical category of this 'object' can be a noun, a verb or an adjective. For example, chou2 in fa1-chou2 'to become-worry, to be worried' is a verb. But I will focus on VN forms in this chapter.

4.3.1 Different patterns of verbal VN compounds

A. Noun component as patient

(32) zaj3-ren2 to kill-person 'to exploit/to ask for high price'
     pao4-niul to soak-girl 'to indulge oneself with girls'
     chi1-cu4 to eat-vinegar 'to be jealous'
     bao1-er4nai3 to buy out-second wife 'to have an extra-marital lover'
     shi1-ye4 to lose-job 'to lose job'
     dai4-ye4 to wait-job 'to be unemployed'

B. Noun component as agent

(33) chu1-ming2 to emerge-name 'to become famous'
     shi1-zong1 to lose-trace 'to get lost'
     pao3-diao4 to run off-tone 'to be off tone'
     bian4-xing2 to change-form 'to deform'

C. Noun component as result

(34) ti2-yi4 to raise-idea 'to propose'
     xie3-xin4 to write-letter 'to write a letter'
D. Noun component as instrument

(35)  tiao4-san3  to jump-parachute  'to jump with a parachute'
      jing4-jiu3  to salute-wine  'to offer wine (for respect)'

E. Noun component as location

(36)  zuo4-lao2  to sit-prison  'to be imprisoned'
      dun1-dianr3 to squat-spot  'to go down to a lower administrative
      section to gain experience and guide the work there'
      ma4-jie1  to curse-street  'to curse'
      niao4-chuang2 to urinate-bed  'to wet bed'

F. Verb component as direction verb

(37)  chu1-jia1  to exit-home  'to become a monk or nun'
      chu1-jia4  to exit-marry  '(for women) to get married'
      xia4-gang3 to exit-duty  'to lose job'

G. Noun component as cause for the action

(38)  yang3-bing4  to nourish-illness  'to recover from illness'
      chu1-chai1  to exit-errand  'to be on a business trip'
      xiang3-jia1  to miss-home  'to be homesick'
      shang1-feng1  to hurt-wind  'to catch a cold'

H. Noun component as the cognate object
(39)  
\begin{tabular}{l l l l}
\textit{tiao4-wu3} & to dance-dance & ‘to dance’ \\
\textit{chang4-ge1} & to sing-song & ‘to sing’ \\
\textit{shui4-jiao4} & to sleep-sleep & ‘to sleep’ \\
\textit{chi1-fan4} & to eat-rice & ‘to have a meal’ \\
\end{tabular}

4.3.2 Separability

As Li & Thompson (1981) point out, the separability of Verb-Object compound cannot be predicted on a regular basis. Some VO compounds are completely inseparable; some are separable to a certain degree; others are almost like a regular verb-plus-object phrase in terms of separability.

“...the VO compounds form a continuum, with any specific compound falling at some point on the continuum. This continuum can be seen as a result of the fact that verb-object compounds are historically formed from verb-plus-object phrases: that is, certain verb-plus-object phrases have fused together through time to become compounds either as the verb or the object or both have lost their independent free morpheme status, or as the construction developed idiomatic meaning. Since such fusing processes in a language are never abrupt but are instead gradual, occurring over a long period of time as a verb-plus-object phrase develops into a completely fused word that is inseparable and completely idiomatic in meaning, different verb-object compounds may be at different points along this path.” (1981: 80)

Examples of inseparable VO compounds are shown in (40).

(40)a.  
\begin{tabular}{l l l l l}
\textit{Yang Wulang} & \textit{chu1-jia1} & \textit{dang le} & \textit{he2-shang} \\
Yang & fifth guy & exit-home & become LE monk \\
‘The fifth son of Yang’s family left home and became a monk.’ \\
\end{tabular}

b.  
\begin{tabular}{l l l l l}
\textit{*Yang Wulang} & \textit{chu1 le yi jia1} & \textit{dang le} & \textit{he2-shang} \\
\end{tabular}
Yang fifth guy exit LE one home become LE monk

c. *Yang Wulang ba jia chul le dang le he2-shang
Yang fifth guy BA home exit LE become LE monk

Examples of VO compounds separable in a limited way are shown in (41).

(41)a. wo shang yue chul-chail qu le
   I last month exit-errand go LE
   'Last month I was out on a business trip.'

b. wo shang yue chul le san ci chail
   I last month exit LE three CL errand
   'I was out on a business trip three times last month.'

c. *wo ba chai chu le
   I BA errand exit LE

Examples of more separable VO compounds are shown in (42).

(42)a. wo bu xiang chil-fan4
   I not want eat-rice
   'I don't want to eat.'

b. WangLaowu yi tian chi si dun fan4
   WangLaowu one day eat four CL rice
   'WangLaowu has four meals everyday.'

c. ni yao ba fan4 chil wan cai neng zou
   you must BA rice eat finish then can go
‘You have to finish eating before you leave.’

4.3.3 Transitivity

The vast majority of verbal VO compounds are intransitive, that is to say, they don’t take a direct object. From a functional point of view, since the requirement of the verb element to have a noun argument in the object position has been satisfied, the VO compound does not need another object. But there are exceptions. Some VO compounds that can take direct objects are listed in (43).

(43)  

\[
\begin{align*}
\text{guan1-xin1} & \quad \text{to involve-heart} & \quad \text{‘to care about’} \\
\text{huai2-yi2} & \quad \text{to hold-doubt} & \quad \text{‘to be suspicious of’} \\
\text{zhu4-yi4} & \quad \text{to fix-attention} & \quad \text{‘to pay attention to’} \\
\text{dan1-xin1} & \quad \text{to carry-heart} & \quad \text{‘to be worried about’} \\
\text{de2-zui4} & \quad \text{to obtain-offense} & \quad \text{‘to offend’} \\
\text{ti2-yi4} & \quad \text{to raise-idea} & \quad \text{‘to propose’} \\
\text{chu1-ban3} & \quad \text{to issue-edition} & \quad \text{‘to publish’}
\end{align*}
\]

These transitive VO compounds are a small closed set. Relatively newly created VO compounds are almost always intransitive, e.g. \text{gua4-pail} to hang-bat ‘to retire (only for athletes who plays ping-pong, tennis or badminton)’

4.3.4 Nominalization

With respect to nominalization, it may first be observed that VO compounds can be nominalized. But it is obvious that the nominalization of verbal VO compounds is
different from the N/VmodN compounds. A nominal N/VmodN compound can occur in any position where a regular noun or a noun phrase can occur, but not a nominalized VO compound. When nominalized, a verbal VO compound is usually preceded by the genitive marker de 'of'. When modified by classifiers, differently from N/VmodN compounds as shown in (44), the nominalized verbal VO compounds, shown in (45), can only co-occur with the most generic ones, such as yi4.xie1 'some' or yi4-dian3 'a little', since they are not measurable as regular nouns. However, the nominalized VO compounds are compatible with verbal quantifiers such as ci4 'time(s)', xia4 'time(s)', hui2 'time(s)', etc., whereas the nominal N/VmodN compounds are not.

(44)a  mai3  liang  wan3  pao4-cai4  
buy  two  CL (bowl)  soak-vegetable  
'to buy two bowls of pickles.'  

b.  dui4-xian4  yi4  bi3  cun2-kuan3  
cash  one  CL (pen)  deposit-money  
'to cash out one portion of savings.'

(45)a.  ta  dui4  wo3  de  guan1-xin1  
he  to  I  of  involve-heart  
'his concerns about me.'  

b.  ta  de  san  ci  chui1-jial  
he  of  three  times  exit-home  
'the fact that he left home three times and (tried to) become a monk'  

c.  *mai3  yi  wan  guan1-xin1
buy the one bowl involve-heart

Second, verbal VO compounds, along with other types of verbs, are different from VR compounds in that, under the influence of English language, more and more Chinese verbs are used in nominalized forms in literature in spite of the fact that it sounds somewhat ‘English’, whereas most VR compounds cannot be treated in this way (i.e. in the form of \([de+VR]\)).

(46) \(ta \quad de \quad xia4-gang3 \quad gei \quad quanjia \quad de \quad shenghuo \quad dai\)
he of exit-duty give whole family of life bring
\(lai \quad le \quad kunnan\)
come LE difficulty

‘His losing job brought difficulties to the family.’

(47)a. *\(ta \quad de \quad (bei) \quad da3-bai4 \quad gei \quad ta \quad dai \quad lai \quad le \quad tongku\)
he of (BEI) beat-lose give he bring come LE grief
b. *\(the \quad jian4 \quad shi \quad de \quad zuo4-wan2 \quad shi \quad ta \quad gaoxing\)
this CL matter of do-finish make he happy

The reason that many verbal VO compounds can be nominalized by means of \(de\) insertion, while VR compounds cannot, is because VR compounds are construed by speakers to indicate one process plus the resulting state, while VO compounds are construed as one single process in Chinese. Nominalization treats a process as a ‘thing’. Nominalization usually requires a single ‘thing’ after the genitive marker \(de\) ‘of’, as
shown by the acceptability of (48a, b), (49a) and the ungrammaticality of (48c) and (49b).

(48a. ta de bei shal shizhong shi ge mi
    he of BEI murder always be CL mystery

    ‘It’s always been a mystery about his murder.’

b. ta de si3 shizhong shi ge mi
    he of die always be CL mystery

    ‘His death has always been a mystery.’

c. *ta de (bei) shal-si3 shizhong shi ge mi
    he of BEI murder-die always be CL mystery

(49a. ta dui pengyou de guan1-xin1
    he to friend of involve-heart

    ‘his concern/care about friends’

b. *ta de guan1-xin1 pengyou
    he of involve-heart friends

Likewise, when the components of a verbal VO compound are apart with modifiers in between, the sequence containing the two components cannot be nominalized, as shown by (50b).

(50a. ta de san ci chu1-jia1 yinqi hongdong
    he of three time exit-home cause sensation

    ‘His leaving home (to become a monk) three times caused sensation.’
b. *ta de chul (le) san ci jial
   he of exit (LE) three time home

4.4 Conclusion

In this chapter, I have examined the contrast between formally alike N/VmodN compounds and verbal VN compounds from a point of view of which VN forms can be considered as possessing a modification relationship between their two constituents. An N/VmodN compound represents a special kind of an N. A verbal VN compound represents a process.

I have illustrated that, when a verb component and a noun component relate to each other as Verb-Agent or as Verb-Instrument, then this VN form is necessarily a nominal compound. When the two components are in a Verb-Object relationship, I have proposed a hypothesis that, except for the cooking verbs, verbs followed by typical objects demonstrate strong verbiness and the verb and noun components are less likely to have a modification relationship. The components of a verbal VN form, different from those of a nominal one, can only have a modification relationship by an insertion of de ‘of’.

Among the V-de-N forms with inserted de ‘of’, I have illustrated that there is a product-modification type and a pre-processing-modification type. One pair of examples are chil-de-rou4 ‘meat for eating’ and zha2-de-jil ‘fried chicken’. The form chil-de-rou4 represents the function of rou4 ‘meat’ which does not indicate a special kind of ‘meat’, and rather, it is a clarification about the action ‘eating’. The form zha2-de-jil represents the quality change of jil ‘chicken’. It indicates a special kind of ‘chicken
(meat). It is also about the action of 'frying', but it is more about the result of this action, i.e. the chicken becomes fried chicken.

Among nominal N/VmodN compounds, I have shown that there exists a scale of VN forms in terms of separability and likelihood of modification. The N/V-O type is the one that most likely to be separable, which also has the alternative interpretation of verbal VO compounds, besides a modification relationship, such as .zhài-jíl to fry-chicken 'fried chicken: to fry chicken'. I have illustrated that the semantics and syntax of VN forms follow the iconicity principle.

After differentiating nominal VN compounds from verbal VN compounds, I have established the criterion for verbal VO compounds. That is to say, most of them have specialized meanings except for the ones with bound morphemes. Of course, the opacity of meaning lies on a continuum. I have also shown that verbal VN compounds can have many sub-patterns according to the role the noun component plays in the compound. A verbal VO compound's separability lies on a continuum. Its nominalization is restricted to its non-separated form.

Among others factors, the interaction between the two components will play an important role in determining the grammatical category of the VN compound.

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1 I have noticed that there exist differences of usages in different Mandarin speaking areas. For instance,  fu2-wu4 'to serve' can be used as a transitive verb in Taiwan, but not in Mainland China. Man3-wi4 'to be satisfied' is probably another one.
Chapter 5
VV COORDINATE COMPOUNDS

5.1 Introduction

5.1.1 Defining Characteristics of Coordinate Compounds

The definition of ‘coordinate’ in the Merriam Webster Online Dictionary on the Internet (http://www.m-w.com) is “of equal importance, rank”. Used as a grammatical term for coordinate clauses, it means “being of equal rank in a sentence”. Similarly, the members of a coordinate compound are of equal rank in the compound. A coordinate compound has two heads, and no modification relationship exists between its two components, although one component may not have the same meaning in the compound as when it occurs alone, e.g. wang4-jj4 to forget-to remember ‘to forget’.

There are coordinate compounds which are nominal (e.g. dao4-lu4 road-way ‘way: road’), verbal (e.g. hul-xil to exhale-to inhale ‘to breathe’) as well as adjectival (e.g. ping2-wen3 level-stable ‘stable’). A Verb-Verb coordinate construction is not necessarily a verbal compound. Some are nouns. Examples in (1) are nouns and the ones in (2) are verbs.

(1)  cai2-feng2 to cut-to sew ‘tailor’
     kai1-guan1 to open-to close ‘switch’
     zhan4-zheng1 to fight-to compete ‘war’
     jiao4-yu4 to teach-to educate ‘education’
mai3-mai4  to buy-to sell  ‘business’

(2)  hul-xil  to exhale-to inhale  ‘to breathe’
da3-jil  to hit-to strike  ‘to hit’
wang4-ji4  to forget-to remember  ‘to forget’
jie3-fang4  to set free-to release  ‘to liberate’
cha2-kan4  to check-to look  ‘to inspect’
jie1-shoul  to accept-to receive  ‘to accept’

A verbal coordinate compound in Chinese can be composed of two verbal components, and it can also be in the format of Adjective-Adjective. Please consider the following examples.

V-V:  shul-xie3  to write-to write  ‘to write’
gou4-mai3  to purchase-to buy  ‘to purchase’
jil-lei3  to accumulate—to pile up  ‘to accumulate’
jul-zhu4  to reside-to reside  ‘to reside’
sheng1-chan3  to generate-to produce  ‘to produce’

A-A:  po4-huai4  broken-bad  ‘to destroy’
duan3-shao3  short-short  ‘to lack’

5.1.2 Relations of Components in a Coordinate Compound

The semantic relations between the two components of a coordinate compound can be classified into three kinds, synonyms, antonyms and semi-synonyms. I will give a
brief review of the three types, examples of which are not necessarily verb VV coordinate compounds.

**Synonyms**

Zhankun Wu (1983) characterizes a synonym relation in coordinate compounds as 'the meanings of two components are close to each other and one component can be considered as an annotation of the other' (1983:93), such as *li²-bie²* to depart-to part 'to part from one another' or *shan¹-gai³* to delete-to correct 'to edit' etc.

As Wu (1983) and many other Chinese linguists points out, the linguistic motivations for coordinate compounds with synonymous components are related to the following two factors: (i) the need to distinguish homophones and (ii) the trend toward disyllabism. As a result of historical changes in Chinese, most of the final consonants were dropped in the Mandarin dialect, and this has lead to a great deal of increase in the amount of homophones. This development promoted the formation of coordinate compounds with synonymous components, which can serve the purpose of distinguishing words with the same sounds. For instance, *xi³* 'to wash' and *xi³* 'happy' are homophones. Disyllabic coordinate structures can help distinguish the two *xi³'s: xi³-shua¹* to wash-to brush 'to wash: to clean' and *xi³-yue⁴* happy-happiness 'happiness'.

In this sense, it appears that a coordinate compound with synonymous components is itself a synonym of each of its components. Compared to each of its monosyllabic components, a coordinate compound is more often used in written texts and its usage is more limited and more formal. Correlated with this, the compound's
semantics and usage are also different from that of each of its components in certain ways, which I will illustrate in the later sections (5.2, 5.3 and 5.4).

In some other cases, the meaning of a coordinate compound is extended metaphorically so that the closeness in meaning between the compound and its components becomes less obvious. One example of this is lian3 ‘face’ vs. lian3-mian4 face-face/surface ‘face (in a metaphorical sense): self-respect’ (Wu, 1983:94). The form lian3-mian4 does not have the literal meaning of ‘face’, and so (3b) is not acceptable, although there exists an idiom ge2-xin1-xi3-mian change-heart-wash-face ‘turn over a new leaf’.

(3)a. xi3 lian3
    wash face
    ‘clean face’

b. *xi3 lian3-mian4
    wash face-face

Antonyms

Some coordinate compounds are composed of two antonymic components. In such cases, the meaning of the compound either embodies those of both components or only ‘selects’ one component and ‘ignores’ the other.

