Mandarin Chinese notes

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Contents

Chapter 1

Introduction

1.1 The language and the speakers

1.1.1 Speaker population

Standard Mandarin Chinese, known as 普通话 'generic speech', sometimes 现代汉语 'contemporary Chinese' (when the word is used in the narrow sense) in mainland China, 国语 'national language' in Taiwan, Hongkong and Macau, and 华语 'Chinese language' in Malaysia and Singapore, and colloquially simply 汉语 'Han language' or 中文 'Chinese' (again when the words are used in the narrow sense), is a predominant language in the world, belonging to the Sinitic family. It's currently spoken by most people in mainland China, as well as Taiwan, and increasingly in Hong Kong and Macau. It's the official form of Chinese (i.e. the Sinitic language family perceived as a macrolanguage) in mainland China and Taiwan, as well as in several other countries or regions with traditional link to Han culture, such as Singapore and Chinese communities in Malaysia.

Standard Mandarin is almost always the superior register in the regions mentioned above, except in Hongkong and Macau, where Cantonese enjoys the superior position, although under the pressure from mainland China, the two cities may also gradually turn to Standard Mandarin. Standard Mandarin is the language for school, business, politics, and, when English is not used, academics and technology. Indeed, even in Hongkong and Macau, written texts are usually in Mandarin; written Cantonese does exist but is never as influential as written Mandarin. Indeed, the superior status of Standard Mandarin is directly reflected in its various names: it's explicitly called the generic speech intended for communication between all groups in China, the national language, and *the* Chinese language.

The popularity of Standard Mandarin means it's a fairly well documented languages. Grammars, dictionaries and teaching materials can be easily found (§ 1.3). Despite its popularity, Mandarin has several features that are still not fully TODO

A comprehensive study of Mandarin informed by typological information is therefore still urgently needed.

1.1.2 Variance and standardization

Variances within Mandarin do exist. The term *Mandarin*, in its most generalized sense as the English translation of the Chinese term 官话, include Southwestern Mandarin 西南官话, Northern Mandarin 北方官话, Jiao-Liao Mandarin 胶辽官话, and more.

The Standard Mandarin – the variety discussed in this note – is based on Beijing Mandarin. Still, there are variances within Standard Mandarin. Officially, Standard Mandarin "has the Beijing accent as its standard accent, the Beijing topolect[1] as its foundation, and canonical modern (Mandarin) vernacular literatures as its grammatical specification" (Deng 2010, p. 18); the definition however involves great uncertainty. There is no single Beijing accent, both historically and contemporarily: accent variance can be attested between people with Eight Banner heritage and Han Chinese outside the Eight Banner system; all the accents have stable differences with Standard Mandarin. Considerable grammatical variances exist among canonical Mandarin vernacular literature works; sentences written by some authors, like Lu Xun, are no longer acceptable today when taken out of the literature context.

Standardization of Mandarin is mainly about the lexicon. *Contemporary Chinese Dictionary* (现代汉语词典) is a comprehensive dictionary used for the officially organized Putonghua Proficiency Test. No grammatical standardization happened, and native speakers' acceptability judgement vary on some fine details. This note intends to illustrate the shared core of all varieties within Standard Mandarin.

1.2 Theoretical commitment

1.2.1 Previous approaches

The tradition of Mandarin grammar documentation frequently seen in college-level introductory courses (and occasionally in high schools) is largely structuralist à la Bloomfield; such kind of introductory works usually have names like 现代汉语 'Modern Chinese' (Wang et al. 2004); systematic teaching materials for non-native speakers are also largely influenced by the structuralist tradition. This tradition is still seen in contemporary large-scale grammars for languages other than Mandarin, like Huddleston and Pullum (2002). This tradition is largely coherent with the generative tradition; it's possible to organize a generative work in the traditional and structuralist framework (Deng 2010).

Mandarin also gains much attention in the functional-typological tradition. Li and Thompson (1989) is a "functional" reference grammar of Mandarin, TODO: more references The reason for Mandarin's popularity seems to be the fact that it breaks many previous typological generalizations about isolating languages and constituent orders (Paul 2014, chap. 8).

1.2.2 Formalism

This notes attempts to reconcile the traditional and generative structuralist schools and the functional-typological approach i.e. "Basic Linguistic Theory" (BLT; Dixon 2009) used in modern grammar writing. Below the capitalized Generativism refers to a mixture of Minimalism, Distributed Morphology and Cartography (but with less flavor of Antisymmetry), which I believe are instructive on grammar description. This leaves out Lexicalist traditions, like the framework used in Deng (2010); the reasons are discussed in § 1.2.3.

What I want to do here, then, is to incorporate the new perspectives in generative syntax, such as Paul (2014) and Paul (2008), into the structuralist tradition in an accessible and

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[1]The original term is 方言, which is often translated as 'dialect'; however, varieties like Cantonese, which are rather distant from Mandarin with almost zero intelligibility, are also recognized as 方言, and the word 方言 is even used to refer to non-Sinitic languages in colloquial uses. Therefore the term *topolect* is used to refer to a variety of Chinese that is attested in a region, without any implication on how close it is to Standard Mandarin.

typology-informed way.

Since modern generative syntax contains lots of hidden functional heads, the notion of, say, a DP which is the specifier of T, is to be replaced by an NP filling a subject position in a surface-oriented structuralist constituency analysis. Both "NP" and "subject" should be labeled on a sub-syntactic tree in the structuralist tradition, while in generative syntax, the label "subject" is a secondary concept: it's an abbreviation of SpecTP (or in an even more fine-grained way, SpecSubjP or SpecNomP). So functional heads can be replaced by syntactic function labels: after eliminating the syntactic functional heads, the label SpecNomP should be replaced by "subject", and the label NomP should be replaced by "subject-predicate structure". On the other hand, in Distributed Morphology we have roots, which reside at the center of an extended verbal or nominal projection (NP-NumP-DP, or *v*P-TP-CP), and they are recognized as *heads* (in this note referred to as **lexical heads**) in traditional structuralism. This unifies the notation of Huddleston and Pullum (2002), Chao (1965), Zhu (2009) in the traditional structuralist perspective and Generativism.

The Basic Linguistic Theory (BLT) approach (Dixon 2009), or the grammar writing approach accepted in modern descriptive linguistics and typology, is based on *dependency relations* on the other hand. It's also possible to formulate generative grammar in terms of dependency relations, so it can be expected that the BLT approach is still largely equivalent with the grammatical complexity of generative grammar. BLT only recognizes two major types of constituents: NPs and clauses, which are essentially *domains* or *fields* in generative syntax: The former is the DP domain while the latter is the *v*P-TP-CP domain. The complicated binary constituency tree is replaced by a flat tree with lots of dependency relations labeled inside, containing the same amount of information.[2] Note that the Basic Linguistic Theory approach still (although quite implicitly) admits that there is a rank of "closeness" or "height" among dependency relations: the A argument seems to be somehow higher than the O argument, etc., and this information is conveyed by the fine-grained constituency relations in Generativism.

The focus on dependency relation in BLT also leads to a notational difference on what is a constituent. A sequence like *has been exploring* is not a constituent in the sense of the structuralist constituency test in grammars like Huddleston and Pullum (2002) and generativism, but are still recognized as a unit in BLT because its parts always appear together in the surface-oriented analysis. This what is Dixon (2009, p. 109) defines as a *verb phrase*, which excludes the object. From the constituency-based point, such a "phrase" is usually a larger functional domain minus a smaller functional domain; here it's the functional projection below the subject – the verb phrase in Huddleston and Pullum (2002) – minus the object. This definition is meaningful because syntax is cyclic and the object is a DP and therefore is a phase, and above it is another phase, and although the introduction of the subject (by, say, a Nom head which may contain the nominative case) doesn't seal a phase, it still changes the properties of the syntactic tree, so what happen above the object and below the subject – the TAME functional heads, the verb root, etc. – are tightly linked to each other (note that here we are just translating between the constituency-based analysis and the dependency-based analysis), so from a dependency relation-oriented analysis, the sequence *has been exploring* does qualify as a phrase; in a constituency grammar we recognize this sequence has a status but we don't call it a phrase or a constituent. This difference is notational but may be confusing.

A further difference between the Basic Linguistic Theory and Generativism (as well as the structuralist tradition) is the former is claimed to be semantic-based. But first, of course it's possible to have a meaning-first version of generative syntax, and second, there seems to be a "gluing" layer between pure semantics and the phonetic realization and can't be equated with either of the two: the semantics of complement-taking verbs may be coded as a complement

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[2]We may also say the Basic Linguistic Theory's standard of constituency is "being a relatively independent construction". Then the equivalence between this version of mild constructivism and minimalism is clear (Trotzke 2020).

clause construction, a relative clause construction (compare *I see a man running* and *I see a running man*), and superficially similar utterances may have different "structures". This is recognized by Dixon, who distinguishes the "prototypical" coding strategy of a semantic concept and other strategies. So there is also no substantial disagreement here.

1.2.3 Wordhood

The Generativism I take here doesn't emphasize on wordhood as a universal concept, and indeed this is what I expect here: a word is simply a mini phrase (in the BLT sense), either a mini constituency tree, or the realization of a span of functional heads and possibly the lexical head or in other words the root. The two meanings of the term *word* correspond to the two meanings of the term *morphology*: the first is what happens within the categorizer phrase (mostly derivation); the second is phenomena that involve grammatical categories above the categorizer phrase level with high localized rules (like "the tense affix is always attached to the end of the verb stem, with this, this and this vowel alternation") which look like phonological rules but don't seem to have phonological motivation. They are just the rules of inflection.

The controversy about what is a word in Mandarin has been around for decades, which I believe is due to the desire to find *the* word as a universal unit, without thinking of the tenet of Generativism that phonetic realization doesn't always transparently reflect in the syntax proper, and that what is universal is likely to be prototypes of functional heads and how they are arranged together; this means we may have categorizer phrases like nP or vP, which can be recognized as minimal words, but whether things like compound words are recognized as words or phrases depends more on grammatical traditions and external factors like prosody.

The following example in English may help to illustrate the inherent obliqueness of the term *word*. In the English form *explore-ed* we have the verb stem and the tense marker; generative syntax tells us that the tense/aspect categories are introduced in the same phase as that of the verb stem, and therefore according to the BLT's definition of *verb phrase*, *explore* and *-ed* are to be recognized as one constituent. But in principle, we can also analyze it as *[-ed [explore* something$]_{argument\ structure}]_{TAME\ marking}$, and in this analysis *explore* and *-ed* are no longer recognized as two branches of a constituent. Both analyses, of course, are well-justified – by alternating the terminology in the aforementioned way the two analyses are equivalent. In practice descriptive grammarians refrain from doing so because *explored* is a *phonological* word, so whenever there is strong morphosyntactic relation between its internal parts, we tend to recognize it as a word. The longer sequence *have explored* has a parallel structure, but is not a phonological unit, and therefore the two competing analyses – or actually the two competing *notations* – are both attested in existing grammatical works. This illustrates how factors outside morphosyntax are often (unfortunately) used to favor one certain way to write the grammar.

The definition of the term *word* therefore in principle carries no assertion regarding the nature of the language in question; but whether the definition is handy does tell us something about the language. We do need to choose the definition carefully enough therefore.

I need to note here that many generative works, like Deng (2010), are *lexicalist*:[3] they made a clear distinction between what happens in lexicon and what happens in syntax. Due to space limit, I only want to point out two facts.

First, an empirical observation is that if a morphological device is completely invisible to

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[3]The term *lexicalist* sometimes means that it's lexical words like verbs or nouns that carry grammatical structures with them, and there is no separate phrase-structure rules seen in early Chomskyan generative works. Since in Distributed Morphology, we can use whether a root can be well spelt out with or without certain functional heads surrounding it to control its subcategorization, Minimalism is also lexicalist in this sense: to say that the root of an intransitive verb only gets spelt out together with a Trans head is equivalent to say that the verb carries a verb-object construction with it.

the rest of the grammar, it is likely to have lost productivity altogether and becomes *historical*; its products are therefore synchronically morphemes with no synchronically analyzable inner structures; synchronically active morphological devices engage with syntax more or less, as in *pre- and post-revolutionary France*; the conclusion seems to be that there is only one productive engine in language.