(4)a. mai3-mai4 buy-sell ‘business; to trade’

b. fan3-cheng4 opposite side-right side ‘anyway, in any case’

(5)a. wang4-ji4 forget-remember ‘to forget’
b. *dong4-jing4* move-quiet ‘movement’

In (4), the coordinate compound’s meaning is a metaphorical extension of the meanings of both its components. In (5), one component imparts its meaning to the compound and the other one doesn’t.

*Semi-synonym*

A third kind of coordinate compound consists of two components that are related items in the same semantic field, but not exactly synonyms of each other. They may bear a whole-part, a containing-contained relationship, or other relationships. This kind of coordinate compound seems less common than the other two types. Examples in (6) are nominal coordinate compounds with semi-synonymous components.

(6) *kou3-chi3* mouth-teeth ‘enunciation: ability to speak’

*chuan1-dai4* put on (clothes)-put on (hat) ‘apparel’

*gu3-rou4* bone-flesh ‘flesh and blood: kindred’

The above relations constitute the basic patterns between components of a coordinate compound.

5.2 The Distinctions between Verbal Coordinate Compounds and Other Similar Forms

A verbal coordinate structure can appear similar to many other linguistic structures. From a purely formal point of view, it is not easy to tell if a V-V form is a
coordinate compound, a VR compound, an M(modifier)V compound or a serial verb construction. The sense of ‘coordination’, i.e. of equal importance or rank, is necessary to distinguish a coordinate compound from the others.

5.2.1 Verb Coordinate Compound vs. Coordinative Phrase

As Lu (1957) points out, a combination of two monosyllabic components in coordination can almost guarantee a coordinative compound. The conditions here are: (i) only monosyllabic components, and (ii) only two components. A coordinative phrase often has more than two disyllabic components, but it is rare to have a verbal coordinate compound with more than two monosyllabic components in coordination. There are a few examples of nominal coordinate compounds with three or four monosyllabic components, such as gong1-nong2-bing1 (industry-agriculture-army) ‘people from the field of industry, agriculture and army; all walks of life’, or xi3-nu4-ail-le4 (happiness-anger-sorrow-happiness) ‘one’s feelings’.

In Chinese, when monosyllabic verbs coordinate at a phrasal level, they have to occur in constructions like ‘you4 (‘again’) V1 you4 (‘again’) V2’, or ‘vi4hui3 (‘for one moment’) V1 vi4hui3 (‘for one moment’) V2’, etc. In a phrasal construction, unlike in a verbal coordinate compound, the order of V1 and V2 is not fixed in principle. In a compound, the order of the components is fixed. For example, tui1-sang3 (to push-to push) ‘to push’ does not have the alternative order *sang3-tui1. Word order can help distinguish a coordinate compound from a coordinate phrase. Consider examples in (7).

(7)a. ta you4 ku1 you4 xiao4
he again cry again laugh
‘He is crying and laughing.’

b. ta you4 xiao4 you4 ku1
he again laugh again cry
‘He is laughing and crying.’

Coordinate phrases comprised of disyllabic words do not necessarily occur in You4...you4...construction, and they just need to juxtapose with each other. Again, the word order constraint does not always apply to a coordinate phrase, as shown in (8).

(8)a. tamen chang4-ge1 tiao4-wu3
they sing-song dance-dance
‘They sing and dance’
b. tamen tiao4-wu3 chang4-ge1
they dance-dance sing-song
‘They dance and sing’

5.2.2 VerbalCoordinateCompounds vs. VR and MV Compounds

There are three kinds of verbal compounds of the form of V-V. The V-V form can be a coordinate compound such as gou4-mai3 to purchase-to buy ‘to purchase’, a VR compound such as da3-bai4 to beat-to defeat ‘to defeat’, or an MV compound such as zuo4-shi4 to sit-to see ‘to see idly (to allow sth. to happen)’.

The difference between a verbal coordinate compound and the other two types can be characterized by the presence of ‘headedness’. As we know, both VR and MV
compounds have a head and a modifier, with the former bearing a relationship of Head-Complement and the latter a relationship of Modifier-Head. In contrast, a coordinate compound is two-headed with no modifier-modified relationship. In VR or MV compounds, a modifier and the modified are semantically related in such a way that the modifier/complement sets a frame for the head, the modified. The modifier is not required to be synonymous in meaning with the head nor antonymous with it. For example, both si3 ‘dead’ in (9a) and shangl ‘wounded’ in (9b) are semantically related with da3 ‘to beat’ and can be the result of da3 and therefore occur in the R position in a VR compound, but neither of them has to be close in meaning with ‘to beat’. The components of a verbal coordinate compound can occur in a coordinate construction you4 V1 you4 V2 meaning ‘both ... and ...’, as shown by (9e), but not the components of a VR or a MV compound, as shown by (9f-g).

(9)a. da3-si3 to beat-dead ‘to beat to death’
b. da3-shangl to beat-wounded ‘to beat till wounded’
c. zuo4-shi4 to sit-to see ‘to see idly’
d. da3-jil to beat-to strike ‘to beat/strike’
e. you4 da3 you4 jil
   again beat again strike
   ‘to beat and strike’
f. *you4 da3 you4 si3
   again beat again die
g. *you4 zuo4 you4 shi4
again sit  again see

The resultative element in a VR compound or the M element in an MV compound can be semantically related with the head of the compound, but they necessarily cannot be close to the head to such a degree that they are of the same importance as the head, as illustrated by (9c), in which case, the compound will be a coordinate compound, instead of a VR or MV compound. The modifiers are peripheral satellites centering on the head whereas the components in a verbal coordinative compound are symmetric, as illustrated in Figure 5.1.

(1) Coordinate: Synonym
(2) Coordinate: Antonym

Coordinate Compounds
(3) MV Compound (4) VR Compound

Figure 5.1 Satellites around head vs. symmetric double headedness

Parts (1) and (2) depict the double-headed structure of coordinative compounds: *da3* ‘to beat’ and *jii* ‘to strike’ are synonyms, and *mai3* ‘to buy’ and *mai4* ‘to sell’ are antonyms. The components are poles of a balanced lever. Both components are at the center in Parts (1) and (2). Or in other words, there is no named center in Parts (1) and (2). In contrast, the meanings of *zuo4* ‘to sit’ and *shi4* ‘to see’ are related in such a way that they do not identify antonymic poles nor a synonymous equation with an unnamed center as in Parts (1) and (2). In Part (3), there is a named center *shi4* ‘to see’ which is delimited and constrained by *zuo4* ‘to sit’, therefore the arrow points to the center. It indicates the manner of ‘to see’, meaning ‘to see in a sitting manner’, i.e. ‘to see something happening without interference’. This configuration identifies the MV compound. In Part (4), the center is *da3* ‘to beat’. Its satellite is represented by *si3* ‘dead; to die’ and the arrow points outward to express the fact that the action ‘to beat’ leads to different results. This is the VR compound. In Parts (3) and (4), the satellites—the modifiers—relate to the center from a peripheral position, whereas in Parts (1) and (2) the two poles on a certain scale are equally important. Figure 5.1 shows clearly the differences between a coordinate compound, a VR and an MV compound.
Given any V-V compound, based on the meanings of its components (and only by considering them) and the interrelationship between the components, we can establish whether it is a VV coordinate, a MV or VR compound.

5.2.3 VV Coordinate Compound vs. Serial Verb Constructions

A serial verb construction can appear in different formats including a V V format and a V N V format. The former can indicate that two sub-events of one event happen in a temporal sequence such as the example in (10), and the latter is used for incorporated actions, i.e. the patient of the first verb is the agent of the second verb. Usually the first verb names perceptual events, wishes, advice, recommend or commands etc.

(10) ta lai2 na2 shu1
     he come take book
     ‘He came to get the book.’

(11) wo kan4jian4 ta pao3bu4
     I see him run
     ‘I saw him running.’

It is the first type of serial verb construction that is the concern here. It is important to note that the fact that the two components in a (verbal) coordinate compound have a fixed order does not indicate that there are two actions occurring in a temporal sequence. The fact that the two components are in fixed order seems to suggest that each position has its own special meaning, but this meaning definitely does not have an
implication of a temporal sequence of two events. The order of the components inside a coordinative compound is established as the complex form becomes lexicalized. After a complex form is lexicalized, its internal structure is no longer subject to order variation along with other differences occurring at a phrasal level. Also, a verbal coordinate compound can never be interpreted as is shown in (12c). On the contrary, it is the gloss of (12a) that (12) implies. That is because the sense of a compound is not the sum of its components, nor the sequence. It is a tertium quid, a unit, one act which has no events to order.

(12)  
\[ da3\text{-}jil \quad diren \]
hit-strike enemy

a. ‘to attack the enemy’
b. ‘to hit as well as strike the enemy’ or ‘to strike as well as hit the enemy’
c. ‘*to hit the enemy and then strike the enemy’

So we see that a VV coordinate compound can be distinguished from a serial verb construction very clearly by the difference shown in the way the components relate to each other semantically.

5.3 The Internal Patterns of Verbal Coordinate Compounds

5.3.1 Grammatical Categories of the Components

We have shown in the last section that a VV coordinate compound is characterized by the ‘balanced’ semantics of its components. In this section, I will explore the relevance of the grammatical features of the two components. I consider
cases in which the components of a verbal coordinate compound may not seem to belong to the same grammatical category.

A verbal coordinate compound can be composed of V-V, A-A or N-N components --- both components with the same grammatical category. It seems natural that a coordinate compound should be composed of components of the same part of speech. Yet, there may appear to be coordinate compounds in the following formats: V-A, A-V, V-N, and even N-V. But it is necessary to bear in mind that in some cases, a component’s category is not immediately obvious since it is quite frequent that a morpheme belongs to more than one category, e.g. dao4-zei2 (to steal/robber-thief) 'robber', wan2-hao3 (intact/to finish-good) 'intact', tuan2-ju4 (to conglomerate/group (n.)-to gather) 'reunite', and gao4-bai2 (to tell-spoken part in opera/to state) 'statement', etc.

To address this problem, Lu (1957) sets forth criteria to include both components of a coordinate compound into one grammatical category. He argues that if the part of speech of one component represents that of the compound, then the part of speech of the other component, if ambiguous, should be considered to be the same as that of the first component. For example, dao4 'to steal/robber' should be considered as a noun in dao4-zei2 (to steal/robber-thief) 'robber' because zei2 'thief' has the same part of speech as the compound and in this case dao4 'to steal/robber' should conform to zei2 'thief'. In a second situation, neither of the components has the part of speech which the compound bears, e.g. gao4-bai2 (to tell-monologue/dialogue/white/to state) 'statement' as opposed to kong4-bai2 empty-white 'blank'. In this case, Lu asserts that we should still try to
view the components as sharing the same part of speech. In the case of \textit{gao4-bai2}, both of the components will be considered to be verbs.

Lu’s solution implies the quite appropriate assumption that coordination implies sameness in grammatical category. In principle, coordination should entail that the two components are parallel, with similar or opposite meanings and with the same part of speech, so that the effect of coordination is achieved. Yet, in the case where one component’s part of speech is ambiguous, it is only when we recognize the closeness in meaning of components as well as the compound’s meaning that we can make a judgment about what part of speech the component has in that situation. This explains why \textit{bai2} 'white/spoken part in opera/to speak out one’s thought’ should be considered as a verb in the compound \textit{gao4-bai2} (to tell-monologue/dialogue/white/to state) 'statement’. \textit{bai2} as an adjective meaning 'white' is much more often used in Chinese than the other meanings. Yet, the meaning of 'white' has nothing to do with \textit{gao4} 'to tell' and the compound’s meaning. It is its classic meaning of 'to speak out' that is being expressed in the compound. On the basis of meaning comparison, we know that \textit{bai2} is not an adjective but a verb. Of course, \textit{bai2} can also be a noun. So one might argue that both \textit{gao4} and \textit{bai2} should be considered as noun components. In theory, this alternative is conceivable. But in this specific case, such an analysis is not correct because it makes more sense to treat \textit{bai2} as a verb than to treat \textit{gao4} as a noun.

In short, semantic requirements must be considered along with grammatical requirements in coordinative compound formation. The semantics of two components
have to be related in such a way that the combination of them creates the effect of coordination.

5.3.2 Adjectives Used as Verbs

On the other hand, the parts of speech of the components can seem to be discrepant. In fact, Lu (1957) states there are coordinative compounds that appear in the following formats: V-A, A-V, N-V and V-N etc. Lu (1957) and Wu (1979) categorize the following compounds as follows:

(13) V-A:

\[\begin{array}{lll}
\text{chong1-man3} & \text{to fill-full} & \text{‘to be full of’} \\
\text{jing4-zhong4} & \text{to respect-heavy/important} & \text{‘to respect’} \\
\text{bai4-huai4} & \text{to defeat-bad} & \text{‘to ruin; corrupt’} \\
\text{dai4-man4} & \text{to be idle-slow} & \text{‘to give a cold-shoulder’} \\
\text{bie1-men1} & \text{suppress/suffocate-stuffy} & \text{‘to endure oppressed/depressed’}
\end{array}\]

(14) A-V:

\[\begin{array}{lll}
\text{huang1-fei4} & \text{deserted-to abandon} & \text{‘to lie in waste; to neglect’} \\
\text{can2-hai4} & \text{deficient-to impair} & \text{‘to cruelly injure; to kill’} \\
\text{an1-wei4} & \text{safe-to comfort} & \text{‘to comfort’}
\end{array}\]
(15) **V-N:**

\[ jiu4\text{-}yao4 \to \text{rescue-medicine} \quad \text{‘to be beyond cure: to be hopeless’} \]

(16) **N-V:**

\[ lei4\text{-}si4 \quad \text{type/category-to be similar to} \quad \text{‘to be similar to’} \]

\[ qi4\text{-}zhong4 \quad \text{implement-to think highly of} \quad \text{‘to think highly of’} \]

On the other hand, in Chinese, it is very common for adjectives to be used as verbs. When adjectives are combined with verb elements and form verbal coordinate compounds, a native speaker would consider that the adjectives are occurring as verbs. Some of the adjective components listed above by Lu (1957) and Wu (1979) can be used as transitive verbs in some contexts. The A elements in examples (14-15) have been labeled as ‘A’ by Lu and Wu merely because that is the most frequent usage of the morpheme, even though that is not the category that is applicable in these forms. Consider the following sentences. In sentences (17-21), all the (a) sentences have the adjective form of the morpheme in question but all the (b) sentences have the verbal form.

(17)a.  

\[ tade \ mingsheng \ hen \ huai4 \]

\[ \text{his reputation very bad} \]

\[ \text{‘He has a bad reputation.’} \]

b.  

\[ ni \ bu \ yao \ huai4 \ le \ wode \ mingsheng \]

\[ \text{you not wish bad LE my reputation} \]
‘You can’t ruin my reputation.’

(18)a. shui bu hen man3
water not very full

‘The water is not very full.’

b. qing gei wo man3 shang zhe bei shui
please give me full up this CL water

‘Please fill up this cup with water for me.’

(19)a. ta zou de hen man4
he walk DE very slow

‘He walks very slowly.’

b. ta zhi man4 le yi bu mei gan shang qiche
he only slow LE one step not catch up bus

‘He was only one step behind and missed the bus.’

(20)a. zhe dongxi hen zhong4
this stuff very heavy

‘This stuff is very heavy.’

b. zhongguoren hen zhong4 lijie
Chinese very value courtesy

‘Chinese think highly of courtesy.’

(21)a. jintian hen men1
today very stuffy

‘It’s very stuffy today.’
b. *the* tianqi *neng ba ren men1 si*

this weather can BA people suffocate die

'The weather is suffocating.'

As for the A-A verbal coordinate compounds, some of them can be used both as an adjective and verbal coordinate compound, such as *duan1-que1* short-lacking 'to be short of'. There are others that can only be used as verbs, such as *duan3-shao3* short-few/short 'lack'.

To sum, verbal coordinate compounds can be classified into three groups:

(a) VV with no ambiguities in components’ part of speech, e.g. *shan1-gai3* delete-correct 'edit';

(b) VV after disambiguation of one of component’s part of speech, e.g. *gao4-bai2*² tell-speak out 'statement' or *bai4-huai2* defeat-bad 'ruin';

(c) Apparent V-A, A-V with A element used as verbs, e.g. *can2-hai4* deficient-injure 'do harm'.

### 5.3.3 Hierarchy of Verbal Coordinate Compounds

In terms of both frequency and number, according to Tang (1989), the above patterns can be listed in the following hierarchy:

\[(22) \quad \text{VV} > \text{AA} > \text{NN} \quad \text{l(>VA/AV} \quad \text{> NV/VN)}\]

That is to say, the most common pattern for a verb coordinate compound is VV, the second most common one is AA and the rarest is NV/VN. It accords with our intuition
that the VV should be the most typical pattern for a verbal coordinate compound formation and AA should be more common than NN in the sense that adjectives are more close to verbs in meaning and function than nouns are.

According to Tang (1989), almost all VA/AV and NV/VN verbal coordinate compounds are relics of classic Chinese usages. In classic Chinese, it was more often the case that one morpheme could have multiple meanings and belong to multiple grammatical classes. Since these patterns of verbal coordinate compounds are not productive, they are not my focus in the following sections. Tang (1989) believes that VV pattern for verbal coordinative compound formation is the most productive one and it accounts for 44% of all coordinate compounds.

5.4 Transitivity of Verbal Coordinate Compounds

5.4.1 Tang's statement

Tang (1989) notes that for a VV verbal coordinate compound, not only must the two verbal components share the same part of speech (by definition), they also have to belong to the same sub-category. Here by sub-category, Tang means transitive or intransitive. Therefore, as he states, a transitive verb has to compound with a transitive verb and an intransitive with another intransitive. He further claims that if both of the components can only function as transitive verbs, then the compound can also only function as a transitive verb. For example, yi1 'depend on' can be only transitive and lai4 'depend on' can also be only transitive, therefore, yi1-lai4 'depend on' must be only
transitive. Compounds in (23) are some examples of this type of verbal coordinative compounds.

(23)a. yil-lai4  
   to depend on-to depend on  
   ‘to depend on’

b.  fang2-ai4  
   to hinder-to hamper  
   ‘to hinder/hamper’

c.  diao4-cha2  
   to transfer-to check  
   ‘to investigate’

Otherwise, according to Tang (1989), if the components can be both transitive and intransitive, then the compound can also be both. For example.

(24)a. dong4-yao2  
   to move-to shake  
   ‘to vacillate; to shake’

b.  chong2-die2  
   to repeat-to pile up/repeat  
   ‘to repeat’

c.  fan3-kang4  
   to oppose-to resist  
   ‘to rise against’

etc.

5.4.2 My Comments on Tang’s Statements

I agree with Tang (1989) that sub-categories of verbs should be relevant to our studies of coordinative compounds, but I would like to refine his point in the following ways.

(i) Conformity in sub-category, i.e. transitive vs. intransitive, between components. Some of the components in question occur only in compounds, so it is hard to determine whether they are transitive or intransitive, e.g. fang2 ‘to hinder’ in fang2-ai4 to hinder-to hamper ‘to hinder/hamper’. The form fang2 has no separate occurrence. So it is with diao4 ‘to transfer’ in diao4-cha2 to transfer-to check ‘to investigate’ and diao4-yan2 to
transfer-to study 'to investigate and research'. Since most monosyllabic Chinese verbs can be intransitive, it is not very clear how to draw the line between only transitive-transitive and other cases.

(ii) Conformity of parts of speech between components and the compound. Tang (1989: 75) claims "the subcategory of a coordinative compound is in general the same as that of its components, not including marked cases such as AA or NN patterns". That is to say, two only-transitive verb components should result in a transitive verbal coordinate compound; if the components can be both transitive and intransitive, then the compound will be both too. This claim is only true for some cases. Take shi1-bai4 for an example (to lose (something)-to lose battle/game/to defeat) 'to lose'. The form shi1 'to lose' usually does not occur in isolation in modern Chinese. Where it does occur in archaic usage it is transitive. e.g. shi1 'to lose' appears in SHI JIE ITING2 in the classic novel Three Kingdoms written by Luo Guanzhong in the Ming dynasty. The form shi1 can also appear in some verbal VN compounds. e.g. shi1-shou3 to lose-hand 'to accidentally drop', shi1-ce4 to lose-strategy 'to be unwise' or shi1-chong3 to lose-favor 'be out of favor' etc. On the other hand, bai4 'to lose/defeat' can be both transitive and intransitive. Consider the examples in (25).

(25)a. women da4-bai4 di jun
     we big-defeat enemy army
     'We utterly defeated the enemy.'

b. women bai4 le
     we lose LE
‘We lost.’

Yet the combination of these two components *shil-bai*4 ‘to fail’ can only be intransitive, as shown in (26), not as Tang (1989) predicts, both transitive and intransitive.

(26)a. women shil-bai4 le
    we lose-lose/defeat LE
    ‘We lost/failed.’

b. *women shil-bai4 le diren
    we lose-defeat LE enemy

(iii) Tang (1989) does not mention that, even if the parts of speech of a compound and its components are both transitive, a compound usually has a much more limited range of objects compared to its components. The form *chuil-da*3 to blow-to hit ‘to beat drums and blow trumpets’ is an example. The form *chuil* can be both transitive and intransitive as shown in (25a-b) and so can *da*3 shown in (27c-d). But *chuil-da*3 as a compound cannot not have any object except a farfetched noun *yue4qi*4 ‘musical instrument’.

(27)a. ta hen hui *chuil* dizi
    he very know blow flute
    ‘He is good at playing flute.’

b. ni yinggai yong-li de *chuil*
    you should use-effort DE blow
‘You should blow hard.’

c. \(\text{ni\ lai\ da3\ hei\ mian\ gu}\)
   you\ come\ beat\ this\ CL\ drum

   ‘Come here and beat this drum.’

d. \(\text{yong\ li\ da3}\)
   use\ efforts\ beat

   ‘Beat hard!’

e. \(\text{chui1-da3\ yueqi}\)
   blow-beat\ musical\ instruments

Tang (1989) has had no explanation of this phenomenon. For certain VV coordinate compounds, it may seem to be that the set of their possible objects has to be the intersection of those of their components, which is the case for the compound in example (27). But for some other cases, this theory does not seem to apply well because of several factors. For example, when the meaning of a VV coordinate compound has metaphorical extensions from those of components, an object of such a compound may not function as object to both of the verbal components. The form \(\text{yong1-hu4}\) to embrace-to protect is such an example. The object \(\text{zheng4ce4}\) ‘policy’ to the verbal compound cannot be the object of the component \(\text{hu4}\) ‘to protect’.

5.5 Conclusion

Coordinate compounds differ from phrases and other types of compounds in that (i) when in coordination, the order of the components is fixed, unlike many coordinate phrases; (ii) the meanings of components have to be close or in contrast; (iii) no
modification relationship exists between components—a coordinate compound has to be
double-headed. Coordinate compounds exert rhythmic effects of parallelism and
correspond to the historical trend of bisyllabism in Chinese.

It is not ‘parallelism’ or any other striking grammatical feature that serves as a
pre-requisite of coordinate compound formation. It is the closeness in semantics between
components that is the basis. Therefore, it is natural to expect that the grammatical
features of the components share similarities.

According to Tang (1989), coordinate compounding should be less productive
than Verb-Object or Verb-Resultative patterns, because a process of discerning
‘closeness’ or ‘contrast’ in meaning is needed by a speaker and detecting a relation of
coordination is harder than a VN or a VR relation. He also points out that there are far
fewer compounds composed of antonyms than compounds composed of synonyms.
There are not many newly created ones either. AA, NN coordinative patterns are less
common and non-productive.

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1 I prefer to consider *chong1-man3* as a VR compound.
2 *gao4-bai2* is not a verbal compound but a nominal compound.
6.1 Introduction

6.1.1 Structure of Subject-Predicate (SP) Compounds

The term Subject-Predicate (SP) compound is used by Chao (1965). By SP, we mean that the noun component, in the first position, serves as a logical subject of the P component in the second position, the logical predicate of the noun component. In this chapter, I follow Chao (1965) and use the term SP compound. In Chinese, both intransitive verbs and adjectives can appear as the P component in the second position. Most SP compounds are nouns, adjectives, or verbs. This chapter will focus on adjectival SP compounds (Adj/SP) and verbal SP compounds (V/SP). The adjectival SP compounds are more numerous.

The following are some examples of SP compounds.

(1)

\[di4-zhen4\] earth-to quake 'earthquake: to quake'

\[bing1-bian4\] soldier-to change 'coup d'etat'

\[tou2-teng2\] head-to ache 'to have a headache'

\[yan3-hong2\] eye-red '(to be) jealous, envious'

\[xin1-fan2\] heart-vexed '(to be) vexed, annoyed'

6.1.2 Grammatical Categories of SP Compounds
As mentioned above, Most SP compounds are nouns, adjectives, or verbs. There are more adjectives than verbs. There are also many nouns.

Some SP compounds are nouns:

(2)

\[ \text{*Mian4-shu2} \quad \text{face-familiar} \quad \text{‘looking familiar’} \]

\[ \text{*Xin1-teng2} \quad \text{heart-to ache} \quad \text{‘loving dearly, feeling sorry’} \]

\[ \text{*Xin1-jing4} \quad \text{heart-clean} \quad \text{‘not being bothered’} \]

\[ \text{*Ming4-bao2} \quad \text{life-thin/poor} \quad \text{‘ill-fated’} \]

\[ \text{*Dan3-xiao3} \quad \text{gallbladder-small} \quad \text{‘timid, cowardly’} \]

\[ \text{*Xing4-jii2} \quad \text{disposition-impatient} \quad \text{‘impatient’} \]

\[ \text{*Nian2-qing1} \quad \text{age-light} \quad \text{‘young’} \]

Some SP compounds are adjectives:

(3)

\[ \text{bian4-bi4} \quad \text{stool-to constipate} \quad \text{‘constipation’} \]

\[ \text{Bingl-bian4} \quad \text{soldier-to change} \quad \text{‘coup d’etat’} \]

\[ \text{Yue4-liang4} \quad \text{moon-bright} \quad \text{‘moon’} \]

\[ \text{Dongl-zhi4} \quad \text{winter-to come} \quad \text{‘the Winter Solstice’} \]

\[ \text{Di4-zhen4} \quad \text{‘earth-to quake’} \quad \text{‘earthquake; to quake’} \]

Some SP compounds are verbs:

(4)

\[ \text{Tou2-teng2} \quad \text{head-to ache} \quad \text{‘to have a headache’} \]

\[ \text{Di4-zhen4} \quad \text{earth-to quake} \quad \text{‘to quake’} \]
Some SP compounds serve as other parts of speech in Chinese, but the following usages are less common. SP used as Adverb:

(5) $shi4-bi4$ tendency-necessary ‘be bound to. necessarily’

SP used as a conjunction:

(6) $li4-ru2$ example-as ‘for instance’

SP used as a linking verb:

(7) $mao4-si4$ appearance-to be like ‘to look like. to appear to be’

SP used as a modal verb:

(8) $li3-dang1$ logic-to be ‘should’

It is also interesting to note that a major part of SP compounds are concerned with body parts and body-part related illnesses or feelings/attributes. Tang (1981) notes that except for terms for illness (adjectives) or food (nouns), the SP pattern is not productive. Consider more examples:

(9) $dan3-zhan4$ gut-to shake ‘to shake because of fear’

$xin1-jing1$ heart-to frighten ‘(to be) startled’

$rou4-ma2$ flesh-to tingle ‘(to be) sickened’

$er3-ming2$ ear-to ring ‘ears to ring’
shou3-ruan3  hand-soft  '(to be) softhearted'
shou3-qiao3  hand-skillful  '(to be) deft'

6.2 Differences from S P Clauses and Other Types of Compounds

6.2.1 SP Compounds vs. S P Clauses

It is not hard to distinguish SP compounds from S P clauses. Basically, an SP compound manifests properties that a word (here a verb) has, in contrast with the syntactic properties of an S P clause. Li & Thompson (1981) give a thorough account of this issue, which is briefly reviewed as follows. Some examples below are from that source. The contrasts between SP compounds and S P clauses are enumerated in (i) – (iv).

(i) SP compounds can be modified by an intensifier, such as hen3 'very', tai4 'too much', feilchang2 'unusual' etc.

(10)a.  ta     hen     tou2-teng2
       he     very    head-ache

   'He has a severe headache.'

b.  ta  de  tou2  feilchang2  feilchangl  teng2
    he  of  head  very  very    ache

   'His head aches a lot.'

As we can see from the above example, some SP forms like tou2 teng2 can either function as a compound or as an S P declarative sentence. In the above example, in (10a), tou2-teng2 as a whole is modified by hen3 'very' and functions as an SP compound. In contrast, in (10b), teng2 by itself is modified by the intensifier phrase
feilchang2 feilchang1 ‘very very’ and functions as the predicate of the sentence; and (tu de) tou2 is the subject of a declarative sentence.

(ii) SP compounds are negated like regular verbs.

(11)a.  
zhansan  bu  tou2-teng2  

Zhangsan  not  head-ache  

‘Zhangsan doesn’t have a headache.’

b.  
duidai  jieji  diren  jue  bu  shou3-ruan3  
treat  (social)class  enemies  definitely  not  hand-soft  

‘(We/they) will never be soft-hearted when encountering class enemies.’

c.  
Zhangsan  tou2  bu4  teng2,  shou3  bu4  ruan3  
Zhangsan  head  not  ache  hand  not  soft  

‘Zhangsan does not have a headache, and his hands are not weak.’

In example (11), (11a) and (11b) contain SP compounds tou2-teng2 and shou3-ruan3. Example (11c) is a coordinate sentence with two declarative clauses with tou2 ‘head’ and shou3 ‘hand’ as subjects and teng2 ‘to ache’ and ruan3 ‘soft’ as predicates.

(iii) SP compounds occur in A-not-A questions.

(12) a.  
ni  xin1-fan2  bu  xin1-fan2  ?  
you  heart-vexed  not  heart-vexed  

‘Do you feel disturbed or not?’

b.  
ni  (xin1)  fan2  bu  fan2  ?  
you  (heart)  vexed  not  vexed  

‘Do you feel disturbed or not?’
In (12a), \textit{xin1-fan2} is negated as a compound, and in (12b), \textit{fan2} by itself is negated as the predicate of the sentence.

(iv) Some SP compounds can be modified by adverbs like \textit{chang2chang}, 
\textit{jing1chang} ‘often’.

(13)a. \textit{ta \ changchang \ qi4-chuan3} 
\textit{ta \ often \ breath-breathe heavily} 

‘He has asthma frequently.’

b. \textit{ta \ qi4 \ chuan3 \ bu \ shang \ lai} 
\textit{ta \ breath \ breathe heavily \ not \ up \ come} 

‘He cannot breathe in.’

c. \textit{ta \ chuan3 \ bu \ shang \ qi4 \ lai} 
\textit{ta \ breathe \ heavily \ not \ up \ breath \ come} 

‘He cannot breathe in.’

In (13a), \textit{qi4-chuan3} is modified by ‘often’ as a compound. In contrast, in (13b), \textit{qi4} is actually the pre-posed object of \textit{chuan3}, as compared to (13c). \textit{chuan3} in (13b) and (13c) functions as a predicate.

\textbf{6.2.2 SP Compounds Distinguished from NV Headed Compounds}

These two kinds of compounds have not often been considered together and compared. Because the differences between them may appear self-evident, a comparison may not seem necessary. But such a comparison is of great significance both from a cognitive and from a computational point of view, since SP compounds and NV headed
compounds (also called N(mod)V in the present study, cf. chapter 7) resemble one another in form; they must be accessed and processed in different ways.

First, the types of verbs that occur in the SP compounds are different from those that occur in verbal VN compounds. The vast majority of the verbs in the P position of SP compounds are stative verbs, while those in the V position in the verbal VN compounds are transitive verbs.

In contrast with SP compounds, NV headed compounds consist of a noun component, functioning as an adverbial, and a verb component modified by the noun. Consider the following examples.

(14)  

\begin{tabular}{lll}
  mian4-tan2 & face-to talk & 'to talk face to face' \\
  bian1-da3 & whip-to beat & 'to beat with whip' \\
  kou3-shi4 & mouth-to examine & 'to have an oral exam' \\
  fen3-shua1 & powder-to paint & 'to whitewash' \\
  huo3-zang4 & fire-to bury & 'to have a cremation' \\
  gual-fen1 & melon-to dissect & 'to partition' \\
  qiang1-bi4 & gun-to kill & 'to execute by shooting' \\
  bu4-xing2 & pace, step-to walk & 'to walk on foot' \\
  niao3-kan4 & bird-to view & 'to get a bird's eye-view' \\
\end{tabular}

As we can see, in contrast with SP compounds, the noun elements in the above examples in (14) function as adverbials modifying the following verb elements. Some function as the manner of an action, such as mian4-tan2 'to talk face to face', niao3-kan4 'to get a bird's eye-view' and gual-fen1 'to partition'; some function as instruments, such as
bian1-da3 'to beat with a whip' and fen3-shual 'to whitenew'. In short, NV headed compounds are different from SP compounds in that the noun components in NV headed compounds can not function as logical subjects, but only function as modifiers of the verb components, which usually name actions. As a result, most NV compounds represent actions or processes, while most SP compounds, if not nominal SP, represent states. NV compounds are discussed in more detail in the following chapter. Examples in (15) and (16) briefly show the contrast between SP and NV headed compounds. The components of SP compounds, in most cases, can occur with intervening bu4 'not (habitual)' or mei2 'not (perfective)'. But for NV headed compounds, such a test fails.

(15)a. tou2 bu4/mei2 teng2
    head not/not ache
    'Head does/did not ache.'

b. xin1 bu4 ruan3
    heart not soft
    'not soft-hearted'

c. di4 mei2 zhen4(dong4)
    earth not shake
    'The earth didn't quake.'