Second, inconsistency can be observed in lexicalist works: Deng (2010, pp. 242) says the syntactic structures can also be found in morphology, while on p. 262 he says the syntactic structures listed in the book can be reduced to the X-bar theory; so the inner structure of words likely also fits in the X-bar framework, which in turn means his classification of syntactic structures based on specifier-complement distinction is not accurate enough: a better approach is to divide the functional hierarchy surrounding a root into domains, and thus grammatical relations in a lower domain look like head-complement relations (like the object position, which in a Cartographic theory should be something like SpecTransP, not CompVP) in the traditional X-bar theory, where the root (here the verb root) is considered as the head, and grammatical relations in a higher domain look like specifier-head relations in the traditional X-bar theory.[4] Many phenomena previously attributed to the specifier-complement distinction now can be captured by something like the phase theory;[5] units smaller than phrases but larger than proto-typical grammatical words are sometimes recognized as structures like $[X^0\ Y^0]$, but they seem to be better recognized as maximal projections in lower positions in the functional hierarchy. A hard boundary between words and phrases is not possible even for English (Bruening 2018), and phonological (often prosodic) factors are usually needed to draw the line (§ 3.1.2.1).

This note will not pay too much attention to the word-phrase distinction or the morpheme-word distinction for function items.[6] Distinguishing between words and phrases means to classify morphosyntactic units according to their possible internal grammatical relations and categories. Thus, we distinguish between NPs and compound nouns, for they possess different internal structures (§ 3.3.4). A function item, on the other hand, is a *label* of a grammatical category and has no inner structure. Thus, defining whether something is a function word or a function morpheme is purely based on *external* factors: if something appears in a morphosyntactic unit commonly referred to as a phrase, than it's a function word, and if it appears in a morphosyntactic unit commonly referred to as a grammatical word, than it's a bound function morpheme. But there seems to be no particularly strong correlation between whether a function item is grammatically a function word and whether it is phonologically a word: a suffix in a long grammatical word can be a phonological word, while a function item, like the Latin *-que*, that is an immediate constituent of a phrase may be glued to another phonological word. In general, the meaning of *function word* is not well-defined, and an accurate description of a function item inevitably involves both of its phonological status and its grammatical status. That's why I refrain from discussing wordhood of function items in the following sections.

1.2.4 Grammatical categories

Inspired by Cartography, we divide the verbal system into the vP (core and peripheral arguments, lexical aspect, etc.; for example, a verb can only appear in a CAUSE-BECOME structure

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[4]Another concept in X-bar theory is adjunct. This notion is abandoned in Cartography to leave place for functional heads with optional specifiers, and this is also the viewpoint of this note.

[5]This doesn't mean the current version of the phase theory is adequate; the point is what was once attribute to the specifier-complement distinction can be derived from more general locality conditions.

[6]Here the term *grammatical word* means a word defined in the grammar, not phonology; a *function item* means an item that is not lexical and therefore is a part of the grammar. The adjective *grammatical* means being related to grammar and it has two explanations: being defined in grammar and being contained by the grammar; In this note, I use the term *grammatical* to refer to the first meaning, and *function* to refer to the second meaning.

can be explained by stipulating that the verb root can only get appropriately spelt out together with the CAUSE and BECOME light verbs), TP (TAME marking), and CP (the clause type, speech force, topicalization, etc.; in Mandarin it's responsible for the sentence final particles); here v means light verb, and at the core of vP, we still have a "verbalizer phrase", which contains structures that are traditionally analyzed as derivational morphology, like compounding.

Similarly the nominal system can be divided into the nominalizer phrase, the argument structure of the noun, the numerical modification (NumP), and the most external grammatical concepts like determiner, in-NP topicalization, etc.

Below I will discuss on topics like "whether something is more like a concept in the verb phrase or in the core clause or in the sentence": what I'm doing is to decide whether the syntactic device in question is in the vP or TP or CP.

It can be seen that structural resemblance between the two system exists in several domains; besides the correspondence between the nominal and verbal argument structure, TP and NumP, and DP and CP, a more straightforward structural parallel is that coordination constructions in the nominal system and the verbal system are often close. This might be an evidence for more abstract concepts like "point of view" (and of course, "coordination") that are "generic", which, after being filled by the label "nominal" or "verbal", becomes more concrete grammatical categories (Wiltschko 2014).

These alleged universal functional hierarchies of course are in conflict with the fact that grammatical categories actually observed in languages show great variances. These variances may be explained by substantial alternation of the functional hierarchies (and thus it might be the case that it's not the the whole hierarchy that is fixed cross-linguistically, but its subsystems, which may be motivated by the aforementioned abstract concepts), or they may be explained by fusion of universal categories (because, say, one value of one category and another value of another category can't appear together or the spellout process fails). Since this note aims to compare Mandarin with other languages not only semantically but also structurally, efforts will be made to "decompose" seemingly unique categories of Mandarin into well-attested categories in other languages – and the uniqueness of Mandarin can also be understood more concretely. (A successful example: "Latin TENSE collectively correspond to the future-non future, past-non past, perfect-non perfect, and progressive-non progressive systems in English ...")

1.2.5   The plan of investigation

The theoretical methodology of this note is now briefly summarized here. I start from recognizing concepts like grammatical words (i.e. categorizer phrases, and words in the BLT or inflectional sense, i.e. a verb with T or C heads, or its counterpart in the nominal system), top-level concepts like noun phrases and clauses (in the rest of this note, the term *phrase* is reserved for constructions larger than the grammatical word), and also their internal modification and complementation schemes.

We expect a grammatical word to be a mini-constituent, which is therefore easily subject to conventionalization, and has limited interaction with the syntactic environment.[7] Here the term "constituent" may be interpreted both in the generative sense and in the BLT sense; in the former sense, derivational morphology creates grammatical words, but some instances of inflection, like TAME inflection, don't really create a mini-constituent;[8] in the latter sense,

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[7]Although definitely not absolutely no interaction – even in English, we have things like *pre- and post-processing*, in which a phrasal structure – coordination – interacts with the inner structures of two bare nouns, and therefore a clear boundary between word or phrase or between morphology and syntax is in principle impossible.

[8]But in some versions of Distributed Morphology, in the post-syntactic step, the functional heads realized by inflection are rearranged into a mini-tree, so we can also say inflection creates mini-

both derivational and inflectional morphology creates grammatical words.

Parts of speech divisions are then made according to the syntactically environment and not semantics: what appears in the nominal system is considered a noun, and vice versa. As is said above, I assume "nominal properties" or "verbal properties" to be universal in all languages; detailed parts of speech classes, however, always contain some language-specific information, since they are defined by the interplay between the root and the surrounding functional system.

Another problem is the division of labor between the grammar and the dictionary, or in other words, the lexical-functional distinction. There are three interlinked parameters involved in the lexical-functional distinction: openness to new members, integration with grammar (whether it's already coded in the grammar), and the necessity of a part-of-speech label (see below).

- The most lexical class is open to new members, not a part of the grammar, and its members are able to be lexical heads of phrases (and thus has a "real part-of-speech label" like "noun" or "verb") of, say, an NP or a verbal complex.

- A less open class is not so open to new members (just like Japanese verbs and adjectives), but is still not a part of the grammar and its members are able to be lexical heads.

- A even more closed class is not open to new members, and is a part of the grammar, but its members are still able to be lexical heads. Pronouns are in this type.

- A prototypical function class, then, is not open to new members, hardwired in the grammar, and its members are never lexical heads. Derivational suffixes are in this type. This last type of forms bring no real part-of-speech label to its realization. We still classify these function items in the grammar into classes, but these classes are somehow less "real". When doing part of speech classification, deciding these parameters for each class is also important.

The study of grammatical words also involves the concept of morphemes, which is ill-defined: if we study synchronic morphemes, i.e. minimal forms carrying some meanings, then entries like *till death do us part* are to be recognized as morphemes; it seems then the term *morpheme* is better defined as a historical linguistic term; when doing synchronic studies, it's better to stick to concepts like root and affixes, which are put together in a shared manner with syntax.

Constructions above the layer of grammatical words are divided into different layers, as outlined in the last section. This note is intended as a bottom-up one, but in practice, the anatomy of noun phrases and clauses is always the starting point of the investigation.

It's also important to recognize fossilized constructions from syntactically regularly formed ones. Fossilization may be syntactic or semantic; in the first case, the productivity of the construction involved is reduced, although the meaning may still be compositionally analyzable; in the second case a form gets a conventionalized meaning but not necessarily gets syntactically fossilized. It may be the case that syntactically fossilized constructions are documented in List B (containing information about compatibility between parts in spellout) and semantically fossilized constructions are documented in List C (containing information about accepted meanings). As fossilization goes on, syntactically fossilized constructions has gradually reduced structures (from a verb phrase to a grammatical word, for example), and the original compositional interpretation of a semantically fossilized construction gradually fades away. The final stage of fossilization is collapsing into a single root (documented in List A). It's however hard to tell the stage of fossilization of a construction; the form *till death do us part* at first was a formula used in wedding and may be seen as documented in List C, but contemporary

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constituents.

English grammar is no longer able to assemble other elements from List A into it; a somehow radical analysis would then be placing it in List A.

1.3 Data

1.3.1 Intuition

One problem is scholars working on Mandarin grammar have their own judgement on what is acceptable and what is not, which is sometimes not shared by the majority of Mandarin speakers. Some works, like James Huang, Audrey Li, and Li (2013), are heavily criticized for representing not empirical observations of Mandarin but distorted and man-made examples which are used to "support" a pre-accepted theory. My personal opinion is this reflects individual varieties, which is probably influenced by non-Mandarin varieties of Chinese, instead of academic misconduct. We can find sentences that go against the intuition of most Mandarin speakers in the main text – as opposed to examples – of their works as well, which implies these authors are probably sincere about the acceptability of their "weird" examples. Speaking of Huang, (1) appears in Huang (2007), which doesn't sound acceptable for me but seems to be completely fine for him.

(1) 我们建议汉语动词具有下列特征而有别于英语动词 (Huang 2007)

1.3.2 Representation of data

I will use less structuralist constituency trees compared with structuralist grammars. That's to say, for example, the "serial verb construction" is not divided into two verb phrases following rigidly the structuralist tenets, but is analyzed with a flat-tree structure instead, following BLT. But I will also do lots of in-depth morphosyntactic tests, instead of just staring at the surface realization, as many typologists may do.

1.4 Remarkable features of Mandarin

1.4.1 The overwhelming influence of prosody

One distinct feature of Mandarin is its morphosyntax relies strongly on *prosody* (Feng 2000). Other components in phonology, strikingly, doesn't have much influence on Chinese morphosyntax, and it will be largely skipped in this note.

1.4.2 Lack of word (and therefore morphology)?

Despite of lack of inflection and lack of contextual alternation of morphemes, Chinese does have some local and syntactically unmotivated operations which are just like morphophonological rules, although they don't necessarily operate on phrases.

An example of this is the verb copying phenomenon, as in 看了一会书 (compare 看书了一会); 看书 'to read' (intransitive; lit. 'to read books') has a fossilized internal verb-object structure and this structure may still have synchronic effects. More radical examples however also exist, like %体了一堂操, which is likely to be linked to [[体操]$_{\text{noun-as-verb}}$ 了 [一堂]$_{\text{time object}}$]$_{\text{VP}}$. In casual speech, verbs borrowed from other

languages may also be split and the two fragments of the verb then surround the semi-object (2).

(2) 我 [debug]_{topic:VP} [de不出来]_{predicate:VP} [啊]_{SFP}

This phenomenon – the verb being split and the time semi-object getting embedded into the verb – looks just like infixing, although here this infixing operation targets a VP instead of a smaller unit. This justifies the assumption taken at the end of § 1.2 that there is no clear boundary between words and phrases and therefore syntax and morphology: It's possible for a phrase to undergo rearrangement without clear syntax motivation that usually happens within a word.

1.4.3   The so-called serial verb constructions

It's often said Mandarin is a serializing (i.e. with serial verb constructions) language. A closer look, however, reveals this is not the case: These constructions are either adverbial clause constructions or complement clause constructions, or maybe certain kind of light verb constructions (§ 5.10). The internal heterogeneity renders the term *serial verb construction* useless.

1.4.4   Ionized verbs

Some verbal units – commonly recognized as verbs, i.e. grammatical words – in Mandarin may be ionized into two parts, with a constituent residing between the two. This involves two mechanisms: the first is discussed in § 3.4.2, in which a verb phrase is fossilized, similar to English *in case* or *by definition*, but its object can be extended into a complex NP, and the second seems to be a morphophonological device, by which even a verb without synchronically analyzable inner structure is teared into two parts and a clausal dependent is inserted between the two (§ 5.5). Despite its striking properties for English speakers, ingredients of this phenomenon are all well attested cross-linguistically.

1.4.5   Voices

Mandarin has several valency alternation devices, including at least two structures that may be called passives, commonly known as *bèi*-constructions (§ 5.4.12, § 5.4.14). They however possess some features that tell them apart from passives in West European languages: the most salient feature is they all seem to assume certain level of perceptiveness. There also exists a *bǎ*-construction (§ 5.4.13), which is sometimes known as the causative construction, although the coverage of this construction is narrow compared with lexical causatives (§ 5.4.13.5); the structure TODO: do to cause-become

1.4.6   Verbal complements

The verbal complement system is another remarkable feature of Mandarin, which is sometimes classified as a type of serial verb constructions.

Chapter 2

Phonology and the writing system

2.1 Prosody

By paying attention to stops in Chinese utterances, it can be found that phonological words exist and they are mostly defined by the prosody structure. In the rest of this note, the term *prosodic word* and *phonological word* will be used interchangeably, since other phenomena like sandhi that may be used to determine the phonological word boundary are rare in Mandarin (but not complete absent: TODO: ref). The prosody structure is about how stress is assigned to phonological constituents. Assigning a prosodic structure is like condensation and clustering: something is merged with something adjacent, and the result is merged with something adjacent else. When two phonological constituents are merged together, one of them is considered heavier than the other. If heaviness is to have a simple relation with the length of a phonological constituent, then usually the more a phonological constituent is, the heavier it is. This is consistent with the condensation picture of prosodic segmentation. Suppose a prosodic constituent attracts a syllable and merges with it. The latter is not an independent phonological constituent and cannot be heavy, so the former is the heavier one and the latter is the lighter one in the larger prosodic constituent.

The smallest unit of prosody structure is a prosodic word. The simplest prosodic word is the disyllabic foot, which contains two adjacent syllables in the case of Chinese. (It can be made by two moras in other languages.) One is assigned stress and is therefore heavier than the other. Trisyllabic prosodic words also exist in Chinese, though they are highly limited. Most of which are borrowed words (e.g. 加拿大 'Canada') or words formed by coordinating three morphemes (e.g. 数理化 'math, physics, and chemistry'). They can also be regarded as foots (Feng 2000, § 2.2).

Longer morphosyntactic units are inevitably broke into smaller disyllabic or trisyllabic prosodic words in their prosodic structures, often regardless of their morphosyntactic structure: 加利福尼亚 may be segmented into 加利|福尼亚, although the word contains only one morpheme. In 副总经理, we have two prosodic words, 副总 and 经理, while the morphosyntactic structure of the word is [[副] [总 [经理]]] (§ 3.3.5). This is similar to the case in English and Latin poems, where the prosody arrangement of sentences does not have to respect word boundaries: *arma vi|rumque ca|no*. It's however also possible that a prosodic word has morphosyntactic significance (§ 3.1.2.1).

Prosody is able to see the constituency structure and prosodic constraints are important in Mandarin grammar. Some prosodic rules pertaining to the constituency tree guide and limit the assignment of relative heaviness and lightness. In Chinese,

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prosodic segmentation is done strictly left-to-right in each NP, and then the NPs together with verbal constituents are used as the input of prosodic segmentation of clauses. Certain forms are therefore ruled out (§ 5.9), not by morphosyntactic reasons but for prosodic reasons.

2.2 Chinese characters

The preferred writing system of Mandarin is the Chinese character system. Except some characters made in early modern ages, like 瓩 'kilogram' or 砼 'concrete (lit. human-labor stone)', a Chinese character corresponds to a syllable. However, Chinese characters don't just represent the sound. Putting some quirky cases aside, Chinese characters are often good indicators of morphemes (§ 3.1.1.1). There are, for example, at least seven morphemes sounding *xiān*, and there happens to be seven Chinese characters corresponding to each of them: 仙, 先, 籼, 掀, 铦, 鲜, and 纤.

Like all writing systems, Chinese characters do not completely faithfully represent the underlying linguistic structure. Some characters do not mean anything – they are simply the designated characters representing syllables in certain polysyllabic morphemes. The character 萄 as in 葡萄, for example, means nothing more than the syllable *táo*, but it only appears in the morpheme 葡萄 and 葡萄牙 'Portuguese'. The same is for the character 葡. Some characters have regular morpheme meanings but also have merely phonetic meaning in certain words. The character 登 in 摩登 regularly means 'climb', but in the word 摩登, only its phonetic value *dēng* is preserved. Certain morphemes can be denoted by more than one character. The SFP *ba* can be written as 吧 or 罢, the latter hinting its etymology but is now rarely used. Certain characters denote more than one morpheme. The character 会 may mean 'conference' or 'be able to do'.

Thus, Chinese characters provide clues on what is a morpheme, but they are not decisive (Zhu 2009, p. 1.1.4).

Chapter 3

Parts of speech

3.1 From morphemes to clauses

3.1.1 Morphemes

I start the introduction of Mandarin morphosyntax with morphemes. Although in most language documentation projects, words – whatever this term mean (§ 3.1.2) – are the smallest unit appearing in the dictionary, this is not the case with Mandarin: the standard practice of lexicography is to record Chinese characters and their "meanings"; in linguistic terms, an entry of a Chinese character includes the follows:

- its pronunciation(s), almost always a syllable in Mandarin Chinese (§ 2.2);

- historical or synchronic monosyllabic morphemes that may be represented by that character;

- polysyllabic morphemes containing that character, which may have different pronunciations (§ 3.1.1.1-§ 3.1.1.3);

- grammatical words that are made up regularly using one of the morphemes listed above and have already gained a stable meaning (for example, under the entry of the character 打, which is a light verb, we may find 打坐, which means 'do sitting (and meditate)').

The morpheme is therefore the closest concept to Chinese characters – how most educated Mandarin speakers perceive the basic unit of Mandarin – that bears some linguistic significance. Thus, to use existing dictionaries to understand an utterance, finding the morphemes – instead of grammatical words recognized in § 3.1.2 – is the first step. The meaning of the term however has some ambiguity, since analyzable inner structures of words does not always have synchronic morphosyntactic significance (§ 3.1.1.2, § 3.1.1.3). In this case, we say the item is *synchronically* a morpheme.[1]

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[1]In the end, discussions using the term *morpheme* can – and should – be reduced into discussions about features, roots, fossilization, etc. The concept of *morpheme* enjoys no position in primitive concepts in linguistics, and has inherent ambiguity. The English expression *till death do us part* has a conventionalized usage and an archaic internal structure, but people rarely call it a morpheme. This intuition that morphemes shouldn't be too long essentially comes from the desire to define the morpheme as an etymological concept: the smallest unit that can be distinguished historically is a morpheme (whether the relevant syntactic mechanisms are productive is out of question). This definition of morpheme has its own weakness: morphemes can be fused as time goes by, and how forms like Latin conjugation endings should be divided depends on how long you are willing to go backwards in the history of the language.

3.1.1.1 Primitive content morphemes

Most native primitive content morphemes are monosyllabic, examples of which include 红, 大, 你, etc. (§ 3.1.2.2). Polysyllabic primitive content morphemes, like 葡萄, 巧克力, 哥斯达黎加 etc., are mostly borrowed words in different historical stages. There do exist seemingly native polysyllabic primitive content morphemes, like 轱辘 'wheel'; but it has been proposed that this word is related to PIE. TODO: ref

Only a subset of the monosyllabic morphemes are free, i.e. able to form grammatical words on their own.[2] Bound morphemes may be found as derivational affixes (7a) or as TODO: list . Many of them are historically free morphemes but have become obsolete in contemporary usage. The morpheme 观 'observe', for example, still exists in 观鸟 'bird watching' but never appears as a single verb, nor does it undergo delimitative reduplication of verbs (1).

(1) a. *我要去观观那些鸟
     b. 我要去看看那些鸟

It should however be noted that bound morphemes are not always immediate constituents of grammatical words; that's to say, they may have limited word-forming abilities in some lexicalized constructions. Zhu (2009, § 8.3.2) notes that despite 亏 is a bound morpheme and 饭 is a free morpheme, verb-object constructions 吃饭 and 吃亏 has largely similar morphosyntactic behaviors, in which the object 亏 may be modified just like any other NP, as in (2b). We can even move 亏 out of the verb-object construction and topicalize it (2c; Zhu (2009) seems to be unaware of this fact). Thus, we conclude that 吃亏 can be regarded as a usual VP, enjoying the same status of 吃饭.[3] Cross-linguistically, it's quite common for some words to appear mainly in idioms, but this doesn't mean syntactically these idioms are words.

(2) a. 我吃了这个亏
     b. 我吃了一个大亏
     c. 这个亏我今天吃了，但是你们之后别再想从我这里拿到一分钱好处！

The boundary between free and bound primitive content morphemes seems to vary among registers and conversational context. (3) is somehow strange without a context, but if the idiom VP 吃亏 has appeared frequently enough in previous speech, it gradually becomes acceptable; the fact that 亏 usually doesn't appear as a noun but

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[2]This involves the question what is a word. This question is dealt in § 3.1.2.

Another definition seen in Zhu (2009, § 1.1.2) is that a free morpheme is a morpheme that may appear as an utterance. This definition contradicts with other parts in Zhu (2009), because most function words never appear as a single utterance and yet are still recognized as words and therefore free morphemes by himself. This definition of free morpheme is also of little value syntactically, since it's much more consistent to check the ability of larger constructions to appear as a single utterance, and then check whether some of them are monomorphemic.

Yet another definition seen in Zhu (2009, p. 16) claims that free morphemes don't have fixed positions, while bound morphemes sometimes have fixed positions. Cross-linguistically, this is simply wrong: free morphemes can only occupy a limited number of positions in the syntactic structure (lexical head position, compounding attributive position, etc.) and this may lead to a constituent order effect. In Japanese, the position of the verb is predominantly after all clausal dependents and before inflectional endings, but we would all agree that verb roots are prototypical free morphemes. On the other hand, reordering of derivational affixes, although rare, is not completely unattested.

[3]But it can still be regarded as a grammatical word at least in some circumstances (§ 3.4.2).

does appear as a noun here has a stylist focusing effect. (4) is not acceptable in daily conversation, because the morpheme 犬 is usually a bound morpheme and should be displaced by the more colloquial 狗. The sentence however is perfectly fine in a police officer's recollection of a detective story involving K-9 dogs. Thus the professional background licenses 犬 as a free morpheme.

(3) ? 这个亏让我记了一辈子

(4) % 当时　　我 的 犬　　发现 现场　的　气味 有点　不对劲
　　　at.that.time 1 POSS canine find scenario POSS smell kind.of abnormal

'At that time, my canine found the smell of the scenario was kind of abnormal.' (acceptable in professional context)

Polysyllabic morphemes are mostly free. There exist however a small number of polysyllabic morphemes that seem to be unable to be words themselves. The root 日耳曼 (from *German*) appears in compound nouns like 日耳曼人 'Germanic people' or 日耳曼血统 'Germanic descent', but almost never appears as a noun itself; similarly, 达达 in 达达主义 also never appears as a word itself.

3.1.1.2　Fossilization

A lot of words have internal structures parallel to those observed in syntax (Zhu 2009, § 2.6), but the structures have already completely fossilized, so they may be synchronically regarded as containing only one morpheme. Thus, synchronically they are not different from polysyllabic morphemes.

A completely fossilized structure may be historically created with an obsolete syntactic device, or be not in the expected part of speech inferred from its etymological (i.e. it appears in syntactic environments that are not expected for its inner structure). The verb 关心 has an internal verb-object structure, but is able to take an object. Since well-attested double object constructions in Mandarin are all unable to cover this usage, we conclude 关心 has already been fossilized into one single synchronic morpheme.[4] Some words with fossilized phrasal origin contain gap inside, indicating that at some early stages they were parts of formulaic speeches and were later reanalyzed as words. The word 例如 'for example' is a connective adverb, but it has a subject-predicate with a gap, and likely arose from a reanalysis of the formula (5). This also explains why it appears predominantly at the start of a clause.

(5) [[例]subject 如 [...]object]clause
'an example is like ...'.