(16)a. *mian4 bu4/mei4 tan2
    face not/not talk

b. *bian1 bu4/mei4 da3
    whip not/not beat

c. *qiang bu2/mei2 bi4
gun not/not kill

We can see that the examples in (16) are unacceptable because most of the nouns in the NV headed compounds are not animate and cannot function as agents/subjects of the verb elements, in contrast with the nouns in the SP compounds shown in (15). One may argue that there is one exception of NV compound: niao3-kan4 bird-to look ‘to get a bird’s view’. It is true that ‘bird’ can function as the subject of ‘to look’. But niao3-kan4 can be distinguished from the SP compounds through another test. That is to say, every NV headed compound can be paraphrased into a construction such as (i) xiang4 N yi2yang V ‘to V like N’, (ii) yong4 N V ‘to V by using N’, or (iii) yi3 N de fang1shi4 V ‘to V in an N manner’. So niao3-kan4 can be paraphrased as ‘to look like a bird’. In contrast, none of the SP compounds can pass this test, as exemplified by (17).

(17) *xiang4 tou2 yiyang teng2
like head same ache

6.2.3 Predicate SP Compounds

Both adjectival and verbal SP compounds can function as the predicate in sentences. Generally speaking, the adjectival and verbal SP pattern is more productive than the nominal SP pattern, although the SP as a whole is much less productive than the verbal VN or VR patterns in Chinese. It is not immediately obvious from a functional point of view why some SP are nouns and never can be used as verbs while the others can. Perhaps it is a merely a result of history. Consider the following examples.

(18) a. jintian chun1-fen1
today spring-split

‘Today is the Spring Equinox.’

b. jiantian shi shuangl-jiang4
today be frost fall

‘Today is Frost’s Descent day.’

c. jiantian Taiwan you di4-zhen4 le
today Taiwan again earth-quake LE

‘There was an earthquake again in Taiwan today.’

d. Taiwan ne ge difang chang you di4-zhen4
Taiwan that CL place often have earthquake

‘There are frequent earthquakes in Taiwan.’

The form chunl-fenl and shuangl-jiang4 in (18a) and (18b) cannot be used as verbs.
The form di4-zhen4, on the other hand, can be both a noun and a verb.

6.3 Discussions on Subject/Object Asymmetry

Yueyuan Huang (1991) in his dissertation ‘Verbal Compounding and Chinese Phrase Structure’ reviews what Mithun (1984) and Baker (1988) observed as the subject/object asymmetry in compounding or incorporation:

‘It has been observed that transitive verbs can only incorporate or compound objects, but never subjects. Mithun (1984) and Baker (1988) have observed that majority of incorporating languages follow this subject/object asymmetry. It is found, however, that intransitive verbs may incorporate their subjects, provided that these intransitive are unaccusative verbs.’ (Huang 1991: 23)
The term 'unaccusative' is used to compare with 'unergative', which Huang (1991) does not clearly define in his work. The 'Lexicon of Linguistics' on the Web gives the following definition (http://personalweb.sierra.net/~spynx/FAQ/id15.html), summarized from Perlmutter (1978):

Unaccusative verb: Special kind of intransitive verb. Semantically, its subject does not actively initiate or is not actively responsible for the action of the verb; rather, it has properties which it shares with the direct object of a transitive verb (or better, with the grammatical subject of its passive counterpart). EXAMPLE: in English 'arrive', 'die' and 'fall' are unaccusative verbs. Furthermore, unaccusatives cannot be passivized, as opposed to unergatives (in languages with impersonal passives).

Unergative verb: Special kind of intransitive verb. Semantically, unergative verbs have a subject perceived as actively initiating or actively responsible for the action expressed by the verb. EXAMPLE: in English 'run', 'talk' and 'resign' are unergative verbs.

In languages that have a distinction between the perfective auxiliaries 'to be' and 'to have', the unaccusatives take 'to be', while the unergatives take 'to have'.

What Perlmutter (1978) postulates is that there is a split of intransitive predicates into unergative and unaccusative. Subjects of unaccusative verbs pattern syntactically together with objects of transitive verbs, while subjects of unergative verbs share many characteristics of subjects of transitive verbs.

The subject/object asymmetry proposal by Mithun (1984) and Baker (1988) seems to be analogous to ergative-absolutive case marking in ergative languages in that compounds are formed with intransitive subjects and transitive objects, but not transitive subjects. For characterizing the occurrence of verbs in Chinese compounds, we observe that two distinct subtypes of verb and also two distinct subtypes of noun enter into SP compounds vs. verbal VN compounds. That is to say, transitive verbs compound with
their logical objects to form VN compounds, and intransitive and stative verbs compound with their logical subjects to form SP compounds.

There have been arguments on the so-called subject/object asymmetry problem. In this chapter, I do not intend to explore it in depth. But it is pertinent to observe that languages form compounds for combinations which behave syntactically like simple forms, but they do not form compounds which do not fall into a syntactic category that already exists because it contains simple (i.e. non-compound) forms. The V-O combination can be compounded, since such a compound falls into the same syntactic category as simple intransitive verbs. But there are no simple forms which behave syntactically like the S-V- portion of a S-V-O clause. It is perhaps for this reason that the object of a verb can be claimed to be the internal argument of a verb while the subject is the external argument as argued by Huang (1991), Tang (1981) etc.

One may argue that it still seems to make sense to have *Agent +Vi or *SVN compounds, such as *ren2-chil(-fan4) person-eat(-rice) or *ma3-pao3 horse-to run. to serve the purpose of distinguishing similar actions performed by different types of agents. such as differentiating *ren2-chil person-to eat from *maol-chil cat-to eat or *niu2-chil cow-to eat. As a matter of fact, there are indeed compounds in such forms in Chinese: but they function as Modifier-Verb compounds, in which the noun component indicates the manner/mode/means of the action denoted by the verb component (cf 6.2.2 and chapter 7). Can2-shi2 silkworm-to eat ‘to eat the way a silkworm eats; to nibble like a silkworm’ is such an example. In this compound, ‘silkworm’ is construed as a manner rather than the agent of ‘eating’. For example, can2-shi2 Zhong1guol silkworm-to eat China does not mean *‘the silkworm eats China’. Instead, this sequence still needs
another agent/subject, such as *di4guo2zhu3yi4 (can2-shi2 Zhong1guo1)* ‘The imperialist countries (nibbled at China (‘s territory))’. This type of compound will be discussed in detail in Chapter 7 as N modifier-V compounds. The behavior of such compounds supports the observation that, given the existence of S-V-O syntax, the V-O portion is often lexicalized while the S-V portion is not.

6.4 More About SP Compounds

*Transitive SP compound?*

It is quite certain that most of the verb components in SP compounds are intransitive and as a result, most verbal SP compounds are intransitive too. Yet, there are three exceptions, one of which is mentioned by Chao (1965): *lu4-guo4*, ‘way-to pass’, *tu2-jing1*, ‘way-to pass’, ‘to pass by’ and *xin1-teng2* ‘heart-to ache/love’ ‘to love dearly; to feel sorry’, which can be intransitive with the meaning of ‘to feel sorry’. In these three SP compounds, the verb components are themselves transitive, and as a result, the SV compounds as a whole are also transitive. Please consider the following examples:

(19)a. *chel yao4 guo4 qiao2 le*
   car will pass bridge LE
   ‘The car is going to pass the bridge now.’

b. *wo tiantian lu4-guo4 na jia shang-dian*
   I everyday way-pass that CL store
   ‘I pass by that store everyday.’

c. *wo cong Beijing chufa, tu2-jing1 Shanghai, laidao Meiguo*
I from Beijing start off, way-pass Shanghai, arrive USA

'I started off from Beijing, passed by Shanghai, and came to the U.S.'

(20)a. *ta zhe ge ren, teng2 haizi*

he this GE person, love children

'He is fond of and nice to children.'

b. san ge zhier zhong, wo zui xin1-teng2 xiaosan

three GE nephew amid, I most heart-ache/love Xiaosan

'Among the three nephews of mine, I love Xiaosan most.'

c. hua name duo qian, wo hen xin1-teng2

spend that much money, I very heart-ache

'I feel sorry to have spent so much money.'

Are these three examples counter-examples of the claim that *SVtransitive complex forms are not acceptable?* It does not appear to be the case. *Lu4-guo4* is included in Chao (1965) as an SP compound. *Tu2-jing1* is a synonym of *lu4-guo4*, so I list it here, too. But these two compounds are not in a real sense subject-predicate compounds. As a matter of fact, they are close to N(modifier)-Verb forms in that they can only be paraphrased into such structures:

(21)a. *tu2-jing1* → *tu2 zhong1 jing1 guo4*

way-pass way amid pass over

'pass by' 'pass by amid journey'

b. *tu2-jing1* → *zhong1 tu2 jing1 guo4*

way-pass mid journey pass over
a.

`pass by' → 'pass by amid journey'

c.  

\( tu2\text{-jing}1 \rightarrow zai4 \ tu2 \ zhong1 \ jing1 \ guo4 \)  

way-pass in journey mid pass over  

'pass by' 'pass by amid journey'

(22)a.  

\( lu4\text{-guo}4 \rightarrow zai4 \ lu4 \ shang4 \ jing1 \ guo4 \)  

way-pass in way on pass over  

'pass by' 'pass by on the way'

b.*  

\( lu4\text{-guo}4 \rightarrow na4 \ tiao2 \ lu4 \ jing1 \ guo4 \)  

way-pass that CL way pass over  

'pass by' 'that road (way) passes …'

A paraphrase for \( lu4\text{-guo}4 \) like that in (22b) will be inappropriate for sentence (19b), which is repeated as (23):

(23)  

\[ wo \ tiantan \ lu4\text{-guo}4 \ na \ jia \ shang-dian \]  

I everyday way-pass that CL store  

'I pass by that store everyday.'

So, from what has been discussed above, we can see that \( lu4\text{-guo}4 \) and \( tu2\text{-jing}1 \) respectively, bear more of a Modifier-Verb relation between their components than a Subject-predicate relation.

The form \( xinl\text{-teng2} \) 'to love, to feel sorry' is a different issue. I prefer to follow Tang (1981) that the transitive \( xinl\text{-teng2} \) is verbalized and transitivized from the adjectival \( xinl\text{-teng2} \). Very often, such adjectives are metaphorically extended. Another
adjective SP compound that can possibly be used as a transitive verb by some speakers is *yan3-hong2* ‘eye-red’, ‘jealous’.

**Unaccusative verbs**

Huang (1991) states that only adjectives can occur in the second position in an SP compound. This statement is not accurate since some action verbs can also occur in the P position of SP compounds, such as *di4-zhen4* ‘to quake’. But in general, Mithun (1984) and Baker’s (1988) statement is true that intransitive verbs can compound with subjects provided that they are unaccusative. That is to say, the subjects of such verbs **do not initiate** the actions or states indicated by the P component. Examples of verbal SP compounds are: *di4-zhen4* ‘earthquake’, *bian4-bi4* ‘to be constipated’, *tou2-teng2* ‘headache’, *ri4-chu1* ‘sun-come out’, ‘sunrise’, *ri4-luo4* ‘sun-set’, ‘sunset’, etc. Examples for adjectival SV compounds are: *xin1-hen3* ‘cruel’, *shou3-du2* ‘hand-poisonous’, ‘merciless’, etc.

### 6.5 Adjectival SP Compounds As Modifiers Only

#### 6.5.1 The Difference from SP Compounds Discussed Above

There are some complex forms that seem to share the same formal structure as the SP compounds discussed above. These complex forms can be illustrated by the following examples:

(24)a. *sheng3-li4* province-to found ‘founded by a province’

*min2-xuan3* people-elect ‘elected by people’

*guan1-ban4* government official- run ‘run by government’
guo2-ying2 state-run 'run by state'
si1-ying2 private-run 'run by private people or organization'
guo2-li4 state-found 'founded by state'
min2-ban4 people-run 'run by non-governmental organization'
b.

ta zai4 sheng3-li4 zhongxue du-shu
he ZAI province-found middle school read-book

'He goes to a province-founded middle school.'
c.

zhe shi yi jia guan1-ban4 qi3ye
this BE one CL government-run enterprise

'This enterprise is run by the government.'

This group of SP forms are different from the SP compounds discussed above in the following respects.

i. The V component in such an SP complex form is transitive.

ii. Yet, such an S+Vt, as a whole, is not transitive. They differ from the real transitive example I gave in the previous sections, such as the alleged SP compound lu4-guo4 way-to pass 'to pass by'. For example, (25a-b) are not acceptable.

(25)a. *women sil-ying2 zhe suo xuexiao
we private run this CL school

b. *guojia guan1-ban4 le zhe suo xuexiao
iii. Such an S+Vt does not form intransitives or adjectives either:

(26)a. *zhe suo xuexiao guan1 ban4
    this CL school official run
b. *zhe suo xuexiao hen guan1 ban4
    this CL school very official run

iv. In short, such an SP complex form cannot function as a predicate by itself.

v. However, S+Vt+de can occur in isolation. It can function as predicate after the link verb shi4 ‘be’:

(27) zhe suo xuexiao shi guan1 ban4 de
    this CL school be official run DE
‘This school is run by the government.’

vi. Such an S+Vt complex form can only serve as a modifier of a following noun phrase to form a larger noun phrase (composed of S+Vt+Noun, in which S is the logical subject of the Vt component, and the modified noun is the logical object of the Vt component). This kind of S+Vt form functions like a relative clause. In form, it also resembles a relative clause. The glosses of (28-35) show the only acceptable interpretations of such SP complex forms.

(28) sheng3-li4 (de) zhong1-xue2
province-found (of) middle-school
'middle school founded by a province'
"the province founds(founded) the middle school"

(29)a.  min2-xuan3 (de) zong3-tong3
people-elect (of) president
'president elected by people'

people elect president (it means that president is not designated by some
people behind the screen)

b  jin4-xing2  min2-xuan3  zong3-tong3
proceed people-elect president
people electing president

(30)  guan1-ban4 (de) za2-zhi4
government official- run (of) journal
'journal managed by government'
"government runs a journal"

(31)  guo2-ying2 (de) qi3-ye4
state-run (of) enterprise
'enterprise run by state'
"government/state runs the enterprise"

(32)  si1-ying2  qi3-ye4
private-run enterprise
'enterprise run by private people or organization'
"private people run the enterprise"
vii. So far, I have shown that these SV forms cannot function as predicates and do not have most of the properties to be SP compounds discussed in the above sections. However, most literature on Chinese linguistics and compounds include them as compounds. These SV forms such as min2-ban4 are lexicalized units. They differ from relative clauses in that a relative clause modifying a following noun has to have a de ‘of’ immediately preceding the modified noun as shown in (35d). On the contrary, the S+Vt form in question does not need a de when modifying a noun; instead, with a de, the utterance will sound unnecessary, as shown in (35b-c).

(35a) min2-ban4 jiao4-shi1

people-found teacher

‘teacher who works in a non-government founded school’

b. *min1-ban4 de jiao4-shi1
people-found of teacher

c. sheng3-li4 (de) zhongxue
province-found (of) school

d. ta bu xihuan wo mai de shoujuan
he not like I buy of handkerchief

‘He doesn’t like the handkerchief I bought.’

6.5.2 A Hypothesis

From the perspective of word formation, I propose that these SVt complex forms are very different from the SP compounds discussed in the previous sections, i.e. SVi/Adj. The SV forms that appear in this section may be considered to be simplifications of combinations of other compounds or SP phrases. I have discussed this type of word formation briefly in Chapter 2. Namely it is an abbreviation of a longer form. Then as time goes on, the simplified phrases become fixed and lexicalized. But their usage is limited to being modifiers of noun phrases. But such is not the case for the most of the SP (SVi/Adj) compounds, especially those with adjective V components. We can show this difference by trying to extend the SVt compounds in (36-37):

(36)a. guojia jing1-ying2 de qiye
state run of enterprise

‘an enterprise run by the government’

b. guo2-ying2 qiye
state-run enterprise

‘state-run enterprise’
Most the SP compounds that can function as predicates are composed of a noun and a monosyllabic adjective, which is not a simplification of any complex form.

6.6 Comparison of Pairs with Opposite Orders

There are a limited number of SP compounds, especially with xin1 ‘heart’ as the noun component, that have mirror forms. It is not of great significance to compare them, since this pattern is not at all productive. I will briefly discuss them to observe that there exist such pairs.

(38)a.  
\[ xin1 - xi4 \] heart-fine  \[ 'careful, scrupulous' \]

b.  
\[ xi4 - xin1 \] fine-heart  \[ 'careful, attentive' \]

(39)a.  
\[ xin1 - han2 \] heart-cold  \[ 'bitterly disappointed' \]

b.  
\[ han2 - xin1 \] cold-heart  \[ 'bitterly disappointing' \]

(40)a.  
\[ xin1 - xu4 \] heart-void  \[ 'diffident; with a guilty conscience' \]

b.  
\[ xu4 - xin \] void-heart  \[ 'humble; modest' \]

All the compounds in the three pairs of examples can be considered to be adjectives.