Although fossilization in syntactic structure is often connected with a conventionalized meaning and being small in size, the three parameters are not completely interdependent, although we can observe some weaker-than-expected correlation. Regarding the relation between syntactic fossilization and the size of the unit in question, it should be noted that many languages have idioms that have archaic syntactic structures, like *till death do us part* in English (involving archaic verb-final clausal structures) and 放心不下 (involving an early stage of a type of verbal complement

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[4]It's still possible for 关心 to be split, but this happens without considering the internal structure of the verb (§ 5.5).

structure) in Mandarin. Regarding the relation between syntactic and semantic fossilization, note that most idioms – what the word refers to in everyday speech – are formed by regular syntactic devices and yet have gained conventionalized meanings, while it's also possible that some structures have already been semi-productive and yet the meanings of their products can still be regularly inferred compositionally (§ 3.3.5).

3.1.1.3 Abbreviation

Mandarin has a strong tendency to abbreviate an existing construction into a prosodic word. The abbreviation of a binary-branching structure usually consists of the first syllables of its two immediate constituents, regardless of the inner structures of the two immediate constituents. Thus [副 [总经理]] 'vice general manager' is usually abbreviated as 副总, and 总工程师 is usually abbreviated as 总工. It's possible that an abbreviation replaces the original word completely. 空调 is historically the abbreviation of 空气调节器, the word-by-word translation of *air conditioner*, but the latter is no longer in active use.

Trisyllabic prosodic words do exist in Mandarin, and trisyllabic abbreviations also exist. The majority of them are three-morpheme coordination structures like 数理化, which is the abbreviation of 数学物理化学 'math, physics, and chemistry'.

3.1.1.4 Function items and semi-function items

Another type of morphemes is the type of

Monosyllabic location words, for example, appears in NPs and therefore should be analyzed as words; they however never constituent one-word NPs themselves (§ 3.5). Whether they are words therefore becomes a mystery, and this mystery is merely a wrongly asked question.

Certain borrowed affixes may be unable to serve as words in certain periods. As times goes by, however, they gradually become free morphemes. If clause linking markers like 之所以 and 是因为 are recognized as single morpheme words, then they may be included into the non-prosodic simple word blob and however be unable to serve as phrases. These markers, however, never appear in other places, and their exact status is of no descriptive and comparative interest.

3.1.2 Wordhood

A question causing endless controversy and confusion is "what is a word". Dixon (2010) spends a whole chapter (chap. 10) on this topic. It is often said that Chinese is "character-based" or to be precise, "monosyllabic morpheme-based", with no level of grammatical words. This claim is factually flawed: what really happen are the disagreement between phonological wordhood and morphosyntactic structures (§ 2.1), and subtleties concerning word-phrase distinction.

3.1.2.1 Phonological words in morphosyntax

Comparing morphosyntactic levels and *phonological* wordhood may be a good idea for us to draw a boundary between words and phrases. This helps us find native speakers' intuition about the smallest unit in natural (i.e. non-linguistic, not in language

games, etc.) conversation, which strongly influences how new words are created or how borrowing happens, etc. (§ 3.1.5).

A phonological word, which in Mandarin is defined by prosody (§ 2.1), may be syntactically one of the follows:

- a single-morpheme with a well-defined part of speech tag (§ 3.1.1), like 幽默 'humor (homophonic translation)' and relatively rare trisyllabic cases like 加拿大 'Canada (homophonic translation)', or

- a mini-constituent with NP or VP-like internal structure (§ 3.1.2.3), like 白菜 'Chinese cabbage (lit. white vegetable)' (§ 3.3.2) or 种树 'plant tree' (§ 3.4.2), or

- a sequence with arguable affixation like 交给 'transfer-give (the latter being a verbal complement)' (§ 3.1.2.4).

- It's of course possible that a phonological word has no morphosyntactic significance at all.

The next question is whether all prosodic words that are also morphosyntactic units are small enough to be grammatical words, or some of them are actually phrases. The main issues are presented as follows:

- Disyllabic verb-object constructions are highly similar to ordinary verb phrases; they however participate in compounding and therefore are words (probably after dephrasalization) at least in some occasions (§ 3.4.2).

- Disyllabic attributive constructions like 小狗

- Verbal complement constructions

Thus, I use the term **morphosyntactic prosodic words** to refer to prosodic words with morphosyntactic significance, indicating that they are all words in some circumstances, but may also be phrases in other cases.

fixing the boundary between words and phrases in a way that is somehow subjective but consistent with the standard employed in many other world languages (TODO: § 3.1.2.4).

There are also non-prosodic grammatical words in Mandarin, including monosyllabic words and polysyllabic words like 哥斯达黎加 (§ 3.1.1.1) and complex non-prosodic words like 总工程师 (§ 3.1.2.5).

3.1.2.2   Monosyllabic words: grammatical words, but not prosodic words

As is said in § 3.1.1.1, some – although by no means all – monosyllabic morphemes are free morphemes and

3.1.2.3   Disyllabic mini-constituents: prosodic words, and also grammatical words

There are disyllabic units in Chinese that have conventionalized meanings and its inner structure is invisible to any other morphosyntactic rules (§ 3.1.1.2, § 3.3.2, § 3.4.1). Other disyllabic word are made up by two morphemes with a synchronically available device.

A controversy is whether some disyllabic prosodic words that have morphosyntactic significance are actually phrases, in which the two syllables may be analyzed as two grammatical words instead of two morphemes or two meaningless syllables. This is usually not the case for nouns, but is indeed true for verbs (§ 3.4.2). Examples of them include 念佛, 军训, 体操 etc.

Then it's possible that the morphosyntactic prosodic word can be extended into a phrase by inserting more phrasal dependents or by adjoining modifiers to one of the two morphemes. But note that similar processes are possible even for disyllabic verbs without analyzable inner structures, which are surely grammatical words (§ 5.5).

3.1.2.4 Psosodic words created by semi-inflection

In Mandarin, although prototypical inflection is absent, in verbal complement constructions and the aspect system, we indeed can see something similar to *explored* mentioned above, the inner parts of which have strong dependency but do not form a constituent in the most strict sense. What is the status of 爬上 in 他笨手笨脚地爬上信号塔? A word (created by a productive verb compounding rule), a phrase (a verb-complement structure), or just a word sequence without structural significance? Here I follow the opinion in (Feng 2000, p. 86) and Tham (2015) and call it a word, because a sequence like 爬上 is extended in a highly limited way (the only possibilities being 爬得上 and 爬不上), while phrases, in principle, can be extended infinitely, and it is also a prosodic word. This goes against the analysis in (Zhu 2009, § 1.2.7).

3.1.2.5 Non-prosodic complex words

Certain grammatical relations seem to be not a part of NPs and clauses, again highlighting the necessity to introduce a smaller level of constituency (§ 3.3.4, TODO: verb), commonly known as grammatical words. The structures listed above in principle can be extended without an upper bound, and therefore they are not monosyllabic and are not prosodic words.

Just like the case of morphosyntactic prosodic words, these **non-prosodic complex grammatical words** may be created by synchronic morphosyntactic rules, or they may be fossilized or have no internal structure.

Compared to prosodic words, non-prosodic complex words are less "active" in syntax: splitting them is possible in certain cases but is much less frequent. This may be a result of pragmatics: complex words are created to cover a meaning that needs some explanation, and once a complex word is well-accepted, its form and meaning soon gets fixed (because people will not burden themselves), and fossilization occurs rapidly. The term 美利坚合众国 has an analyzable internal structure, but it has already gained a fixed meaning and its parts are never taken out, despite both 美利坚 and 合众国 can serve as grammatical words.

3.1.3 Larger units

3.1.3.1 Noun phrase

Nouns are able to be lexical heads of NPs, including non-prosodic simple words like 哥斯达黎加, as well as non-prosodic complex words. One-word phrases are always possible, and there is almost no attested counterexample.

3.1.3.2 The verb phrase

Transitive verbs can regularly fill argument slots and thus are able to be used as one-word phrases, though they themselves are not sufficient to build one-word predicate VPs. TODO: really??? Certain grammatical words, like some verbal complement structures

(6)   a. [看书]$_{\text{subject:verb}}$ 是一件有趣的事情
       b. *[走进]$_{\text{subject:verb}}$ 意味着您已经同意了我们的服务条款
       c. [走进这个建筑]$_{\text{subject:VP}}$ 意味着您已经同意了我们的服务条款

3.1.4 The structure of Mandarin grammar

After establishing the status of *words* in Mandarin grammar, we can now discuss the overall architecture of Mandarin grammar in a more disciplined way. Fig. 3.1 summarizes the organization of Chinese lexicon as well as how larger units are built from lexical items. Overlapping of blobs means "having the same form". Thus, the blob representing monosyllabic words is completely in the blob of monosyllabic morphemes. The same is for the relation between non-prosodic simple words (which are neither monosyllabic nor disyllabic) and polysyllabic morphemes. Red arrows mean synchronic morphosyntactic devices, while orange arrows means historical evolution, like grammaticalization and/or fossilization,.
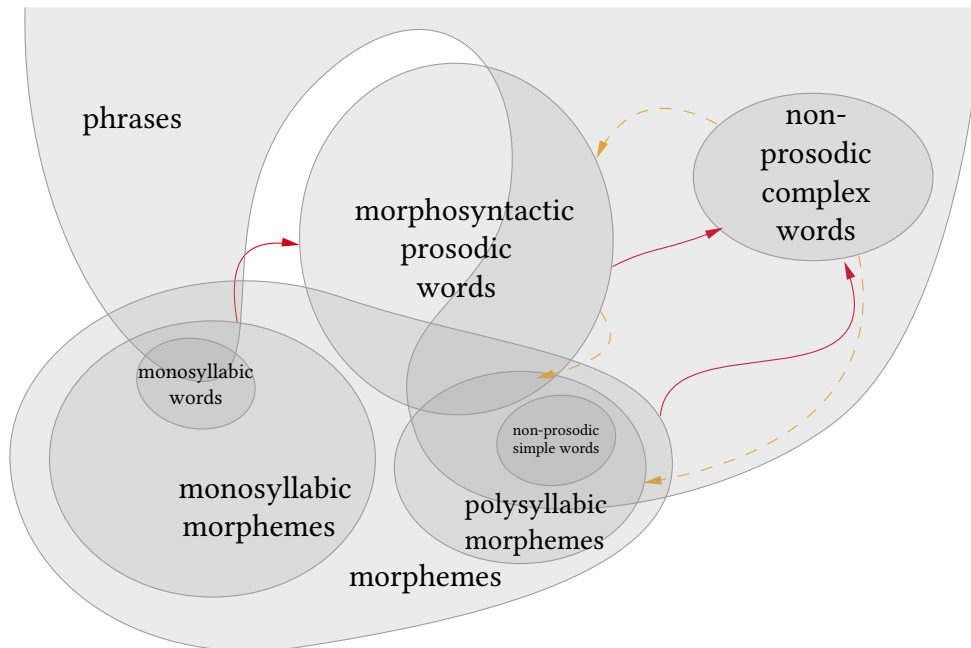
Figure 3.1: From morphemes to phrases.

The sub-phrasal units mentioned in Fig. 3.1 are represented in Table 3.1. The +? symbols in the "morpheme" column mean possible fossilization, corresponding to the lower two orange arrows in Fig. 3.1. The upper orange arrow in Fig. 3.1 means word creation by abbreviation. The +? symbol appearing in the "phrase" column means

some authors may agree that 走进 is a constituent and therefore they may say it's a phrase (§ 3.1.2.4).

3.1.5   Perception of basic units in Mandarin

In English there is a group of clearly defined and largely homogenous morphosyntactic units lying between morphemes and phrases (which means they can be neither morphemes nor phrases, and can be constructed by the former and can be used to build the latter), which is just the grammatical word. They are recognized as basic units by society (i.e. outside of the linguistic community): the length of an article is measured by counting words, not letters, for example.

In Chinese, however, despite the fact that we can still identify grammatical words, the much larger overlap between grammatical words and morphemes and phrases means Chinese characters – representation of syllables in polysyllabic morphemes and rough representation of monosyllabic morphemes – are recognized as basic units of the language. This may be the deriving force for some linguists (who are too eager to "find diversity") to reject the existence of grammatical words in a hurry, although I've already shown this is not the case.

Still, native speakers generally confirm that there is something between the morpheme and the phrase, which people call 词. In everyday speech, non-prosodic complex words have limited use, and monosyllabic words are rarely used because their formality (§ 3.1.1.1). Thus, from Fig. 3.1, we find it's the class of prosodic morphosyntactic words that plays the role of "words" as a level between morphemes and phrases, as well as intermediate units between morphemes and complex words. Prosodic morphosyntactic words are also usually the final product of abbreviation (§ 3.1.1.3), and they observe frequent fossilization (§ 3.3.2, § 3.4.1). These morphosyntactic prosodic words are therefore the nature response when native speakers without much linguistic training come up with intuitively when talking about "words" or 词, i.e. intermediate building blocks.

The fuss around wordhood in Chinese arises from the split of several definitions of the term *word*: wordhood defined by morphosyntactic test include is wider than the coverage of morphosyntactic prosodic words, and the range of morphosyntactic words indeed has too much overlapping with morphemes and phrases.

3.1.6   The functional-lexical distinction

> **Box 3.1: Confusion related to the lexical-functional distinction**
>
> (Zhu 2009, § 3.6) classifies certain categories like locative particles into the nominal class and hence the lexical one, while the locative particle class can definitely be enumerated (Zhu 2009, § 4.4). On the other hand, the author claims that lexical classes are always open and function classes are always closed Zhu (2009, § 3.4). A conflict thus occurs. We now see that's because he failed to see there are three parameters related to the lexical-functional distinction. Still, it's of course not easy to tell a newly discovered part of speech (or *form class*, which may be a word class or an affix class) What's the status of an orientation preverb, which may be found in Japhug (Jacques 2021)? It's a part of the grammar, but does it carry a real part-of-speech label (like "directional adverb")? And speaking of ad-

Table 3.1: Sub-phrasal units

index	length	morpheme	word	phrase	example	comment
1	monosyllable	+	-	-	兑, 语	usually from Classical Chinese
2		+	-	-	性 in 等价性, 前 in 窗前	suffixes, location words, and other semi-grammatical items
3		+	+	+	蛇, 猫	usually from Classical Chinese
4		+	-	-	达达 in 达达主义	usually borrowed terms, rare
5	disyllable	+	+	-	觊觎, 葡萄, 空调	from Classical Chinese, borrowed items, abbreviations, and deep fossilization of type 6 and 7
6		-/(+?)	+	-/(+?)	走进, 来到	constituents in BLT only; made of manosyllables
7		-/(+?)	+	+	念佛, 看书, 吃饭	mini-constituents; made of monosyllables
8	trisyllable or larger	+	-	-	日耳曼	usually borrowed terms, rare
9		+	+	+	哥斯达黎加, 滑铁卢, 数理化	usually borrowed terms or abbreviations
10		-/(+?)	+	+	副总经理, 总干事	complex word, made of monosyllables and disyllables

verbs, what's the status of the English *allegedly*? An adverb filling a peripheral argument position, or an evidentiality marker? We really need to know a lot about language to fix the position of a form class. A common practice is just to shun the details and just say whether a large word class is lexical or functional, drawing a somehow arbitrary hard line between the two. So Zhu (2009) mainly uses the criterion of whether there is a real part-of-speech label, and then directive particles are classified into the nominal class and they are in turn considered lexical. But he mistakenly confuses the notion of lexical classes with the notion of open classes, and then we get the self-conflicting asserts in Zhu (2009, § 3.4).

3.2 Part of speech labels

3.2.1 Word class labels: noun, verb, adjectives, etc.

3.2.1.1 The nominal-verbal division

Lexical words in Chinese can be roughly divided into nominal ones and verbal ones, or in the Chinese terms, 体词 and 谓词. The prototypical role of nominal words is to fill predicate slots (or to be more precise, to head a phrase that fills an argument slot). Nominal words rarely appear in the verbal complex, though for stylistic purposes, they sometimes do. Verbal words prototypically appear in the verbal complex (chap. 5), but many of them – and clauses without any morphological marking – can regularly appear in argument slots (Zhu 2009, § 3.5).

Verbs can be negated by 不 while nouns generally cannot, and this is a criterion to tell verbs from nouns. TODO: others

The fact that verbal categories can fill argument slots or in colloquial words "be used as nouns" urges some to put the verbal categories under the nominal categories, so thus there is only one mega lexical category in Chinese: the nominal category or the Noun. The analysis adopted here does not aim to organize lexical categories in a binary branching classification tree, so the ordinary nominal-verbal distinction is maintained: verbs being able to fill argument slots is not typologically rare, actually, and this shared feature itself does not bring nouns and verbs close enough for them to be merged together.

3.2.1.2 Two adjectival classes

Whether Chinese has a separate adjective category has been debated for decades. Based on a line of reasoning similar to the above verb-as-noun analysis, some linguists argue that the so-called adjectives should be put under the verb category, since they can fill the predicator slot without any morphological marking (Li and Thompson 1989). Since verbs and most alleged adjectives show different morphological behaviors in reduplication, the verb-adjective distinction is kept, and the two are placed under the verbal category.

There still exist a (much smaller) number of alleged adjectives that shows different morphosyntactic properties with the adjectives in the verbal category (Paul 2014, chap. 5). They can be marginally used as heads of NPs, while they do not have reduplication variants. These "adjectives" are thus placed under the nominal category. Thus we

have two types of adjectives. In Zhu (2009), nominal adjectives are called 区别词 'distinction word', while verbal adjectives are called 形容词 'adjective'.

3.2.1.3 Other nominal categories

There are more nominal categories than the ordinary noun category and the nominal adjective category. Numerals, for examples, are in another nominal category. Chinese has a rich classifier system, and most classifiers still have strong nominal properties and thus they constitute yet another nominal category. Zhu (2009) calls them 量词 'measure word', because many classifiers have the meaning of "unit". There is also a locative particle class, including 里 in 在房子里, which is sometimes said to be the postposition class because they sometimes have adposition-like properties (TODO: ref: topicalization, and what else?).

3.2.2 Summary: a tentative part of speech analysis

3.3 Nouns

3.3.1 Monosyllabic nouns

3.3.2 Nouns with historically analyzable inner structure

The unit 白菜 is made up by two perfectly productive morphemes: 白 'white' and 菜 'vegetable', but its meaning is not the composition of the two morphemes: 白菜 means 'Chinese cabbage', not 'any vegetable with whitish appearance'. The word has already gained a conventionalized meaning, and its inner structure is of mostly diachronic interest but not synchronic interest. Therefore, the disyllabic unit 白菜 is the smallest unit fed into morphosyntax, and it of course is not a phrase.

Those insisting on the nonexistence of words in Chinese may explain the observation made above by claiming 白菜 to be an idiom NP: it is indeed a lexical entry, but is regarded as a pre-compiled phrase. TODO:

Also: 大车, 大师傅, etc.

3.3.3 Nominal bound morphemes

3.3.4 Compound nouns

From (7a) and (7b), it can be seen in certain morphosyntax units, a bare noun may serve as a (restrictive) modifier. The constituent of Chinese NPs is Dem Num A N, and this bare noun modifier position seems to be more internal than the adjective position, as is illustrated by (7c) and (7d).

(7)   a.   [[定义]$_{\text{modifier:N}}$ [[等价]$_{\text{complement:adjective}}$ [性]$_{\text{nominalizer}}$]$_{\text{N}}$]$_{\text{N}}$ 'equivalence of definitions'

      b.   [[美国]$_{\text{modifier:N}}$ [苹果]$_{\text{head:N}}$]$_{\text{N}}$

      c.   *[美国]$_{\text{modifier:N}}$ [红色的苹果]$_{\text{NP}}$

      d.   红色的美国苹果

Furthermore, the bare noun position cannot be filled by an NP. The following examples demonstrate this:

(8)   a.   [联合国] [秘书长]
         b.   *[[某个组织] [秘书长]]
         c.   某个组织的秘书长

The obligatoriness of 的 means the NP 某个组织 can only appear as a modifier via the possessive construction. It cannot fill the slot of 美国 in 美国苹果. So the bare noun modifier position is a function label existing in a unit smaller than the NP – and it has to be the word.

The modifier position can also be filled by a disyllabic

(9)   染发行业

(10)   *染头发行业

3.3.5   Adjectival modification in complex noun

小狗, 大盘子, as opposed to 大车

In Feng (2000, pp. 84-85), he emphasizes that a prosodic word doesn't have to be a grammatical word, and specifically, attributive modification structures like 小狗 (§ 3.3.5) don't have to be words. But he then precedes to say that these constructions are also not prototypical phrases (Feng 2000, pp. 85-86). His conclusion is that these constructions are "syntactic words", which, in the X-bar scheme, is smaller than a maximal projection but larger than terminal nodes. Due to the lexical-decomposition stance of this note, this analysis is discarded in this note; I simply label them as grammatical words

3.4   Verbs

3.4.1   Verbs with fossilized internal structures

The verb 关心 'care for' is certainly analyzable as a predicator-object structure, but it takes objects just like any other verbs:

(11)   他 [[[关]$_{predicator:V}$ [心]$_{object:N}$]$_{predicator:V}$ [自己的家人]$_{object:NP}$]$_{predicate:VP}$

This means 关心 is not a VP but a grammatical word, or otherwise it is impossible to take another object since there is no valency changing device in use.

3.4.2   Disyllabic verb-object constructions

Unlike the case of § 3.4.1, there exist some disyllabic prosodic words which are verbal constituents and are often recognized as words. Examples of them include 看书, 做饭, 吃饭, etc. These disyllabic verb-object constructions behave just like ordinary VPs when the object is modified by, say, adjectival or nominal attributives; when a semi-object is inserted between the verb and the object, they also follow the same pattern observed in ordinary VPs (§ 5.2.2.2). However, disyllabic verb-object constructions do seem to have one thing different with longer VPs: they can appear in compound

nouns, while the latter can't (§ 3.3.4). Thus, the morphosyntactic tests outlined in this note decide that they are both words and phrases.

(12) gives an example of this duality. The verb 念佛 in the first example is similar to 美国 in (7b): it serves as a bare modifier (since in Chinese verbal constituents can fill argument slots directly, the fact that 念佛 is a verb is not surprising). The fact 念佛 is able to appear in such a position assures us that it is a word. Then consider (12b). In VP1, a temporal semi-object is injected between the verb 念 and the object 佛, while in VP2, an interrogative phrase 哪一尊 is inserted into 佛 and an NP object is now taken by the verb 念.

(12)   a. [念佛] 堂
        b. 老太太 [念了这么久佛]_{VP1}，却不知道自己在[念哪一尊佛]_{VP2}

The solution used in this note is to regard 念佛 in (12a) as a word, while the two VPs in (12b) as phrases. 念佛 as in 老太太经常念佛 can be interpreted as a word or as a phrase without making any difference. 念佛 as a word is something like *Buddha-chanting*, while 念佛 as a verb is something like *chant (the name of) Buddha*. This agrees with the account of Feng (2000, p. 82), in which 念佛 is a morphosyntactic word (the original term being a 句法词 'syntactic word'), which is created by morphosyntactic rules and has a inner structure that is (partially) transparent for other morphosyntactic rules, while 关心 is a 'lexical word' (not the same as *lexical word* in the rest of this note which means words that are not stored in the grammar), which is taken out of the lexicon directly and has no synchronically analyzable inner structure.

Note that we don't really need to set an intermediate layer between ordinary grammatical words and phrases: the fact that disyllabic VPs like 念佛 are also grammatical words can be easily accounted for by dephrasalization.[5] The limit that only disyllabic VPs can be grammatical words as well may have a purely prosodic explanation: to make prosodic processing of a grammatical word easier, Mandarin has a strong tendency to dephrase only units that are prosodic words. This also agrees with the claim in § 3.1.2.1 that all prosodic words with morphosyntactic significance are indeed grammatical words and are never *only* phrases.

Various degrees of fossilization exist for verb-object constructions. In some of them, the object is no longer frequent in ordinary speech, but can still receive modification within the verb-object construction, and sometimes can be moved out of the verb-object construction (2, 13); some verb-object constructions have almost completely fossilized and act as a whole in synchronic syntax (14, 15). These historical verb-object constructions usually have restricted abilities (14b) to have the object modified; insertion of a semi-object is usually possible (14c), which is not surprising since this involves verb ionization, which does not consider the internal structure of the verb (14). Some constructions can be analyzed both as semi-object insertion and object modification (15b).