When a noun component precedes an adjective component as shown in the (a) forms, the
complex form is an SP compound. When an adjective component is preceding the noun component, i.e. Adj+S, the complex form can be viewed as an inverted form of an SP compound, but definitely has its own semantics somewhat different from that of the SP form. An Adj+S form cannot be interpreted as having a modification relationship between the two components. Since these pairs have a difference in semantics, they should not be considered as free variants of their counterparts.

6.7 Conclusion

To sum up, in this chapter I have described the different categories of SP compounds and have shown how SP compounds are different from NV headed compounds. Most SP compounds indicate states. In SP compounds, P is usually an adjective or an intransitive verb. Many S components are body parts and the compounds are used to express one’s feelings.
Chapter 7
MV COMPOUNDS

7.1 Introduction

7.1.1 Definition of MV Compounds

By 'MV', I mean a verbal compound pattern with a modifier functioning as an adverbiai plus verb or adjective component, the modified. The modifier can refer to 'manner', 'mode' or 'means'. An MV compound is right-headed, which means that the verb component is the head of the MV structure. Tang (1981), in a study of productivity of Chinese compounding patterns, states that in general, MV compounding patterns are much less productive than VN(object) and VR ones. Among MV patterns, I believe that Adj+V and Adj+Adj patterns are more productive when compared to the rest.

7.1.2 Various Patterns of MV

Any of the following can appear in the M position of an MV compound: Adj. Noun. Adv. Verb. Some examples are:

A. Adj(mod)+V (hereinafter A(mod)V)

(1) leng3-xiao4 cold-to laugh 'to jeer'
    an4-shai dim-to kill 'to assassinate'
    re4-ai4 hot-to love 'to love passionately'
    chi2-dao4 late-to arrive 'to arrive late'
\( huan1 \)-song4 joyful-to see off 'to see off'
\( zhong4 \)-shi4 heavy-to look (as) 'to value'
\( ruan3 \)-jin4 soft-to prohibit 'to put under house arrest'
\( xiao3 \)-kan4 small-to look 'to look down upon'

B. Noun(mod) + V (hereinafter N(mod)V)

(2) \( mian4 \)-tan2 face-to talk 'to talk face to face'
\( huo3 \)-zang4 fire-to bury 'to cremate'
\( feng \)-xing2 wind-to do 'to become a fashion'
\( bian1 \)-da3 whip-to beat 'to whip'
\( gua1 \)-fen1 melon-to separate 'to carve up'
\( can2 \)-shi2 silkworm-to eat 'to nibble'
\( xi2 \)-juan3 mat-to roll 'to roll across, to engulf'
\( xiang3 \)-ying4 sound-to respond 'to respond, to answer one's call'
\( qiang1 \)-bi4 gun-to kill 'to kill, to execute'
\( dian4 \)-tang4 electricity-to burn 'to perm hair'

C. Adv(mod)+ V (hereinafter Adv(mod)V)

(3) \( xian1 \)-sheng1 first-to be born 'Mr.; teacher'
\( zai4 \)-jian4 again-to see 'to see again; bye'
\( hu2 \)-shuo1 recklessly-to talk 'to talk nonsense'

D. Verb(mod)+ V (hereinafter V(mod)V)
Some of the V(mod)V compounds listed here may not have a sharp distinction from VV coordinate compounds in some speakers' view.

(4)  
\[ qiang3-jiu4 \] to rush-to rescue \quad 'to rescue'  
\[ zuo4-shi4 \] to sit-see \quad 'to sit by and watch'  
\[ zou3-fang3 \] to walk-to visit \quad 'to visit'  
\[ zheng1-ming2 \] to contend-to sound \quad 'to contend'  
\[ liu2-shi4 \] to flow-to elapse \quad 'to pass: to elapse'  
\[ chul4-jia4 \] to be out-to marry \quad '(women) to marry'  
\[ lian2-zai3 \] to link-to publish \quad 'to publish in series'  
\[ wu4-shang1 \] to be mistaken-to hurt \quad 'to hurt by mistake'  
\[ jiao1-huan4 \] reciprocal-change \quad 'to exchange'  

There is one subtype of MV compound which can be called Verb(direction)V MV compound, which will be discussed in Section 7.4.2.

7.2 The Distinctiveness of MV Compounds

7.2.1 N(mod)V Compounds vs. Nsubj-Vpredicate (i.e. SP) Compounds

The distinction between SP compounds and compounds composed of noun modifier plus verbal components has been discussed in the previous chapter. Formally, there is not much evidence to make such a distinction, except that many S-P compounds have body parts in the S position and adjectives in the P position. N(mod)V compounds do not show this tendency. Most of the noun components in MV compounds name a kind of material, such as \[ xi2 \] 'mat' in \[ xi2-juan3 \] 'to roll across, to engulf'; \[ bian1 \] 'whip' in
bian1-da3 ‘to whip’; gua1 ‘melon’ in gua1-fen1 ‘to carve up’, etc., or name a kind of phenomena, such as xiang3 ‘sound’ in xiang3-ying4 ‘to echo, to respond’. In the following sections, I will show that these nouns are used in MV compounds as tools or manners to modify the verb components, mostly in metaphorical senses.

7.2.2 V(mod)V Compounds vs. VV Coordinate, VV(obj), VV(result) Compounds and Serial Verbs

MV vs. VV Coordinate Compounds

The key difference between an MV compound and a VV coordinate compound is that the components of a VV coordinate compound are either synonyms or antonyms, or at least components representing very close semantic fields, such as sheng1-chan3 generate-produce ‘to produce’, or shan1-gai3 to delete-to correct ‘to correct’ etc. In contrast, MV compounds do not have that sense of coordination. Instead, the first verb component is supposed to serve as a modifier, usually indicating manner, of the second verb component. The form zuo4-shi4 to sit-to look ‘to sit idly and watch’ is a good example to show the difference of the two VV types of compounds. The form zuo4 vividly indicates a manner of shi4, with the implication that when something important or urgent happens, one simply sits aside and watches without taking any action. In this compound, zuo4 is not in coordination with shi4, unlike sheng1-chan3 to generate-to produce ‘to produce’. Another example in which the first verb indicates manner is wo4-you2 (to lie on one’s back to swim). The difference between MV and VV coordinate compounds can be tested also by the phrasal coordinate you4 ... you4 ... construction. The two components of VV coordinate compounds can almost always occur in such a construction to form a coordinate phrase indicating two parallel processes, provided that
both of the components are free morphemes. Such a construction is rough paraphrase of a VV coordinate compound. But the components of an MV compound cannot co-occur in such a construction, because the M element and the V element together name a single process, therefore they cannot separately occur in a phrasal coordinate construction to indicate parallel processes. On the contrary, for V(mod)V compounds, the V _ the V construction is close to its meaning, in which the first V indicates the manner of the second V. In contrast, the components of a VV coordinate compound are not compatible with such a construction, as illustrated in (6).

(5)a  you4  _ pail  you4  da3
     again  pat  again  beat
     'to pat and beat.'

b.  *you4  _ wo4  you4  you2
    again  prone  again  swim

c.  *you4  _ zou3  you4  fang3
    again  walk  again  visit

(6)a.  wo4  _ the  you2(yong3)
     prone  ZHE  swim
     'To swim in a prone manner.'

b.  *pail  _ the  da3
    pat  ZHE  beat

Yet, there are cases when an MV and a coordinate VV compound are harder to distinguish. qia1-suan4 to pinch-to calculate ‘to count something on one’s fingers’, for
example, appears problematic. On the one hand, *qia1* does not have the sense of 'to count' or 'to calculate' in isolation, so when it appears in the compound *qia1-suan4*, it should be considered as a modifier of *suan4*, as some linguists classify it, which makes perfect sense. On the other hand, it can appear in a coordinate structure like *neng2 qia1 hui4 suan4* be able to-pinch-be able to-calculate 'be able to calculate'. In this instance, *qia1* is assimilated to the sense of *suan4* at least metaphorically, indicating 'to be capable of calculating'. One may argue that *qia1-suan4* can be either an MV or a VV coordinate compound. There are some other VV forms listed by Tang (1989:20) as MV compounds which are even more ambiguous, such as *tan3-hu4* to shield-to protect 'be partial to; to shield'; *zhu3-chi2* to host/own-to hold 'to take charge'; *ke4-fu2* to overcome-to obey 'to overcome'; *can1-bai4* to pay one's respect to-visit with respect 'to pay homage to', etc.

As a matter of fact, there are quite a few verbal compounds which are so lexicalized that we can no longer tell their structure in a clear-cut way. In the beginning of this work, I pointed out that it is more meaningful to study the patterns of compounds that are more productive than focusing on a closed set of compounds. As a whole, the MV pattern of compounds is not as productive as the VN or VR patterns, according to Tang (1989). Among MV compounds, certain patterns, such as Adj(mod)V, are more productive than others. The V(mod)V pattern is not very productive.

*MV vs. VV Verb Objective Compounds (VV(obj))*

A verb component can be the object of another verb component in a compound. To distinguish this kind of compound from V(mod)V compounds also requires consideration of meaning. For example, both *cuil-chan3* to expedite-to produce 'to expedite child delivery' and *cuil-mian2* to expedite-to sleep 'to hypnotize' are verb-
object compounds with two verbal components. *tao3-yen4 to invite-d disgust ‘to be disgusting, to find (someone) disgusting/annoying’ is another example.

**V(mod)V vs. VV (resultative) Compounds**

A VR compound has the **first** verb component as its head and the second as its complement, whereas a V(mod)V compound has the **second** verb component as its head and the first as its adverbial modifier. Here is a pair of examples: *wo4-you2 to lie on one’s back-to swim ‘to swim in a prone position’ and *wo4-dao3 to lie on one’s back-to fall onto the ground ‘to take a prone position’.

(7a). wo4       bu/de       dao3
lie on one’s back not/able fall down

b. *wo4         bu/de       you2
lie on one’s back not/able swim

In theory, a VR compound can occur in a potential form ‘V de/bu R’ (cf. Chapter 3 VR compounds), indicating ‘to be able/unable’ to V to R’s extent. In contrast, a V(mod)V compound cannot occur in this way, as illustrated in (7b). In example (7b), wo4-you2 is an MV compound with wo4 as an adverbial signaling the manner of you2; in contrast, in (7a), wo4-dao3 is a VR compound with dao3 ‘to fall down’ as a post-adverbial signaling the result of wo4 ‘to lie one one’s back’. A sharper difference is manifested in the pairs consisting of directional verbs, such as shang4-sheng1 up-to rise ‘rise’ versus sheng1-shang4 to rise-up ‘to rise up’, chul-jia4 out-to marry ‘to marry (for women)’ and jia4-chul to marry-out ‘to marry (for women)’. In section 6, I will discuss in more detail the contrast of such pairs.
**V(mod)V Compounds and Serial Verbs**

A serial verb construction occurs at the syntactic level and is not a compound. In Li & Thompson (1981), 'serial verb construction' is used to refer to a sentence that contains two or more verb phrases or clauses juxtaposed without any marker indicating what the relationship is between them:

(NP) V (NP) (NP) V (NP)

A serial verb construction can always be separated by noun phrases. This is where a serial verb construction differs from a VV MV compound. Here are some examples (Li & Thompson 1981):

(8a) ta shuo ta yao4 lai2

she say she want come

'She said she would come.'

b. ta shuo ta yao4 wo lai2

she said she want me come

'She said that she wanted me to come.'

In sentence (8a), the verb lai2 'to come' is a direct object of yao4 'to want' which functions as a modal verb expressing wishes and in sentence (8b) a phrase wo3 lai2 is the object of yao4.

(9a) wo qu4 mai3 shu1

I go buy book
b. \textit{wo qu4 shudian mai3 shu}\]

I go bookstore buy book

‘I’m going to a bookstore to buy a book.’

In sentence (9a), \textit{qu4 mai3 shul} indicates an event composed of two sub-events in a sequential order. (9b) shows that a noun naming location \textit{shudian} ‘bookstore’ can be inserted in the serial verb construction \textit{qu4 mai3 shu1}. In contrast, the components of a V(mod)V compound cannot be separated by noun phrases.

### 7.3 Compound Status of MV Compounds

Some of the MV compound formation patterns such as the N(mod)V type do not conform with Chinese syntactic rules. They are only valid at a morphological level.

#### 7.3.1 Noun Components as Modifiers

In the following cases, it is very easy to determine the compound status of an MV complex form: (1) when M is a noun and V names an action and (2) when M is a noun and V is actually an adjective. In Chinese, at a syntactic level, it is not grammatical for a noun to function as modifier of a following verb. Therefore, any MV complex form that makes sense with a noun modifying a following verb is necessarily a compound. The following are some comparisons:

(10)a. \textit{wo xiang3 gen1 ni dang1 mian4 tan2(lun4) che jian shi}\]

I want with you face to face talk(discuss) this CL matter

‘I want to talk to you face to face about this matter.’
b. wo xiang gen ni mian4-tan2 zhe jian shi
   I want with you face-talk this CL matter
   ‘I want to talk to you face to face about this matter.’

c. *wo xiang gen ni mian4 tan2-lun4 zhe jian shi
   I want with you face talk&discuss this CL matter

(11)a. tamen yong bian1-zi (chou1)da3 zhansan
   they use whip (lash)beat Zhangsan
   ‘They beat Zhangsan with a whip.’

b. tamen bian1-da3 zhansan
   they whip-beat Zhangsan
   ‘They beat Zhangsan with a whip.’

c. *tamen bian1-zi (chou1)da3 zhansan
   they whip (lash) beat Zhangsan

The MV compounds in the examples (10-11) are made up of a noun component modifying a following verb component. As shown in the examples (10a) and (11a), at a phrasal level, such a noun has to be preceded by a preposition (or co-verb), dang1 ‘to sb’s face’ or yong4 ‘with: to use’, in order to serve as an adverbial of the following verb or verb phrase. Without prepositions (or co-verbs) preceding the noun phrases mian4 or bian1-zi, as shown in (10c) and (11c), the utterances are ungrammatical. Thus MV complex forms such as mian4-tan2 and bian1-da3 must be construed as compounds.

There are, however, apparent exceptions to the rule that nouns (or noun phrases) cannot modify verbs in Chinese at a syntactic level. For instance, the following utterances are allowed:
(12)a. \textit{gao1-sheng1} \hspace{1cm} \textit{(de)} \hspace{1cm} \textit{jiao4-han3}

high-voice \hspace{1cm} DE \hspace{1cm} call-shout

‘shout loudly’

b. \textit{kuai4-su4} \hspace{1cm} \textit{(de)} \hspace{1cm} \textit{chong xiang qianfang}

quick-speed \hspace{1cm} DE \hspace{1cm} dash \hspace{1cm} toward \hspace{1cm} front

‘rush forward quickly’

In (12), \textit{gao1-sheng1} and \textit{kuai4-su4} both appear to be nominal compounds yet they are used to modify the verb phrases following them. In both cases, \textit{de} (the marker of adverbial phrases) can be omitted. In such cases, \textit{gao1-sheng1} and \textit{kuai4-su4} probably can be considered as adverbs. One piece of evidence is that these two forms seldom function as nouns in other contexts.

Likewise, at the syntactic level, nouns also cannot precede adjectives as modifiers. Please consider the following examples.

(13)a. \textit{zhe} \hspace{1cm} \textit{haizi de} \hspace{1cm} \textit{shou xiang4 bing1(-kuai4) vivang liang2}

this \hspace{1cm} child \hspace{1cm} of \hspace{1cm} hand \hspace{1cm} like \hspace{1cm} ice \hspace{1cm} (-chunk) \hspace{1cm} like \hspace{1cm} cold

‘The child’s hand is as cold as ice (or icecube).’

b. \textit{zhe} \hspace{1cm} \textit{haizi de} \hspace{1cm} \textit{shou bing1-liang2}

this \hspace{1cm} child \hspace{1cm} of \hspace{1cm} hand \hspace{1cm} ice-cold

‘This child’s hand is ice-cold.’

c. \textit{*zhe} \hspace{1cm} \textit{haizi de} \hspace{1cm} \textit{shou bing1-kuai4 liang2}

this \hspace{1cm} child \hspace{1cm} of \hspace{1cm} hand \hspace{1cm} ice-cube \hspace{1cm} cold
The ungrammaticality of example (13c) shows that attempting to use a noun modifying an adjective fails.

7.3.2 Adjective Components as Modifiers and Compound Status

I believe that when a *monosyllabic* adjective signaling manner (or degree), with the exception of adjectives such as *kuai4* ‘quick’, *duo1* ‘more’ and *shao3* ‘less’, etc., which I will discuss later, is attached to a following monosyllabic verb, the combination tends to behave like a compound in the sense that the combination is tighter than the components of a phrase. There are several reasons for proposing this idea.

First of all, like compounds generally, many such Adj+V combinations have special meanings that go beyond the phrasal meaning, such as *jing4-zuo4* quiet-to sit ‘sit-in demonstration’, in contrast with ‘to sit quietly’.

Second, many monosyllabic adjectives or verbs are bound morphemes, which makes the combination of an adjective and a verb component necessarily a compound, according to Chao (1968), e.g. *zhong1* ‘loyal’ in *zhong1-gao4* loyal-to inform ‘advice: to advise’. *xi2* in *kong1-xi2* air-to attack ‘air-to attack’ are bound morphemes.