(13)   a. 我今天吃了这个亏
        b. 这个亏我今天吃了，但是你们之后别再想从我这里拿到一分钱好处！
(14)   a. 我们今年招了一个很有才干的学生
        b. *我们今年招了一个很有才干的生
        c. 我们今年计划招两次生

---

[5]As in *his [holier-than-thee] attitude* in English.

(15) a. 她正在起草一份报告
      b. 先起个草再说，别管是不是写得下去

In conclusion, disyllabic verb-object constructions, no matter historical or synchronic, are classified as Fig. 3.2, which their full VP versions, if any, illustrated. It can be seen that all disyllabic verb-object constructions, historical or synchronic, can be seen as grammatical words in some circumstances; without fossilization, the object of a disyllabic verb-object construction can be arbitrarily modified and we get a VP; with fossilization, semi-object insertion is always possible, while for forms like 起草, whether the extended version 起个草 comes from object modification or semi-object insertion is not clear. The terminology in the figure is introduced in Zhu (2009, pp. 128-129). Zhu (2009) recognizes three classes of grammatical structures: 组合式 'composition-style', 粘合式 'gluing-style', and 复合词式 'compound word-style':[6]

- A composition-style verb-object construction is just a VP.

- A glued-up structure is a regularly formed structure containing elements smaller than usual phrases – possibly bare grammatical words – and can serve as a verb phrase itself (12b), or as a grammatical word, probably after dephrasalization (12a); this includes the case of 念佛 or 吃饭.

- A compound word-style structure contains at least one bound morpheme as one of its immediate constituent, which includes the case of both 吃亏, 起草, and 招生, but the latter two are even more fossilized and belows to § 3.4.1.

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[6]However, it's necessary to realize Zhu's own analysis of wordhood of verb-object constructions is flawed. It seems in Zhu's analysis, it has to be a grammatical word in this case (and hence a "compound word-style construction"); this however is refuted by the example of 吃亏 (2, 13).

He also seems to think that if a structure contains free morphemes and doesn't have a highly established meaning, then it has to be a phrase, and hence we have the distinction between "glued-up construction" and "compound word-style construction", the first being made of free morphemes. This is a confusion between wordhood and fossilization. I define wordhood purely from the perspective of structural analysis (ability to appear as a part of a compound word, etc.), and from this perspective, when used as a grammatical word, a glued-up construction doesn't appear to be quite different from a compound word-style construction. Indeed, Zhu recognizes that the syntactic behaviors of the glued-up construction and the compound word-style construction are highly close to each other.

Figure 3.2: Classification of disyllabic verb-object constructions, fossilized and synchronic
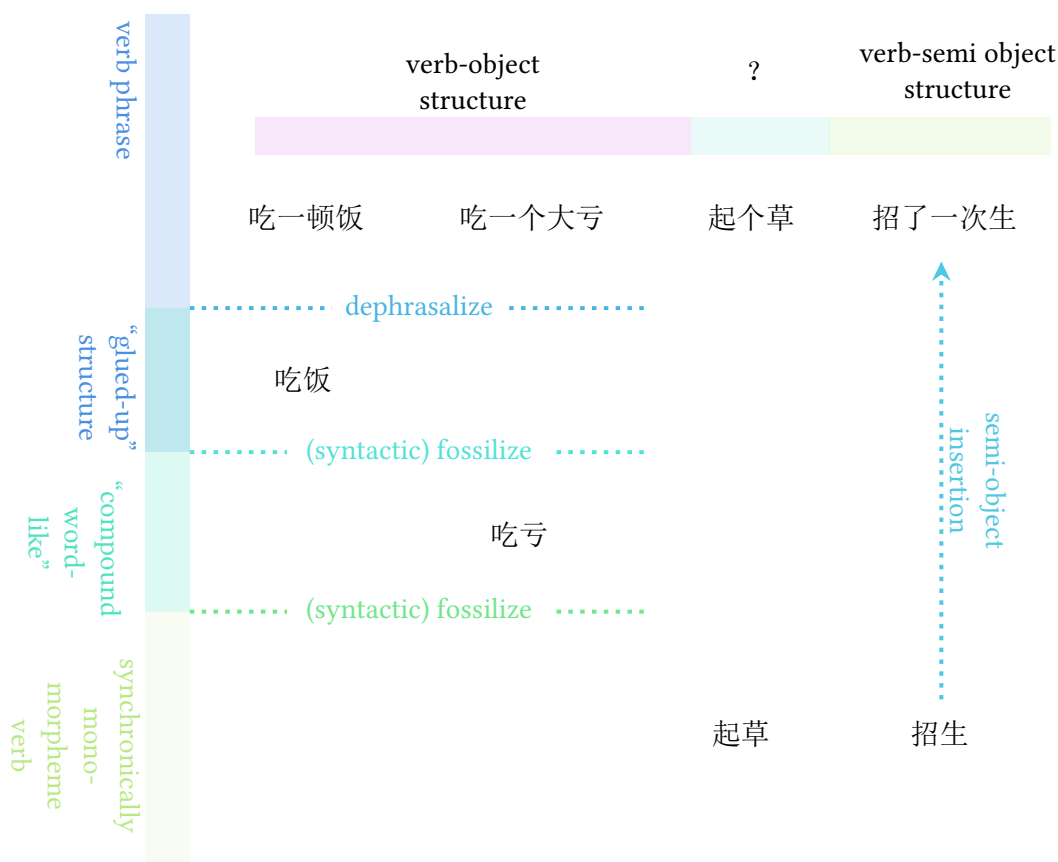
The above discussion is all about syntactic aspects. Semantic fossilization is an orthogonal parameter; 吃饭, despite being a "glued-up" structure, has an established meaning of 'eating something', and not just eating rice; 吃亏, on the other hand, is semantically compositional, although 亏 is infrequent as a noun in ordinary speech.

3.4.3 Idiomatic clauses as a predicate

Some clauses (usually idioms), like 大鱼吃小鱼, or 你看看我我看看你, despite having perfectly analyzable internal structures, are used collectively as a *verb* (§ 7.5.3.1).

3.5 Locational words

Monosyllabic location words like 前 may be analyzed as words because they can be attached to an arbitrary NP to denote a place near the place denoted by that NP, as in [[那座老旧的房子 [前]$_{\text{location word}}$]$_{\text{NP}}$ 有一口井]$_{\text{clause}}$, and what only appears as immediate constituents of phrases are of course words,[7] but they never appear independently as NPs.

---

[7] I'm talking about morphosyntactic words here. It is possible that something is a morphosyntactic word appearing at the level of phrase is incorporated into a word nearby phonologically, though this is not the case in Chinese.

3.6 Prepositions

Though all Mandarin prepositions have verb origins and therefore may be classified as a subclass of verbs by some, it's necessary to distinguish a separate preposition class. Criteria of prepositions include being able to be deleted in topicalization (§ 7.5.2),

> **Box 3.2: The term *coverb***
>
> In

3.7 Other grammatical "coverbs"

TODO: 把, 被, etc.; put the surface constituent orders here and link them to the chapter about the verb phrase

Chapter 4

Noun phrase

No morphological case, number, and gender categories are attested in Mandarin. There is a word class system or in other words classifier system, however. In most cases when a numeral appears in an NP, a classifier follows immediately after the numeral. Attributives – both adjectives and relative clauses – follow the classifier. The demonstrative, if any, appears before the numeral, and even when there is no numeral, there is frequently also a classifier.

The template of NPs, therefore, belongs to the Dem-Num-A-N type, with the classifier residing between Num and A.

Chapter 5

Verb phrase

5.1   Introduction

This chapter is the first chapter regarding Mandarin's clausal structure. It covers clausal dependents inside the VP, as well as the relation between the subject and the VP. The subject of a clause is also a part of the argument structure, but the constituent order, reflexive tests, and information structure constraints on the subject all indicate that the subject is outside of the verb phrase and is "higher" than it, and therefore discussions on these topics about the subject are delayed to chap. 7.

The structure of a VP is optional adverbials plus the core VP. The adverbials are peripheral arguments like temporal and spatial locations TODO: any real TAM adverbs? Inside the core VP, we have the following systems:

- The lexical aspect, without explicit marking but with grammatical consequences (TODO: ref).

  TODO: If the aspectual 了 marker is below the external light verb head, then it can be only recognized as something more similar to the lexical aspect; but it has rich interaction with negation (没吃完, *没吃完了, etc.), the latter seeming to be a clause-level phenomenon? But if we consider it to be higher than the external light verb head, then the 把书交给了他 structure is hard to capture, since here we will agree that the verbal complex 交给了 is lower than 把, which roughly has the same position of the external light verb head, and 了 appears in the verbal complex; this can be explained by affix lowering though; but then arguably 把 should bar the affix lowering process; but in the Cartographic viewpoint, affix lowering is not prevented by the empty functional heads; the minimal movement constraints seem to be more about a tendency.

- The system that is sometimes considered to be non-argument complements. Apart from subjects and objects identifiable in other nominative-accusative languages, the verb may also select a verbal complement or an "internal objects".

- Ordinary arguments, like subject and object; also various valency alternation devices.

- Negation.

It's hard to explicitly give a template of Mandarin core VP here, because the structure of the core VP – as well as what argument is promoted to the subject position – depends strongly on the valence class of the verb.

When *bǎ-*, *gěi-* and *bèi-*constructions are not used, the verbal complex always appears at the initial position of the core VP, that is, it appears immediately after the adverbials and after the negator if there is any. Thus, Mandarin is usually classified as an SVO language.[1] I use the term *verbal complex* to cover the main verb and the suffixes. The structure of the verbal complex is highly intertwined with verb valence, and therefore describing the verbal complex on its own (which is identified as the verb phrase by some) is not feasible. Instead, the VP – the verbal complex plus internal clausal complements, with the subject being an external complement, not just the verbal complex – should be analyzed as a whole.

The so-called serial verb constructions aren't mentioned here. Paul (2008) and Deng (2010, § 9.4) summarizes several constructions that are frequently referred to as serial verb constructions, and points out after deeper investigation, they can all be described in terms of the usual complement clause constructions, purpose clause constructions, etc. that are well attested cross-linguistically (§ 5.10).

5.2 The verbal complex

5.2.1 The internal makeup

Although Mandarin is generally regarded as a prototypical analytic language, without traditionally acknowledged verb inflections, several highly productive (as opposed to arguable historical derivation) verbal affixation devices have been attested. There are several types of TODO: reduplication, 好不好, etc.

- Some types of verbal complements – the resultative complements, the directional complement, the potential complement (§ 5.3), and also the preposition part of the prepositional complement are attached to the end of the verb stem.

- The aspectual system (§ 5.8) are also usually materialized as suffixes in the verbal complex. TODO: 正在

- Inside the verb stem, we still have a derivation system, like 化 '-ize'.

(1) is an example in which all the three systems appear. In real world speeches, such combinations have relatively lower distributions, possibly because of the prosodic constraint that verb shouldn't be too heavy unless it appears at the end of a clause (§ 5.9). In this example, the verbal complex 数字化完了 splits into two prosodic words.

(1) …并且企业 [数字 [化]$_{\text{derivation}}$ [完]$_{\text{complement}}$ [了]$_{\text{aspectual}}$]$_{\text{V}}$ 之后还不一定赚钱 …

It should be noted that verbal complements have limited mobility and therefore are not strictly affixes. The linear order between the aspect marker and the verbal complement, if any, is not completely fixed (2). In the first sentence of (2), 了 is an aspectual suffix (§ 5.8), while 走 is a verb which never appear without an argument in uncontroversial phrasal grammar. So we conclude 了 and 走 are suffixes, and by structural comparison, we conclude 过来 in (2b) is also a suffix, with the same status as 走. But there comes (2c), in which 过来 moves to the end of the clause.

---

[1]The existence of the *bǎ-*construction casts doubt on this classification in typologists, but this is TODO: ref

(2) a. 他 [带 走 了] 他的 文件
3sg carry go.away PERF 3sg-POSS file

'He carried his files away.'

b. 他 [带 [过来]~directional complement~ 了] 三 瓶 汽水
3sg carry come PERF three bottle.CL soda

'He carried here three bottles of soda.'

c. 他 带 了 三 瓶 汽水 [过来]~directional complement~
3 carry ASP three CLS.bottle soda come

'He carried here three bottles of soda.'

Besides the phenomenon shown in (2), it's also possible that a part of the verb that not a morphosyntactic constituent at all is scattered to the end of the VP, also the acceptability of this structure varies among people (§ 5.5). The formation of the verbal complex therefore involves multiple levels of operations motivated by syntactic (i.e. more compositional) and morphological operations.

In some occasions, a personal pronoun can also be phonologically incorporated into the verbal complex (3, 4); this is note possible when the pronoun is replaced by a longer NP (5).

(3) a. Ordinary order
他 [给 了] 我 三 本 书
3 give ASP 1 three CL book

'He gave me three books.'

b. Personal pronoun incorporation
他 [给 我 了] 三 本 书
3 give 1 ASP three CL book

'He gave me three books.'

(4) a. 他送给了我三本书
b. 他送了给我三本书

(5) a. 他给了学生三本书
b. *他给学生了三本书

5.2.2 Verb ionization

It's sometimes possible to split a verb and inject some clausal dependents into it (6, 7, 8). This phenomenon is known as **verb separation** or **verb ionization** (Chao 1965, § 6.5.8). The injected clausal dependent is usually a resultative complement (6) or a semi-object (8, 9), but in marginal cases, an object personal pronoun is also possible beside a short semi-object (8).

(6) % [军 完 了 训]~VP~ 以后 才 可以 去 请
military finish ASP training after only.after(TODO) can go ask.for
护照
passport

'(We) can only apply for a passport after finishing military training.' Chao (1965, § 6.5.8)

35

(7)　% 还 [幽了他一默]$_{VP}$

(8)　这件事情你 [关什么心]$_{VP}$ 啊

(9)　我[学了两个小时的习]$_{VP}$

Whenever a semi-object is inserted, the resulting structure is uncontroversially an VP (7, 8, 9). Insertion of a resultative complement seems to be only available when the verb is intransitive, so the resulting structure is also an VP on its own.[2] It's usually possible to move the inserted constituent out (10, 11, 12), except in (7, TODO: general condition). When this is possible, the resulting structure has exactly the same meaning with the verb separation structure.

(10)　军训完了以后才可以去请护照

(11)　这件事你关心什么啊

(12)　我学习了两个小时

5.2.2.1　Motivation of verb ionization

The splitting of the verbs clearly origins by analogy with VPs containing morphosyntactic words. 军完了训 is apparently created by analogy with [[吃完了]$_{predicator:verb\ complex}$ [饭]$_{object:N}$]$_{VP}$. The motivation of this analogy seems to be prosody: splitting words into phrases is only observed in VPs, and VPs are subject to the prosodic constraint that the neither the verb nor the final complement can be too light. Splitting the verb may help to reduce the "weight" of the verb so the resulting utterance meets the prosodic constraint better.

The phenomenon of verb ionization looks just like infixing, in which a word is split even when it has no analyzable morphosyntactic inner structure. Here, however, this infixing operation creates an VP instead of a grammatical word. This justifies the assumption taken at the end of § 1.2 that there is no clear boundary between words and phrases and therefore syntax and morphology: It's possible for a phrase to undergo rearrangement without clear syntax motivation that usually happens within a word.

Verb ionization sits at the boundary of morphology and syntax. It involves alternation of the shape of the verb and is therefore morphological; but what is injected into the verb is a clause complement and the resulting morphosyntactic unit is a phrase, so verb ionization is also syntactic. This is an illustration of

5.2.2.2　Comparison with similar constructions

It should be noted that some so-called verb ionization examples seem to be analyzable as trivially extending the object: compare 看书 and 看了三本书. Some verbs with verb-object inner structures contain an internal object that usually doesn't appear as a full NP, but that is not absolute: 洗了一个舒服的澡 and 一个舒服的澡对睡眠有好处. These constructions are excluded from the category of verb ionization, although as is shown above, they may historically motivate the emergence of verb ionization.

Other verbal items that are prosodic words seem to be extendable by both modification within the object and verb ionization. The prosodic word 念佛 may be extended into 念阿弥陀佛 (extending the object) as well as 念三声佛 (inserting a semi-object,

---

[2]And therefore whether 军完了训 is directly a VP or is first a verb complex and then a VP is not of much importance.

verb ionization). This happens for 染发 as well: we have both 染了一头蓝发 (extending the object) and 染了一次头发. Since the semi-object can also intervene between the verb and the direct object in uncontroversial VPs (13), it seems disyllabic (and therefore prosodic) verb-object constructions have the same behaviors with longer verb-object constructions.

(13)   老太太念了十多年的阿弥陀佛，却说不清阿弥陀佛是谁

5.3   Verbal complements and internal objects

Depending on their sizes, verbal complements[3] can be divided into phrasal verbal complements and suffixal verbal complements. Suffixal verbal complements include **resultative complements**, **directional complements**, and **potential complements**. Phrasal verbal complements include **state complements** and **prepositional complements**. In each VP there is at most one verbal complement: thus, the existence of a directional suffix automatically excludes all phrasal verbal complements.

There are also a class of clausal dependents that are traditionally analyzed as objects, but are extremely inactive in structure building after the argument structure is finished. They seem to be in contrast distribution with verbal complements. They therefore are to be classified together with verbal complements (Deng 2010, pp. 188-190).

> **Box 5.1: Verbal complements and ordinary arguments: which is higher?**
>
> It's hard to tell whether verbal complements are closer to the main verb or they are actually further from the main verb (ahd ordinary arguments like the object are closely linked to the verb). Frequently used structural tests, like the binding test (observing the distribution of reflexives), the coordination test, etc. all don't work. From the perspective of semantic interpretation, both possibilities are highly plausible – if the verbal complement is closer to the main verb, we can say it modifies the action in question, while if the verbal complement is attached to the main verb plus its arguments, we can say it modifies the whole event including the participants. Both interpretations seem to be largely equivalent.

---

[3]The Chinese term 补语 corresponding to my *verbal complement* is frequently translated into the English term *complement*. This creates some confusion, because the term *complement* can also denote clausal dependents that are arguments of the main verb, as in Huddleston and Pullum (2002).

TODO: make the logic clearer The term *non-argument complement* may be used to avoid this confusion. The reason it's not used in this note is sometimes semi-objects are considered non-argument complements for it seems to reside at the very core of the VP, which usually records the quantity or amount of an action; this construction can also be seen in Latin, like the Latin accusative expression of time (Greenough and Allen 2013, § 423), considered as an argument. Thus, I use the term *verbal complement* to refer to things like 完 as in 做完了.

5.3.1 The directional complement

5.3.1.1 Monosyllabic directional complement

5.3.1.2 Disyllabic directional complements

> **Box 5.2: Phrasal directional complement?**
>
> The VP-final disyllabic directional complement seen in (2c) may also be seen as a phrasal verbal complement (Deng 2010, p. 120), but this is due to his strictly lexicalist analysis; in my approach outlined in § 1.2, even though the directional complement in (2c) doesn't appear together with the rest of the verbal complex, the fact that it's small in size and it's constrained in productivity means it should be put together with other directional complements.

5.3.2 The state complement

> **Box 5.3: Structural ambiguity after 得**
>
> There are two structures corresponding to the 得-NP-VP sequence. In one case, like 这文章写得谁也看不懂, the NP-VP sequence after 得 is a clause, which, together with 得, constitutes a state complement construction. In another case, like 这条山路走得我累死了, the NP immediately after 得 is the THEME argument associated with the BECOME argument structure, while the VP is a clause with an empty subject that constituents the state complement construction. This difference can be tested by trying to remove the current subject and see whether we can still find a related grammatical sentence. In the second case, we have 我走得累死了, which has a structure parallel to 这文章写得谁也看不懂, while in the first case it's impossible.

5.3.3 Complement clause constructions

Some are complement clause constructions
    Purpose clause

(14)   你当我傻吗

(15)   我准备明天去骑马

(16)   他跪下来求我

    TODO: 为动，死国可乎 etc.
    What about 笑天下可笑之人
    It should be noted that the position of the complement clause is lower than the direct object.

(17)   他把这个消息告诉了我

(18)   他告诉了我这个消息

(19)   他告诉我张三脑袋被驴踢了

(20) *他把张三脑袋被驴踢了告诉了我

Here, the NP 一顶帽子 seems to be the internal object, which specifies "the amount" of the action, while the

(21) 他抢了我一顶帽子

(22) 我被他抢了一顶帽子

5.3.4 Prepositional complement and preposition incorporation

交给, etc. % 住在了

5.3.5 Semi-object

There may be a numeral expression in the VP that gives the "quantity" of the event, which is called the **semi-object** (Zhu 2009, § 8.6). A semi-object may be a counting expression, a time expression, or a pure numerical expression (TODO: examples, and more concise terms). Their semantic functions are closer to numeral attributives in NPs. They are called "objects" purely because they are within the VP and are NPs themselves; this note doesn't recognize them as objects; the term *semi-object* is only used to TODO: so is it really necessary to use the term?

5.4 Subject and objects

5.4.1 Overview

The definition of the subject involves the definition of the topic (§ 7.5.3). As for the classification of argument structures, a well-known cross-linguistic generalization of argument structure is that ambitransitive verbs can be divided into S=O ones and S=A ones, the former being usually related to (change of) state, the latter being related to a "spontaneous" action, while intransitive verbs can be classified according to their resemblance to the S=A case or the S=O case, and transitive verbs can be classified similarly. Thus, concerning the subject and the object[4] of VPs, intransitive and mono-transitive verbs may be prototypically divided into the following contrasting classes (Deng 2010, chap. 6):[5]

- The BE type, describing a static state, with one argument (§ 5.4.2).

- The intransitive DO type, describing a dynamic event, with one agentive argument.

---

[4]Not including so-called semi-objects in § 5.5 – their behaviors seem to be largely orthogonal to the content of this section.

[5]An intransitive verb from the fourth category is often called an **unaccusative verb**, and in contrast, intransitive verbs belonging to the second type are **unergative verbs**. The terminology is unfortunately confusing because this has nothing to do with alignment: an ergative language can still have unergative verbs. Since this note pretends to be a descriptive one, below I will try to use terms like "a verb frequently appears in the BECOME structure" in place of "an unaccusative verb", which also agrees with the lexical-decomposition flavor of my theoretical commitment better.

- The monotransitive DO type, describing a dynamic event, with one agentive argument and and one patientive argument. In both DO constructions, the agentive argument always goes to the subject position and therefore goes out of the VP (§ 5.4.3).

- The BECOME type, describing a dynamic event, with one argument being the participant of this event and the "state-transition" caused by the event (§ 5.4.6). The argument may be agentive or patientive semantically. The argument is raised to the subject position.

- The CAUSE-BECOME type, a dynamic event, with one argument being the causer, and the other argument being the participant of this event. The causer is raised to the subject position (§ 5.4.7).

A verb allowing alternation between the two BECOME frames is a S=O ambitransitive verb; a verb allowing alternation between the two DO frames is a S=A ambitransitive verb. Some verbs however are always transitive and can never be intransitivized (§ 5.4.7).

Double-object VPs may be divided into two subclasses (Deng 2010, § 7.2):

1. A BECOME construction about giving something, with one agentive argument, one receiver and one theme (TODO: elaborate). The receiver is not syntactically active in valency changing.

2. A DO construction event with a meaning of obtaining something, with one agentive argument corresponding to the receiver, one argument similar to the TODO: experiencer? What's the role? that corresponds to the source, and one argument about the object being transferred.

The division between the DO family and the BECOME family is of great importance in Mandarin grammar. Apart from the S=O/A distinction and the action/state semantic distinction, the follows can also be observed: a BE verb or adjective can only be converted to a BECOME one (§ 5.4.10); the instrumental or locational object construction is restricted to DO verbs (§ 5.4.5); the "experiencing" construction is restricted to BECOME verbs (§ 5.4.8); the aforementioned classification of ditransitive constructions also reveals DO-BECOME distinction.

Certain gradience exists in the distinction between the two transitive classes (Lin and Deen 2021; Huang 2007); thus, the five types listed above are verb frames, into which verb stems can be inserted, instead of inherent properties of verbs.

There is a strong correlation between the argument structure and the lexical aspect of VPs (Laws and Yuan 2010; Toratani 1997; Aljovic 2000). Specifically, a BECOME or CAUSE-BECOME VP tends to be telic, because it describes a transition of states and therefore the event denoted is bounded by definition.