Third, the components of many adj+V combinations allow no or a very limited number of intervening elements. Even for those adj+V forms whose meanings are transparent, such as *jin3-gen1* tight-to follow ‘to follow closely’ or *ku3-xue2* bitter-to study, ‘to study hard’, there exists a difference distinguishing them from their corresponding phrases.

Lu (1957) gives an unsatisfactory explanation of this issue. Lu (1957) lists four adjectives that can never be separated from any following verbs they modify: *pang2* ‘beside’, *fu4* ‘again; copy’, *gong1* ‘public’, and *tong2* ‘same’. For other cases, Lu claims
that the compound status of some can be tested by inserting the aspectual marker *zhe*. If an adj+V form can be separated by *zhe*, then it is likely to be a phrase. For instance, *liang2 chi1* cold-to eat ‘to eat as it is cold’ can be expanded as *liang2* ‘cold’ *zhe chi1* ‘to eat’, therefore, it is a phrase. But then Lu acknowledges that it is very hard to distinguish adj+V phrases and compounds using this method because, according to him, many phrases cannot be expanded by *zhe* either, such as *chou1 da3* stink-to beat ‘to beat utterly’. Therefore, he suggests a rather subjective test, that in cases where both adjective and verb components are free morphemes, if the meaning of their combination feels ‘tight’ enough, then it is a compound; otherwise it is a phrase. He gives one pair of examples: *huan3 jiao1* (slow-to hand in) ‘to hand in at a slow pace’ and *huan3-zheng1* slow-to levy ‘to levy at a slow pace’. The first according to Lu is a phrase whereas the second one is a compound. Despite the fact that *zheng1* is a bound morpheme, there is no clear difference in the ‘tightness’ of the two forms’ meanings. Both of them are transparent.

An alternative proposal is as follows. The monosyllabic adjectives preceding the verbs are not as free as the non-monosyllabic adverbial modifiers of the same verbs at a phrasal level. One reason is that a monosyllabic adjective cannot be used as an adverb to modify a verb from a distance at a phrasal level. It has to be attached to the verb as closely as possible. In Chinese, as Li & Thompson (1981:322) state, “with a few exceptions, such as *gu4yi4* ‘deliberately; on purpose’, manner adverbs are derived from adjectives. The process by which an adjective becomes an adverb involves the addition of the suffix –*de* and, for many adjectives, reduplication as well”. Consider the following examples.
(14)a.  
\[ \text{ta jing4jing de zuo4 zai nar} \]
he quiet-quiet DE sit at there

‘He is sitting there silently.’

b.  
\[ \%ta jing4jing zuo4 zai nar \]
he quiet-quiet sit at there

‘He is sitting there quietly.’

c.  
\[ *ta jing4 de zuo4 zai nar \]
he quiet DE sit at there

d.  
\[ *ta jing4 zuo4 zai nar \]
he quiet sit at there

e.  
\[ *ta jing4-zuo4 zai nar \]
he quietly-sit at there

f.  
\[ ta zuo4 zai nar \]
he sit at there

‘He sits there’

g.  
\[ tamen zai nar jing4-zuo4 shi-wei \]
they at there quiet-sit show-force

‘There are having a sit-in demonstration over there.’

In the above examples, jing4 is a one-syllable adjective. In sentence (14a), the reduplicated adjective jing4 ‘quiet’ plus the particle de functions as an adverbial indicating the manner of the verb zuo ‘to sit’. This is the most natural way for adjectives to modify following verbs. In some cases, de can be omitted as shown in (14b), which
some speakers may feel to be incomplete. Sentence (14c) shows that the non-
reduplicated jing4, even with particle de, cannot modify the verb zuo ‘to sit’. This
provides evidence that a monosyllabic adjective cannot be used as an adverb to modify
verbs even with the presence of the adverbial particle de. Reduplication of monosyllabic
adjectives, in fact, enables such adjectives to function as adverbs. The ungrammatical
example in (14d) further illustrates that a monosyllabic adjective cannot modify verbs at
a phrasal level.

Sentence (14e), however, is unacceptable for a different reason. In (14e), jing4-
zuo4 is construed as a compound, which is the same in the acceptable utterance (14g).
The reason (14e) is not grammatical is that, after the compounding of jing4 ‘quiet’ and
zuo4 ‘to sit’, the meaning of sitting expressed by the compound jing4-zuo4 is no longer
the same as that of the component zuo4 ‘to sit’. While zuo4 ‘to sit’ by itself, as shown in
(14f), can have locative phrases following it, the compound jing4-zuo4 can not. As Li &
Thompson (1981) illustrate, only four kinds of verbs can have post-locative phrases.
They are: (1) verbs of displacement such as tiao4 ‘to jump’: (2) verbs of posture such as
zuo4 ‘to sit’: (3) verbs of appearing such as si3 ‘to die’ and (4) verbs of placement such
as fang4 ‘to put, to place’. Apparently, jing4-zuo4 with the sense of ‘sit-in demonstration
’ does not qualify as a verb of posture any more.

In examples (15-16), jin3-gen1 tight-to follow ‘to follow closely’ and xi4-kan4
fine-to look ‘to look closely/carefully’ do not have specialized meanings different from
the composition of those of their components, yet they also show the tightness that their
corresponding phrases do not possess.

(15)a. women jin3-gen1 jie qianmian de che
we tight-follow ZHE front DE car

‘We followed the car in front of us closely.’

b. *women jin3 de gen1 zhe qianmian de che
we close DE follow ZHE front DE car
c. *women jin3 zai na liang che houmian gen1 zhe
we tight at that CL car behind follow ZHE
d. women jin3jin (de) gen1 zhe qianmian de che
we tight tight (DE) follow ZHE front DE car

‘We followed the car in front of us closely.’

e. women jin3jin (de) zai na liang che houmian gen1 zhe
we tight tight (DE) at that CL car behind follow ZHE

‘We closely followed behind that car.’

(16)a. wo ba cailiao xi4-kan4 le yi bian
I BA material fine-look LE one time

‘I read through the material very carefully.’

b. *wo ba cailiao xi4 de kan4 le yi bian
I BA material fine DE look LE one time
c. *wo xi4 (de) ba cailiao kan4 le yi bian
I fine (DE) BA material look LE one time
d. wo ba cailiao xi4xi (de) kan4 le yi bian
I BA material fine-fine (DE) look LE one time

‘I read through the material very carefully.’

e. wo xi4xi (de) ba cailiao kan4 le yi bian
I fine-fine (DE) BA material look LE one time

‘I read through the material very carefully.’

The fact that a monosyllabic adjective can only modify an adjacent verb as an adverb provides further evidence of the tightness between the components in an Adj+V complex form that is different from phrases.

Another instance of adjective functioning as adverb in Adj+V compounds is xiao3 ‘small’. Pan (1990) et al. also mention that, when xiao3 ‘small’ modifies a verb, the complex form consisting of xiao ‘small’ and the verb is necessarily a compound. xiao3 ‘small’, as an adjective, names indeterminate size of entities and is used to modify following nouns. It can only be used to indicate manners in compounds. For instance, sentence (17a) is not acceptable. xiao3-kan4 in (17b) is a compound.

(17)a. *ta xiao3xiao de kan4 le wo yi yan
he small small DE look LE me one look

b. ta xiao3-kan4 wo
he small-look me

‘He belittles me.’

The driving force for combinations of monosyllabic adjectives and monosyllabic verbs to be compound-like as opposed to phrases may come partly from the dominance of the two-syllable word unit in contemporary Chinese. A two-syllable unit is the most stable and best-accepted unit in the language. So as long as an Adj-V combination is formed, speakers are ready to accept it as a unit.
Exceptions to the above observation are utterances with *kuai4 'quick', *duol
'much; more', *shao3 'little; less' in imperative senses.

(18)a. *kuai4 chong1- dao4 qian2mian qu!
    quick dash to front go!
    'Rush ahead!'

b. *ta *kuai4 chong1- dao qianmian qu
    he quick dash to front go

c. ta hen4 quai4 /quai4-su4 chong1- dao qianmian qu
    he very quick /quick-speed dash to front go
    'He rushed ahead quickly.'

From the examples in (18), we can see that, although it is acceptable in an imperative
sentence (18a), the sequence of *kuai4-chong1 quick-to dash is not acceptable in the
declarative sentence (18b). When *kuai4 'quick' is replaced by *hen3 *kuai4 'very quick' or
*kuai4-su4 'quick speed', however, the combination with verb chong1 'to dash' becomes
natural. *kuai4 'quick' can precede many verbs in an imperative sentence, but in a
declarative sentence, *kuai 'quick' cannot by itself appear in front of most of the verbs.
(19) are examples for *duol 'more'.

(19)a *duol chil shucai shao chi rou
    more eat vegetable less eat meat
    'Have more vegetables and eat less meat.'

b. *ta *duol chil shucai
    he more eat vegetable
c.  
\[duo1\text{-}kui1 \quad ni \quad bangmang\]

much-owe  you  help

'Thank you very much for your help.'

In sentence (19a), *duo1 chil* is not a compound. Like *quai4 'quick', it occurs in front of a verb only in imperative sentences (cf. (19b)). *duo1-kui1* in (19c) is a compound.

All the above illustrations including nouns and adjectives as modifiers of verbs in compounds confirm one point: when an unaccepted sequence (with a modification relationship) at phrasal level becomes acceptable at a morphological level, the complex form qualifies as a compound. For example, *xiaoz* in general cannot be used as modifier to modify a verb. Yet, it can occur in the compound *xiaoz-kan4* small-to look 'to belittle'.

As a matter of fact, many compound-like Adj+V forms can be considered simplifications/contractions of phrases that consist of adverbial phrases as modifiers and verbs as the modified. The following are some examples.

(20)a.  
\[zhuan1\text{-}gong1\]

special-attack  ‘to specialize in’

b.  
\[zhuan1\text{-}men2\]

\[gong1\text{-}du2\]

special-door  attack-read  ‘to specialize in’

(21)a.  
\[gong1\text{-}shen3\]

public-to interrogate  ‘to put sb. on public trial’

b.  
\[gong1\text{-}kuail\]

\[shen3\text{-}pan4\]

public-open  to try-to judge  ‘to put sb. on public trial’

(22)a.  
\[an1\text{-}du4\]

safe-to pass  ‘to spend … time safely’

b.  
\[ping2\text{-}an1\]

\[du4\text{-}guo4\]
7.4 The Nature of MV Compounds

As is true for all modification, the modified noun or verb identifies a conceptual category and the modifier defines another category, and their combination denotes the intersection of their categories, hence a subcategory of the modified. In verbal MV compounds, the head verb components are delimited by their modifiers. M and V are usually not separable and the M component functions as an adverbial. The component in the M position either defines a manner of the action named by the verb component, a tool used to realize the action, or a degree of an activity or state in a metaphorical or a non-metaphorical sense. The M slot cannot be filled with a component that names an agent of the action, nor can it stand in a coordinative relationship with the verb. Some examples of the M element indicating manners of an action indicated by the verb components are: mian4-tan2 face-to talk ‘to talk face to face’, gual-fen1, melon-to divide ‘to carve up’, xiao3-kan4 small-to look ‘to look down upon; to belittle’, leng3-xiao4 cold-to laugh ‘to jeer’. hu2-yi2 fox-to suspect ‘to suspect’, he2-chang4 together-to sing ‘to sing together’, etc.

Some examples of the M element indicating instrument are: qiang1-bi4 gun-to kill ‘to kill with a gun’, bian1-da3 whip-to beat ‘to beat with a whip’, huo3-zang4 fire-to bury ‘to cremate’, etc.

Examples of the M component indicating degree are: fei1-kuai4 to fly-quick ‘extremely quick’, tou4-ming2 transparent-clear ‘transparent’, re4-ai4 hot-to love ‘to love’, chi2-dao4 late-to arrive ‘to arrive late’, etc. Consider Table 7.1:
Table 7.1 Various Combinations of M and V in MV compounds

<table>
<thead>
<tr>
<th>V</th>
<th>M</th>
<th>Nouns</th>
<th>Adjectives</th>
<th>Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjectives</td>
<td>e.g. xue3-bai2</td>
<td>snow-white 'as</td>
<td>gun3-re4</td>
<td>to boil-hot 'extremely</td>
</tr>
<tr>
<td></td>
<td>snow-white 'as</td>
<td>white as snow'</td>
<td></td>
<td>hot'</td>
</tr>
<tr>
<td></td>
<td>bu4-xing2</td>
<td>step-to walk 'to walk</td>
<td>leng3-xiao4</td>
<td>to flow-to elapse</td>
</tr>
<tr>
<td></td>
<td>to foot'</td>
<td>on foot'</td>
<td></td>
<td>'to elapse'</td>
</tr>
<tr>
<td></td>
<td>qiang1-hui4</td>
<td>gun-to kill 'to kill</td>
<td>an4-shai</td>
<td>to rush-to rescue</td>
</tr>
<tr>
<td></td>
<td>to kill with a</td>
<td>gun'</td>
<td>to kill 'to murder'</td>
<td>'to rescue'</td>
</tr>
</tbody>
</table>

As illustrated in section 2, Noun+V, Noun+Adj, Verb+Adj or Verb+Verb MV compounds may seem ambiguous when viewed from their formal appearance alone because Noun+Verb and Noun+Adj can be SP compounds and Verb+Verb can be VO, VR and VV coordinative compounds or a serial verb construction. In the following paragraphs, I will elaborate what makes a Noun+V/Adj or Verb+Verb an MV compound rather than any other type of compound.

7.4.1 Noun(mod)Verb/Adj MV compounds

There are two subtypes of N(mod)V/Adj compounds: (1) noun + verb; (2) noun + Adj.

A Noun Component plus a Verb Component Naming an Action

This category refers to MV compounds that are composed of nouns and intransitive or transitive verbs, but not adjectives. The noun component in some
compounds of this category, no matter from what perspective it is viewed, cannot be considered to be an agent of the action named by the verb component. For example, *mian4 ‘face’, in *mian4-tan2 face-to talk ‘to talk face to face’, cannot be construed by a speaker to be the agent of the action of talking. It names a manner of talking among people. Likewise, bian1 ‘whip’, in bian1-da3 whip-to beat ‘to beat with whip’, cannot be interpreted as the agent of the action of beating. It is an instrument used to realize this action. In short, the noun components in such compounds do not have the capacity to execute the actions. This characteristics distinguishes N(mod)V MV compounds in this subcategory clearly from SP compounds. The components of an SP compound can, in most cases, occur in a clause in which the S element is the subject of the P element. In contrast, the components of the N(mod)V compounds in this subcategory cannot. Consider the examples in (23). (23a) is associated with an SP compound tou2-teng2 head-to ache ‘to have a headache’ and (23b) is about the MV compound mian4-tan2 face-to talk ‘to talk face to face’.

(23)a. tou2 hen3 teng2
    head very ache
b. *mian4 yao4 tan2
    face will talk

More examples of this MV subcategory are listed below.

(24) kou3-shi4 mouth-to test ‘to have an oral exam’
fen3-shuai powder-to paint ‘to whitewash’
chen2-feng1 dust-to cover ‘to be covered with dust’
Some N(mod)V MV compounds, however, are composed of animate nouns and verbs naming actions. In such cases, nouns can be potential subjects or agents of the action named by the verb component, but there is a key characteristic that distinguishes this group of MV compounds from SP compounds with the same grammatical forms. This group of compounds can be paraphrased by a construction of ‘Vs like N’ or ‘V’s as an ‘N’ Vs’. In contrast, in SP compounds, P components do not represent characteristic properties of noun components and do not possess the ‘V in the manner of N’ relationship with the noun component. Consider can2-shi2 silkworm-to eat ‘to eat like a silkworm’ as an instance in contrast with an SP compound tou2-teng2 ‘to have a headache’ (cf. chapter 6).

A N(mod)V compound in this group can be defined as follows: the verb element indicates a general process of ‘eating’, and with the noun element it identifies a subset of eating, the subset of the process which is characteristically performed by the noun element functioning as modifier, i.e. ‘eating the way a silkworm characteristically eats’. In contrast, tou2 ‘head’ in the SP compound tou2-teng2 does not characteristically ache (represented by teng2). In this case, it is the head that is aching. For example, you can say (25b) but not (26b) and (27b).
(25)a. can2-shi2 silkworm-eat 'to eat like a silkworm'
   b. xiang4 can2 yiyang chi1 (i.e. shi2)
   like silkworm the same eat
   'To eat like a silkworm'

(26)a. tou2-teng2 head-ache 'to have a headache'
   b. *xiang4 tou2 yiyang teng2
   like head the same ache

(27)a. Taiwan di4-zhen4 le
    Taiwan earth-quake LE
    'There was an earthquake in Taiwan.'
   b. *xiang4 di4 yiyang zhen4(dong4)
   like earth the same shake (move)

In MV compounds of this subcategory, the action named by the verb component
is characteristic of the noun component. Compare the examples in (28).

(28)a. diguozhuyi wangtu can2-shi2 zhongguo
    imperialism try in vain silkworm-eat China
    'The imperialists tried nibbling China('s territory) (as a silkworm
    characteristically eats).'
   b. renmen feng1-yong1 er zhi
   people bee-flock and arrive
   'People flocked to the place (as bees characteristically flock).'
   c. na ji ge huaidan bao tou shu3-cuan4
that several CL bad guy cover head mouse-scurry

‘Those bad guys scurry off as a frightened rat (characteristically does).’

d. ta gui1-suol zai jiaoluо li bu dongtan
he tortoise-huddle at corner in not move

‘He is holed up in the corner not moving (as a tortoise characteristically does by
hiding its head).’

The MV compounds in (28a-d) consist of animate nouns that can be considered as
potential agents and verbs naming actions. All of the compounds share one property in
common: the verb of the MV compound names an action or a feature that is a salient
characteristic of the noun component. For example, a turtle has the characteristic of
drawing in its head and legs as described by gui1-suol turtle-to huddle: a rat is known for
scurrying when frightened as described by shu3-cuan4 rat-to scurry.

Consider examples in (29).

(29)a. ta tou2-teng2
he head-ache

‘He has a headache (His head aches).’

b. diguozhuyi can2-shi2 zhongguo
imperialist silkworm-eat China

‘The imperialists eat China like a silkworm.’

In (29a), strictly speaking, the experiencer of ‘ache’ is his head, not ‘he’. In
contrast, the performer of ‘eating’ in (29b) is not the ‘silkworm’, instead, it is the
‘imperialists’. In the SP compound in (29a), ‘ache’ describes what happens to the head. In the MV compound in (29b), ‘silkworm’ describes the manner of eating.

For such N(mod)V compounds, it is a speaker’s intention to describe how somebody scurries (like a rat) rather than the fact that rats scurry or that tortoises hide their head. It is so because, in usual cases, he/she assumes that these facts are common sense that is shared as background knowledge between people in communication and do not need recapitulating. And a speaker, by means of language (here by means of these MV compounds), wishes to convey new information that contains his/her subjective views of the objective world we are living in, such as ‘runs like a rat’ etc. The function of such compounds being used as MV compounds to express manner/means/mode is so prominent, compared to their being used just for stating common sense, that hearers of these N(mod)V compounds naturally comprehend them as an action that is characterized by the noun element performing it, i.e. with a modification relationship in stead of SP compounds.

_A Noun Component and the Adj Component Characterized by the Noun Component_

The second type N(mod)Adj is similar to the previous N(mod)V subcategory. This group of compounds can be paraphrased by a construction of ‘as Adj as N’. Some examples are as follows:

(30)a. ta zuan zhe ta na bing1-leng3 de shou

he hold ZHE she that ice-cold DE hand

‘He holds her ice-cold hand.’

b. ta sa le yi ge tian1-da4 de huang
he lie LE one CL sky-big DE lie

‘He told such a big lie.’

c.  
tamen  ba  qiangbi  shua  de  xue3-bai2
they BA wall paint DE snow-white

‘They painted the wall as white as snow.’

The MV compounds in (30a-c) consist of inanimate noun components that are described by adjective components. For instance, sky is construed by human beings as big, as described by tian1-da4 sky-big; snow is necessarily white as shown by xue3-bai2 snow-white and ice is necessarily cold as shown by bing2-leng3 ice-cold, etc. This relationship contrasts with the SP compounds, as shown in (31-34).

(31)a.  ni  ban  le  cuoshi  hai  zui3-ying4
you do LE mistake still mouth-hard

‘(How could) you still insist on it after you have made a mistake?’

b.  *xiang4  zui3  yiyang  ying4
like mouth the same hard

(32).  ta  tai  lian3-nen4,  shuohua  liang  jiu  hong
he too face-tender speak face then red

‘He is too shy. He blushes whenever he speaks.’

b.  *xiang4  lian3  yiyang  nen4
like mouth the same hard

(33)a.  nei  ge  ren  dan3-da4  xin1-xi4
that CL person gall-big heart-fine
‘That guy is both bold and careful.’

b. *xiang4 xin1 yiyang xi4
   like heart the same fine

(34)a. zhe tai ling ren xin1-han2 le
   this too make people heart-cold LE
   ‘This is so bitterly disappointing.’

b. *xiang4 xin1 yiyang han2
   like heart the same cold

In the above (a) sentences from (31) to (34), none of the adjectives or verbs in the SP compounds represent characteristic properties of the noun components, as shown by the (b) sentences. For example, ying4 ‘hard’ in zui3-ying4 mouth-hard ‘argumentative’ is not part of what ‘mouth’ is. On the contrary, the adjectives describe incidental or occasional properties of the noun components, in many cases, in metaphorical senses. These properties, such as ‘gall-big’ or ‘face-tender’ are information that cannot be derived from the meaning of the noun components.

Another observation (cf. chapter 6) is that descriptions of body parts such as ‘heart’, ‘face’, ‘gall’, etc. occupy a major part of SP compounds. That is because, I believe, body parts are the most direct and tangible parts by which human feelings are affected by the outside world and therefore are the best choices to describe one’s feelings. But different from MV compounds, the properties represented by verb/adj components in SP compounds do not characterize what the body parts are.

7.4.2 V(mod)Adj MV compounds
\textit{V(mod)Adj MV Compounds vs. \textit{V}adj(resultative) VR compounds}

Consider Figure 7.1 below. In a VR compound, the \textit{V} element is the head and in an MV compound, the second element is the head.

\texttt{V(mod)Adj} compound \hspace{1cm} \texttt{VR compound}

e.g. \textit{fei1-kuai4} to fly-fast \hspace{1cm} e.g. \textit{shuo1-ming2} to speak-clear

\texttt{‘as fast as flying’} \hspace{1cm} \texttt{‘to speak clearly’}

Figure 7.1 Characteristic attributes of verb in \textit{V(mod)Adj} MV compounds

\textit{V(mod)Adj MV compounds} and \textit{V+Adj(resultative) VR compounds} share the same formal appearance. Yet, they can be distinguished as shown in Figure 1. \textit{kuai4} ‘quick’ in \textit{fei1-kuai4} fly-quick ‘as fast as flying’ is intrinsic to ‘fly’ in speakers’ conceptualization. In contrast, \textit{ming2} ‘clear’, in \textit{shuo1-ming2} to speak-clear, is not a necessity to make \textit{shuo1} ‘speak’ possible. \textit{shuo1-ming2} cannot occur in a construction like \texttt{*xiang4 shuo1 yiyang ming2} like-to speak-the same-clear.
V(mod)V MV compounds vs. V+V(resultative) VR compounds

Correlated with the difference of the position of the head component in these two kinds of compounds, the key feature that differentiates V(mod)V MV compounds, e.g. zuo4-shi4 to sit-to see ‘to see idly’, from VV(resultative) VR compounds, e.g. da3-bai4 to beat-to defeat ‘to defeat; to be defeated’, is that the verb in R position in VR compounds indicates change of state, whereas the verb in the second position in an MV compound does not. As has been discussed in the previous chapters, VR compounds represent a result that an action causes or leads to. In a two-syllable VR compound, the R component always indicates a state that is different from what has been before the action has been executed, a state marking difference. It marks a perfective sense of the action. That is why R components are not compatible with progressive marker zheng zai ...zhe.

Consider the following examples.

(35)a. ta kul-hong le yanjing
   he cry-red LE eye
   ‘He cried and his eyes are all red.’

b. *ta de yanjing zheng zai hong zhe
   he of eye Progressive red ZHE

(36)a. women da3-bai le diren
   we beat-defeat LE enemy
   ‘We defeated our enemy.’

b. *diren zheng zai bai zhe
   enemy Progressive defeat ZHE

(37)a. wo chil-bao le
I eat-full LE
‘I’m full.’
b. *wo zheng zai bao3 zhe
I Progressive full LE

In contrast, the second verb in an MV compound can co-occur with the progressive marker.

(38)a. jushuo Maozedong yao wo4-you2 changjiang
it’s said Maozedong will lie-swim Yangtze River
‘It was said that Maozedong would swim (in a prone position) in the Yangtze River.’
b. jushuo Maozedong zheng zai you2 Changjiang
‘It was said that Maozedong was swimming in the Yangtze River at the moment.’

(39)a. tamen zheng zai fenli qiang3-jiu4 shangyuan
they Progressive try hard rescue-save wounded
‘They are trying their best to save the wounded people.’
b. tamen zheng zai fenli jiu4 shangyuan
they Progressive try hard save wounded
‘They are trying their best to save the wounded people.’

The interaction with the aspectual marker le also marks the difference between the R component in a VR compound and the second verb component in an MV compound. Most R elements can independently function as a predicate with a le in a sentence. For example,
(40)a. yanjing hong2 le
eye red LE
‘(Your) eyes look red.’
b. diren bai4 le
enemy defeat LE
‘The enemy lost.’
c. wo bao3 le
I full LE
‘I’m full.’

All the LE markers in (40a-c) indicate a change of state. Sentence (40a) means that your eyes were not red before but they are now. Likewise, (40b) means that the enemy could not be said to be defeated some time ago, but now they are. Sentence (40c) implies that I was not full but now I am. In contrast, when le co-occurs with a verb that cannot name a change of state, like the ones in the second position in V(mod)V MV compounds, it signals a different meaning.

(41)a. Maozedong you2 le
Maozedong swim LE
‘Maozedong did swim./Maozedong swam.’
b. tamen jiu4 le
they save LE
‘They did make efforts to rescue (the person).’
Sentences like (41a-b) have to occur with a pre-context. The aspectual marker le here emphasizes an action that has indeed happened in the past. Such a verb plus a le conveys the meaning—*the agent indeed tried*. (41a) is used to answer a question ‘Has Maozedong swum?’ or to rebut or correct a denial that ‘Maozedong did not swim’. Sentence (41b) may occur in a context where somebody raises a question such as ‘Did they try to save the wounded people’s life (at all)?’ or ‘Why did the wounded people die?’. For the later question, (41b) implies that ‘They tried, but they still couldn’t save the wounded people’s life.’

In short, it is clear that the R component in VR compounds indicates a change of state, but the second V component in MV compound does not. Correlated with this difference, there is another key difference between the two types of compounds—the relationship with their arguments in a sentence.

As we know, a VR compound can be both intransitive and transitive. An MV compound can also be both transitive and intransitive. When intransitive, the two components in the compound, be it a VR or an MV, both only have one logical subject. the subject of the sentence. So in such cases, these two types of compounds have similarities. For example, both *da3* ‘to beat’ and *bai4* ‘to defeat’ in *da3-bai4* describe what happens to *diren* ‘enemy’ in (42). Likewise, both *wo4* ‘to prone’ and *you2* ‘to swim’ describe an action of the subject *ta* ‘he’ in (43). That is to say, both of the components represent an action or a state of the same argument, which is the grammatical subject in the sentences.

(42)a. *diren da3-bai4 le*

   enemy beat-defeat LE
'The enemy were defeated.'

b. *ta chil-pang4 le*

he eat-fat LE

'He is fatter.'

(43)a. *ta shier wo4-you2 shier yang3-yong3*

he sometimes prone-swim sometimes face upward-swim

'At one moment he was swimming facing downward and at another moment he was facing up.'

b. *he hen hui qia1-suan4*

he very know how pinch-calculate

'He is very capable of calculating.'

Yet, in cases of transitive VR and MV compounds, the two components in VR components can represent the actions/state of two different arguments, whereas the two components in MV compounds necessarily always represent the actions/state of one same argument---the grammatical subject in cases of active sentences. Consider examples (44) and (45).

(44)a. *women da3-bai4 le diren*

we beat-defeat LE enemy

'We defeated the enemy (We fought and the enemy lost).'</n

b. *ta da3-si3 le ren*

he beat-dead LE person

'He killed somebody.'
(45)a. tamen  qiăng3-jiu4  shangyuän
    they          rescue-save  wounded
    ‘They rescue the wounded.’

b. jizhe  zou3-fang3  le  xuduo  zhiqin2zhe
    reporter   walk-visit   LE  many    know facts person
    ‘The reporter visited many who know the facts.’

In (44a), the logical subject of da3 ‘beat’ in da3-bai to beating be defeated ‘to defeat’ is
‘we’ and that of bai4 ‘to be defeated’, on the other hand, is ‘the enemy’. Similarly, in
(44b), the logical subject of da3 ‘to beat’ in da3-sí3 to beat-dead ‘to beat dead’ is ‘he’
whereas that of sí3 ‘dead’ is ‘somebody’. In contrast, in (45a), both qiăng3 ‘to rescue’
and jiu4 ‘to save’ share the same logical subject ‘they’. In (45b), both zou3 ‘to walk’ and
fang3 ‘to visit’ share the same logical subject ‘the reporter’.

The reason for this discrepancy between VR and MV compounds is that the V in
MV compounds is the pivot of the action and there is only one pivot represented by an
MV compound. What M and V represent is not separable, since M indicates the manner
in which V is conducted. On the contrary, in VR compounds, the V names an action of
one argument, and the R element can indicate a state, i.e. the result of that action of a
second argument –the affected. There are two successive aspects involved in a VR
compound: an action and a state. This characteristic of MV compounds is summarized in
Figure 7.2.
V(mod)V MV Compounds vs. Serial Constructions

Figure 7.2 also explains why and how an MV compound differs from a serial verb construction. A serial verb construction with two verbs juxtaposed almost always indicates an event composed of two sub-events. Therefore, a V(mod)V MV compound, which indicates a single integrated event, cannot start with a verb such as lai2 ‘to come’ or qu4 ‘to go’, or a modal verb such as yao4 ‘to want; to wish’, xiang3 ‘to wish’ as in a serial verb construction. Compare the (a) and (b) sentences in (46).

(46)a. wo lai (yiyuan) (ran2hou4) kan4 ni

I come (hospital) (and then) see you

‘I come to (the hospital first and then) see you.’

b. wo zou3-fang3 le henduo ren

I walk-visit LE many people

‘I visited many people.’

c. *wo zou3 ranhou4 fang3 le henduo ren

I walk and then visit LE many people
The event in (46a) can be viewed as containing two sub-events: come and see, whereas, "zou3-fang3 to walk-to visit 'to visit' is one integrated event which cannot be decomposed into sub-events.

Not all direction verbs followed by another verb, however, result in a serial verb construction. As a matter of fact, there is one subtype of MV compounds which can be called Verb(direction)V MV compounds. In such compounds, the first verb indicates a direction of the following verb, such as shang4-sheng1 up-to rise 'to rise' or chul-jia4 out-to marry 'to marry (for women only)'. The difference between these direction verbs and lai2 'to come'/qu4 'to go' lies in the fact that lai2/qu4 actually implies a path taken first before another action is realized; on the contrary, direction verbs such as shang4 'up' or chul 'out' only indicates an orientation of the action carried out by the second verb in an MV compound. Figure 7.3 summarizes this point. And I have also briefly elaborated the difference between DirectionVerb+Verb MV compounds and Verb+Direction VR compounds in Chapter 7.3.

Figure 7.3 Difference between lai2/qu4+Verb and shang4/wai4+Verb
\( V(\text{mod})V \ MV \text{ compounds vs. } VV(\text{object}) \ VO \text{ compounds} \)

There is a group of verbs in Chinese called \( zaol \)-type verbs by Li (1989), which include three verbs: \( ai2 \) 'to suffer', \( shou4 \) 'to receive, to suffer', and \( zaol \) 'to suffer'. Verbs of this group require verbal objects and convey a passive sense. Consider examples in (47).

(47)a. \( ai2 \ ma4 \) to suffer-to scold \( ' \text{be scolded}' \)

b. \( shou4 \ fa2 \) to suffer-to punish \( ' \text{be punished}' \)

c. \( zaol \ an4\text{-suan4} \) to suffer-dark-to calculate \( ' \text{be set up}' \)

There is another group of verbs, as a matter of fact, that also allow verb objects but which do not possess a passive sense, which I think are close to linking verbs. They are: \( de2 \) 'to get, to obtain', \( fa1 \) 'to become; to show one's feelings', \( cui1 \) 'to push', \( dai4 \) 'to wait to (for)', \( lin2 \) 'be about to' etc. The examples are shown in (48).

(48)a. \( de2 \ cheng3 \) to get-to carry out/to succeed \( ' \text{to succeed (in a derogative sense)}' \)

b. \( fa1 \ chou2 \) to become-worried \( ' \text{to worry}' \)

c. \( cui1 \ sheng1 \) to push-to produce \( ' \text{to expedite child delivery}' \)

d. \( dai4 \ xu4 \) to wait-to continue \( ' \text{be continued}' \)

e. \( lin2 \ zhan4 \) to be close to-to fight \( ' \text{to be just before fight}' \)

Many of the examples in (47) and (48) may be considered to be verbal phrases. Yet, some of them are lexicalized, such as \( de2\text{-cheng3} \) to get-to succeed in which \( cheng3 \) is a bound morpheme, and \( dai4\text{-xu4} \) to wait-to continue \( ' \text{to be continued}' \). When such
combinations are Verb-Object compounds, the key to distinguishing them from V(mod)V
MV compounds is that the first component in an MV compound can not belong to either
of the two verb groups listed above.

\textit{V(mod)V MV compounds vs. VV Coordinate Constructions}

Sometimes, it is not immediately obvious whether a Verb-Verb form is an MV
compound or a VV coordinate compound. For example, as discussed before, \textit{qia1-suan4}
to pinch-to calculate 'to calculate' is considered as a MV compound by some linguists
and at the same time I think it also shows some properties of VV coordinate compounds.
Similar to MV compounds, both components of a VV coordinate compound share the
same logical subject. For example in (49), both \textit{zheng1} 'to levy' and \textit{shou1} 'to collect'
share the same semantic subject 'some people'. The form \textit{liangshi} 'crops' is the object of
both \textit{zheng1} and \textit{shou1}. It is never the case, as in some VR compounds, that the two
components refer to different arguments in a sentence.

(49)a. \textit{zheng1-shou1} \textit{liangshi}
     levy-collect  crops
     'Collect crops.'

b. *\textit{zheng1} \textit{zhe} \textit{shou1}
   levy    ZHE  collect

The difference lies in the fact that the two components in a VV coordinate compound
have to be in coordination, i.e. there are two heads in the compound. The two
components are either synonyms or antonyms. On the contrary, a MV compound has a
head which is the second verb and the two components in an MV compound are not close in meaning.

7.5 Transitivity

In general, as Tang (1989) states, an MV compound’s transitivity is consistent with that of its verb component. If the verb component is intransitive, then an MV compound that contains this verb tends to be intransitive too, e.g.

(50)  *sha3-xiao4*  silly-to laugh  ‘to laugh foolishly’
      *xiao3-zuo4*  small-to sit  ‘to sit for a short while’
      *gan1-ke2*  dry-to cough  ‘to dry cough’
      *xian2-ju1*  leisure-to live  ‘to stay at home idle’
      *cu4-si3*  suddenly-to die  ‘to die suddenly’

When the verb component is transitive, an MV compound that contains the verb tends to be transitive too, e.g.

(51)  *da4-bai4*  big-to defeat  ‘to defeat utterly; to put to rout’
      *bei4-shou4*  double-to suffer/receive  ‘to suffer/receive double’
      *qing1-shi4*  light-to look  ‘to despise’
      *kuan1-dai4*  wide-to treat  ‘to treat with leniency’
      *pian1-ai4*  skew-to love  ‘to favor’
      *xu1-bao4*  fake-to report  ‘to make a false report’

Yet, just as adverbial phrases have effects on their modified verbs in some aspects, the scope of an MV compound’s transitivity is constrained by the M component. Under the
constraints of M elements, some MV compounds with transitive component are intransitive. e.g. \textit{qi2-que}1 strange-to lack 'to be lacking' is only used as an intransitive, while \textit{que}1 'to lack' by itself is transitive. Some have a more limited range of objects, i.e. a more limited range of usages only in certain contexts, and the others do not seem too affected. For example,

(a) \textit{women zai yiqi tan2 shiye. tan2 shenghuo.}
we at together talk career talk life
<br>
\textit{shenme dou tan}
what all talk
<br>
'We talk about our careers, our lives and everything.'

(b) \textit{women zai yiqi mian4-tan2 shiye. mian4-tan2 shenghuo.}
we at together face-talk career face-talk
<br>
\textit{shenghuo shenme dou tan}
life what all talk
<br>
'We talk about our careers, our lives and everything.'

\textit{mian4-tan2 face-to talk 'to talk face to face' somehow sounds awkward in (52b). mian4-tan2 has a connotation of making an appointment with the other partner—Let’s talk face to face about something— and it does not appear wherever \textit{tan2 'talk'} can appear. Another example is da4-bai4 big-defeat ‘to defeat utterly’ as shown in (53).}

(a) \textit{women yi weiruo de youshi da3-bai4 le}
we with weak of superiority beat-defeat LE
dushou

opponent

‘We defeated our opponent with a slight superiority.’

b.  ?women yi weiruo de youshi da4-bai4 le
    we with weak of superiority big-defeat LE

dushou

opponent

It is obvious that in (53b), da4-bai4 big-to defeat ‘to defeat utterly’ is not compatible with another modifying phrase in the sentence ‘with only a slight superiority’, therefore in such a context, it is not very appropriate to use da4-bai4 big-to defeat. although it is grammatically correct.

My observation is that MV compounds tend to be used in more formal situations than when the second V element functions as predicate alone. Not only is the range of objects relevant here, the position of MV’s objects also has something to do with the M component in the MV compound.

(54)a.  ta zai jianyu bao3-chang2 le tongku
    he at prison full-experience LE bitterness

    ‘He has suffered so much in the prison.’

b.  naxie ku3 ta dou chang2 guo/le
    those sufferings he all experience GUO/LE

    ‘He has experienced all those bitter things.’

c.  *naxie ku3 ta dou bao3-chang2 le/guo
As shown in (54), when an object is preposed at the beginning of the sentence, *bao3-chang2* full-to experience cannot occur where *chang2* ‘to experience’ can.

There does not seem to be any consistency in what kind of constraints the M element applies to what MV compounds. I favor what Dr. Lilly Chen has suggested about the functional motivation on why M elements put constraints on the transitivity of MV compounds. In every utterance, there is one salient focus. An MV compound, compared to the V element in isolation, has a focus on the M element. When the MV compound is used in an utterance, it might have to compete with the other potential focuses in the sentence. When the M element wins out and becomes the sole focus of the sentence, no more object or only a limited range of objects are allowed after the MV compound, to demonstrate the salience of the M element. All in all, it is the semantics of every individual MV that governs the range of objects and other relevant grammatical properties.

### 7.6 Conclusion

In this chapter, I have described what constitutes an MV compound, its variations and how an MV compound differs from other types of compounds. The key characteristic that an MV has is that M, as a modifier, only names a manner, an instrument or a degree of the action or state that makes the particular MV different from the Vs without the M. M itself does not represent a separate event/state.
Chapter 8

CONCLUSION

In the present study, I have provided a functional account of the major types of verbal compounds. Each chapter examines a specific type of compound. In this chapter, I will describe all the verbal compounds from a macroscopic perspective, considering their positions and roles in the language and examining their interrelationship within the framework of the language, especially within the framework of Chinese verbs as a whole. These relationships can be treated in each of six dimensions.

8.1 How the Compounds Enrich the Verbal Lexicon in Chinese

Compounding is an important method of word formation in Chinese. Compounds are a major part of the Chinese lexicon. Every type of compound has its own characteristics. The five types of verbal compounds enrich the lexicon in different ways. Figure 8.1 summarizes the roles they play in this dimension.
Figure 8.1 How verbal compounds enrich verb lexicon in Chinese

8.1.1 VR Compounds—Action-Result

There is a group of monosyllabic morphemes that indicate states in Chinese, such as \textit{hong}^2\ 'red', \textit{po}^4\ 'broken', \textit{si}^3\ 'dead', etc. These words used alone in sentences can indicate states, and can also indicate change of states. They are usually intransitive. For example,

(1)a. \textit{shuye} \quad \textit{shi} \quad \textit{hong}^2 \quad \textit{de} \quad \text{leaf} \quad \text{be} \quad \text{red} \quad \text{DE}
'The leaves are red.'

b. shuye hong2 le

leaf red LE

'The leaves turn red.'

(2) yifu po4 le

clothes broken LE

'The clothes are worn out. / The clothes become worn out.'

(3) Wangwu si3 le

Wangwu dead LE

'Wangwu is dead./Wangwu died.'

These monosyllabic stative verbs can indicate states as well as change of states, but they obviously do not indicate the causes of such states. On the other hand, there are a great many monosyllabic verbs indicating actions but not specifying results, such as da3 'to beat', ku1 'to cry', chi1 'to eat', shuai3 'to fling', etc.

(4) wo da3 le ta

I beat LE he

'I beat him.'

There are also some monosyllabic verbs that imply both action and results, such as bi4 'to kill or execute by shooting', sha1 'to kill', fei4 'to maim', etc. Consider the examples in (5-7).

(5) ta ba ta bi4 le
she  BA  he  kill  LE

'She killed him.'

(6a)  ta  bei  ren  sha1  le
he  BEI  person  kill  LE

'He was killed.'

b.  ta  bei  ren  da3  le
he  BEI  person  beat  LE

'He was beaten.'

(7)  ta  bei  ren  fei4  le  wugong
he  BEI  person  maim  LE  martial  skill/art

'He was disabled so that he couldn't practice martial arts any more.'

The verbs in (5), (6a) and (7) all imply a result of the action the verb indicates. The result expressed by (5) and (6a) is 'death' and that of (7) is 'disabled'. Comparing (6a) and (6b) will give us a very clear idea that sha1 in (6a) implies a result, but da3 in (6b) does not. ying2 'to win', shu1 'to lose' and bai4 'to be defeated; to lose' also name results and can be used as transitive verbs. But they don't indicate specific actions.

However, most of the monosyllabic action verbs in Chinese do not imply results. VR compounds fill this gap in the lexicon. The monosyllabic verbs listed here that imply results in general cannot occur in the first position in a VR compound. That is to say, they cannot be followed by a R element indicating result, because they themselves already realize some concept of result. But most of them are compatible with the morpheme diao4 'to drop'. Among these verbs, sha1 is an exception and it can still be followed by si3 'dead'.
(8)a. *bi4 si3 to kill-dead/to die
b. *fei4 lan4/si3 to maim-mashed/dead
c. *ying2 si3 to win-dead
d. shal-si3 to kill-dead
e. fei4-diao4 to maim-to drop ‘to maim’
f. shul-diao4 to lose-to drop ‘to lose’

Except for these limitations, almost all other action verbs can appear in the first position of a VR compound. As far as the R position is concerned, not only can the stative verbs appear in the R position; some other action verbs which do not usually name change of state can also occur in the R position in combination with the first V element to form a VR compound. For example,

(9)a. wo ba ta da3-pao3 le
   I BA he beat-run LE
   ‘I beat him away.’

b. wo ba ta da3-kul le
   I BA he beat-cry LE
   ‘I beat him and he cried.’

The form pao3 ‘to run’ in (9a) and kul ‘to cry’ in (b) cannot indicate states in isolation. But the VR compounding pattern allows intransitive verbs like pao3 and kul to function as the resultative verb components in VR compounds. Thus, by proliferation of VR
patterns, many verbal compounds came into being which indicate an action plus the result of this action.

8.1.2 Verb-object Compounds

VO compounds enrich the Chinese verbal lexicon by allowing verbs to indicate not only an action but also the completion of the action, by including the type of affectee or the means or location as the second component in the compound. A typical component in the second position is a noun. A VO compound typically conveys 'what' has been affected by the action represented by the first element in the compound. These completed events indicated by VO compounds are used in the language as verbs to name general actions that happen often in people's lives, such as *ch'i-l-fa*-4 to eat-rice 'to have a meal', *shang*-4-*ban*-1 to go up-duty 'to work' etc. Very often, these VO forms acquire specialized meanings that are beyond the composition of those of V and O components.

The O element in VO compounds can be the patient of the V element, or it can have other functions too, including instrument, location, cognate object, etc. For example, *za-o*-3 'bath' in *xi*-3-*za-o*-3 to wash-bath 'to take a bath' is such a cognate object of *xi*-3 'to wash'.

8.1.3 MV Compounds

In many situations, verbs with specified manners are needed for human communication purposes. In many such cases, MV compounds will serve. The modifier can be a noun, an adjective, an adverb or a verb. An MV compound conveys 'how' an action is conducted, including manner and means, etc. *mi-an*-4-*tan*-2 face-to talk 'to talk face to face' is such an example. The 'how' delimits the usage of the MV compound and
marks the difference between MV and V by itself. For instance, mian4-tan2 will have a much more limited usage than tan2 alone.

8.1.4 VV Coordinative Compounds

VV coordinative compounds are usually composed of synonyms, sometimes of antonyms. Such compounds can help avoid the confusion caused by homophones. VV coordinative compounds follow the trend of di-syllabism in Chinese and achieve an effect of parallelism. VV coordinative compounds can be considered as synonyms of their components and achieve an effect of highlighting what each component is intended to express, such as tui1-sang3 to push-to push violently 'to push and shove'.

8.1.5 SP Compounds

SP compounds in general enrich stative verbs in Chinese. They usually represent states that require potential animate subjects, such as xin1-teng2 heart-to hurt 'to love dearly; to feel sorry'.

8.2 Interaction Between Noun & Verb Components in Verbal Compounds

Nouns and verbs can compound with each other and form different types of verbal compounds. These different types include: VN compounds, SP compound, and N(mod)V compounds. As to which of the three types of compounds a combination of noun and verb will form, it is related to the interaction between two continua: the Transitivity/Verbiness continuum (for verbs) and the Animacy/Agentivity continuum (for nouns), as summarized in Figure 8.2.
Transitivity/Verbiness

\[
\begin{array}{c}
\text{Adj} & N(\text{modifier}) + V & \text{V} \\
\text{S} & \text{N} \\
\end{array}
\]

Animacy/Agentivity

Figure 8.2 Interrelation between noun and verb in verbal compounds

According to Figure 8.2, a verb near the right end has more "verbiness" and transitivity, and a noun in the subject position has a relatively higher degree of animacy and is more likely to be the agent of an action. Near the left end, verbs demonstrate more static properties, while nouns have less agentivity and animacy. The consequence of the correlation of these two continua is that nouns incorporated with verbs at the left end form SP compounds, which, in most cases, name states and function as adjectives. In contrast, the nouns incorporated with verbs at the right end form VN compounds, which name actions and function as action verbs. The ones in between may form N(mod)V compounds, in which the noun components are not considered to function as logical subjects of the V elements. There exists a subject/object asymmetry in compounding, i.e. verb components compound with the subjects of intransitive verbs but the objects of transitive verbs.

8.3 Potential Actions/States Involved in a Compound
Figure 8.3 is an attempt to depict the results of comparing the internal structure of compounds semantically. The meaning of an MV compound is usually a subset of that of its V component. M represents a feature of V, and therefore it is unseparable from V.

A coordinative VV compound (for cases of synonym components) implies the involvement of both actions represented by their components. Sometimes a coordinative compound acquires specialized meanings.

A VR compound actually involves an action and a state. This action and the state can indicate one agent, or they can indicate an agent and a patient. In many cases, semantically, a VR compound can be considered a combination of an action plus a state.

8.4 Transitivity
As shown by Figure 8.4, most SP and VN compounds are intransitive. As for VR compounds, most Agent-Resultative compounds are intransitive, and the other two kinds are transitive. For VV coordinate compounds, it depends on whether the V's are transitive or intransitive. For MV compounds, the transitivity is usually in accordance with the V element. But the M element put constraints on the transitivity of the V element if V is transitive. That is because, whenever there is modification, a subset of V is formed and as a result the transitivity will be limited too.

8.5 Tightness and Transparency of Compounds as a Whole
The tightness of the components of a compound can be ‘measured’ in a way by the separability of this compound. When it is unseparable, it is tight. Otherwise, it is loose. When it is unseparable, it shows clearly the property of a word. When it is separable, it may show some properties that phrases have.

As a general rule of thumb, two-morpheme complex forms with specialized meanings have been considered to be words, even though there exist some phrases with specialized meaning. Transparent complex forms can be compounds or phrases. In the case of transparent forms, other criteria have to be considered in order to tell whether a complex form is a compound, such as the test of bound morpheme component, separability, order of components, the ability of being modified by adverbs as a whole, etc. In the present work, all VR forms, Adj(mod)V forms are included in the discussion even if they are transparent in meaning.

8.6 Productivity

According to Tang (1989), among all the compounding patterns for verbal compounds, the most productive is the VO pattern. The VR pattern is also very productive, as pointed out by many other linguists. SP and MV coordinate types are among the less productive ones (cf Tang, 1989:16-48; 70-79). The productivity of the different types of verbal compounds can be portrayed in a scale, from not productive to highly productive, as shown in Figure 8.5.
N(mod)V:
transitive VO
non-separable VR
etc.

<table>
<thead>
<tr>
<th>SP</th>
<th>MV</th>
<th>VV coordinate</th>
<th>VO &amp; VR</th>
</tr>
</thead>
<tbody>
<tr>
<td>not productive</td>
<td>not very productive</td>
<td>moderately productive</td>
<td>highly productive</td>
</tr>
</tbody>
</table>

Figure 8.5 Productivity of Chinese verbal compounds

The following are some examples of relatively new VO compounds.

(10)  *chao3-gu3*  to fry-stock  'to be engaged in stock trading'

    *fen1-hong2*  to divide-dividend  'to share dividend'

    *kong4-pan2*  to control-market  'to control stock market'

    *pao1-pan2*  to cast-market  'to sell stocks'

    *shang4-wang3*  to get on-web  'to get on the internet'

    *qin1-quan2*  to intrude-right  'to infringe other’s (copy)right'

8.7 Final Notes

The present work is intended to thoroughly investigate the compounding patterns of verbal Chinese compounds. Future work is needed on nominal and adjectival compounds.
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