There exist several important variants of the VP valencies listed above. The most salient cases are the *bǎ*-construction (§ 5.4.13), the *bèi*-constructions (§ 5.4.12, § 5.4.14), and similar constructions that interrupt the standard SVO constituent order (TODO: ref, 让, etc.). Some constructions that have triggered endless debates (and even make some people claim that Mandarin has no argument structure), which include the EXPERIENCE construction (§ 5.4.8, commonly known as the 王冕死了父亲 structure), and several types of existential constructions TODO: 台上坐着主席团 Under in-depth

scrutiny, all these constructions can be reduced into argument structure alternation and alternative ways to realize the verbal complex.

(23) 他们表扬了我

(24) 我被表扬了

(25) ??他们把我表扬了

The patientive argument and the TODO: numeral object like 他抢了我[一块钱] are not active for further processing; thus the VP can be further divided into two layers. TODO: 被 construction: what happens to the so-called passivized argument? Evidences suggest that the intransitive object is very internal, appearing in almost the same position with complement clause, etc. but why is it subject to 被 construction? TODO: for short 被-construction, maybe it's because short 被-construction is generated by directly attaching 被 to, say, [抢了一块钱]: 我被抢了一块钱 'lit. I suffer from one-dollar robbing' 李四被捕了 doesn't have a counterpart without 被: 捕 here may be regarded as a deponent verb. This also implies that 被 has already been grammaticalized and is no longer a lexical verb.

The telicity category described above interacts non-trivially with the aspectual system (§ 5.8).

5.4.2 The BE structure

5.4.2.1 Adjective predicator

One intriguing trait of Mandarin is a BE structure without a degree adverbial is considered problematic in a matrix clause, and yet is perfectly fine in a subordinated clause.

(26) ?他个子高

(27) 他个子比较高

(28) 他个子还算高

(29) 他个子高高的

(30) 他睡不下这张床，因为他个子高啊

5.4.3 The prototypical DO structure

(31) 我喜欢她

(32) a. ???我把她喜欢
      b. ??她被我喜欢
      c. 被不喜欢的人喜欢是非常糟糕的事情

– but this is definitely a "suffer" or "affectee" construction

Thus, we conclude 喜欢 is a DO verb, and this can be expected: to like someone (or in general, to have some thoughts about someone) doesn't change the inside state of the target. Thus, the BECOME argument structure is not available.

5.4.4 The DO-AFFECT construction

The AFFECT construction may appear below the agent argument but above the patient argument or the internal object/verbal complement in a DO structure. When there is indeed a patient argument or an internal object, we get a double-object construction (33). This double-object construction however is structurally different from the more frequent dative construction (§ 5.4.9, § 6.1).

The AFFECTEE argument is strongly patientive: unlike the EXPERIENCER argument that bears a similar meaning but appears with the BECOME structure (§ 5.4.8), a AFFECTEE argument can never appear in the subject, which may be partially due to parsing effects, for structural ambiguity usually arises if the AFFECTEE argument moves to the subject position (34). The two *bèi*-constructions are both available for the DO-AFFECT construction, for obvious semantic reason (35, 36). On the other hand, the *bǎ*-construction is problematic (37).

(33) [他]$_{subject, agent}$ 抢 了 [我]$_{AFFECTEE}$ [十 块 钱]$_{internal object}$
    3   rob ASP 1   ten CL money

He robbed ten dollars/*yuan.*

(34) 我 抢 了 十 块 钱
    1 rob ASP ten CL money

I robbed ten dollars/*yuan.* (*I was robbed of ten dollars/*yuan.*)

(35) 我 被 他 抢 了 十 块 钱
    1 BEI 3 rob ASP ten CL money

I was robbed of ten dollars/*yuan* by him.

(36) 我 被 抢 了 十 块   钱
    1 BEI rob ten CL money

'I was robbed of ten dollars.'

(37) ?他 把 我 抢 了 十 块 钱
      3 BA 1 rob ASP ten CL money

He robbed ten dollars/*yuan* from me.

The VP-final theme argument is syntactically inactive in valency alternation; it seems comparable to the semi-object (§ 5.3.5; Huang 2007)

TODO: 打了我一下，幽了他一默

One important behavior of the DO-AFFECT construction is it can't be used with the durative aspect marker 着.

5.4.5 The DO-INSTRUMENT or DO-PLACE structure

The main verb sometimes can move before an oblique or peripheral argument, and the NP then appears to be the object (Feng 2000, chap. 4, § 5).

(38) 我们今天准备吃食堂

The structure seems to have prosodic motivation: when the standard patientive argument is present but carries a piece of old information, its phonological weight will be reduced, which means the stress will be assigned to the constituent after the verb, the patientive argument carrying a piece of old information, which is not able

to carry stress because it's already weakened. One way to redeem the structure is to move the verb before and get a V-ɪɴꜱᴛʀᴜᴍᴇɴᴛ/ᴘʟᴀᴄᴇ linear order, which doesn't break any prosodic constraint.

5.4.6 The intransitive ʙᴇᴄᴏᴍᴇ construction

A ʙᴇᴄᴏᴍᴇ verb may or may not license a ᴄᴀᴜꜱᴇʀ argument. Some never do. The verb 死, for example, doesn't allow the causer argument and is therefore always intransitive (39, 40). When the ᴄᴀᴜꜱᴇ-ʙᴇᴄᴏᴍᴇ structure is not available, the *bǎ*-construction and the two *bèi*-constructions, which require the ᴄᴀᴜꜱᴇʀ argument, are also not available (41, § 5.4.13.2).

(39) 楼　　下　　一 只 猫 死 了
building down one ᴄʟ cat die ᴀꜱᴘ
Outside the building, a cat died.

(40) *这　个 混蛋 死 了 一只 猫
　　ᴅᴇᴍ ᴄʟ thug die one ᴄʟ cat
'This thug killed a cat.'

(41) *这个混蛋把一只猫死了

5.4.7 The transitive ᴄᴀᴜꜱᴇ-ʙᴇᴄᴏᴍᴇ construction

When the ᴄᴀᴜꜱᴇʀ argument is licensed, we observe S=O ambitransitive valence alternation (42, 43). The intransitive verb frame of a S=O ambitransitive verb is sometimes known as the **notional passive**, in which no explicit passive markers like 被 (§ 5.4.12) or 给 (§ 5.4.11) appear, but the semantics is somehow passive, because the subject lacks the ability to carry out the action itself (42, 43; compare the existence of the passive voice in the English translations and the absence of any passive marker in the Mandarin examples). A ᴄᴀᴜꜱᴇ-ʙᴇᴄᴏᴍᴇ verb has no problem appearing in the *bǎ*-construction (44, § 5.4.13.2). The long *bèi*-construction, however, may seem somehow strange (45, § 5.4.14.3).

(42) 茶 泡　好　了
tea soak well ᴀꜱᴘ
'Tea has been prepared. (lit. Tea has soaked well)'

(43) 我 已经　泡　好 茶 了
1　already soak well tea ᴀꜱᴘ
'I have already prepared tea. (lit. I already have soaked tea well.)'

(44) 我 把 茶 泡　好　了
1　ʙᴀ tea soak well ᴀꜱᴘ
'I have already prepared tea.'

(45) ?茶 被 我 泡　好　了
　　tea ʙᴇɪ 1　soak well ᴀꜱᴘ
'Tea is prepared by me.'

Also, if we assume that the *bǎ*-construction is limited to the ᴄᴀᴜꜱᴇ-ʙᴇᴄᴏᴍᴇ structure, then the ᴄᴀᴜꜱᴇ-ʙᴇᴄᴏᴍᴇ structure that comes from a transitive ᴅᴏ structure doesn't have a corresponding ʙᴇᴄᴏᴍᴇ structure.

(46)　他把一条流浪狗捡回了家

(47)　*这条流浪狗捡回了家

The fact that some BECOME structures don't have corresponding CAUSE-BECOME structures, and some CAUSE-BECOME structures don't have corresponding BECOME structures means there should be further distinctions within the BECOME verb class.

5.4.8　The EXPERIENCE-BECOME structure

When a BECOME structure doesn't allow a CAUSER argument being attached to it, sometimes the EXPERIENCE-BECOME structure is available, in which the EXPERIENCER is promoted to the subject position (48, 49). This structure usually has a negative meaning: the subject (the EXPERIENCER) suffers from the action happening on the object.

(48)　王冕　死　了　父亲
　　　 (name) die ASP father

　　　 'Wang Mian's father died. (lit. Wang Mian experienced his father's death.)'

(49)　才几个月，这家工厂就已经坏了三台机床了

One phenomenon worth remarking is in the EXPERIENCE-BECOME structure, the EXPERIENCER argument always seems to have a possession relation with the patientive argument. The experience analysis here semantically imposes this tendency, but it seems when there is no possession relation between the two arguments, the sentence is completely ungrammatical, and not just implausible: the meaning of (50) is quite plausible, but the sentence is not fine. On the other hand, adding a possessive into the object NP that refers to the subject has the correct semantics, but the result is still not acceptable (51). The possessor is never licensed for the object, which means the EXPERIENCE-BECOME structure is not simply adding a EXPERIENCER argument on top of a BECOME structure: it's an external possession construction as well (TODO). External possession is also seen in long and short *bèi*-constructions (119).

(50)　*原本李四就靠张三的妈妈接济，现在李四死了张三的妈妈了，村里人自然要看不起他

(51)　*这家工厂坏了他们的三台机床

> **Box 5.4: Alternative analysis of the EXPERIENCE construction**
>
> Deng (2010, § 212) analyzes the EXPERIENCE structure as a BECOME structure with the subject 王冕 being the argument introduced by BECOME, and the object 父亲 being an internal object attached to the verb 死. The main problem of this analysis is this goes against his previous analysis – which I accept in this note – that in, say, 某人死了, it's the NP 某人 denoting the person who dies that appears as the argument in the BECOME structure. Comparing this prototypical verb frame of 死 with (48), we find if Deng's analysis were true, then the same semantic argument would be linked to two different syntactic positions, which, unless motivated by rather strong structural evidences, should not be accepted.

The EXPERIENCE-BECOME structure is "finalized": the *bǎ*-construction and the long and short *bèi*-constructions are never permitted to appear. This is not surprising: the

EXPERIENCE-BECOME structure is semantically distant from the CAUSE-BECOME structure, and therefore the *bǎ*-construction is not applicable. On the other hand, both the short and the long *bèi*-constructions serve to promote one argument in the VP to the experiencer position, and imposing the *bèi*-constructions on top of the EXPERIENCE-BECOME structure violates the principle of economy.

5.4.9 The CAUSE-BENEFIT-BECOME construction

5.4.9.1 The simple CAUSE-BENEFIT-BECOME construction

The CAUSE-BENEFIT-BECOME construction is predominantly seen with verbs about giving can be divided into two subtypes: in one type the BENEFICIARY argument is related to a resultative complement (§ 5.4.9.2), and another one, described here, is a double-object construction besides the AFFECT construction (§ 5.4.4). A CAUSE-BENEFIT-BECOME construction is just like a CAUSE-BENEFICT structure, but it has an additional BENEFICIARY argument lying between the CAUSER and the THEME; the S=O ambitransitive transitivity alternation (§ 5.4.7) can be observed, where the subject and the THEM argument play the role of S and O, respectively (52).

(52) a. [他]subject, CAUSER [给 了]verbal complex [我]BENEFICIARY [一 本 书]THEME
          3   give ASP   1   one CL book

      'He gave me a book.'

      b. [这 本 书]subject,THEME [给   了]verbal complex [我]beneficiary
          DEM CL book   give.toward ASP   1

      'This book is given to me as a gift.'

      c. 他把一本书给了我

      d. 这本书被他给了我

The beneficiary argument is not syntactically active in valency alternation. It can't be promoted to the subject position in intransitivization, the expected result being a BECOME construction (53; c.f. 52b). Similarly, a legit *bǎ*-construction can't be formed by identifying the CAUSER argument and the BENEFICIARY argument as the arguments in the CAUSE-BECOME construction (54; c.f. 52c). This inactive characteristic of the BENEFICIARY argument may be explained by assuming that it receives an inherent case and behaves just like a prepositional complement (Huang 2007).[6]

(53) *我给了一本书

(54) *他把我给了一本书

(55) *我被他给了一本书

The BENEFICIARY argument lying between the highest CAUSER argument and the lowest THEME argument can be dated back to Old Chinese (56). A difference between Old Chinese and modern Mandarin shown in the example is the BENEFICIARY argument has become less active, for it's no longer able to be the subject; in Old Chinese,

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[6]This fact seems to be unnoticed by Deng (2010, p. 112), who analyzes the dative construction as 我 CAUSE 张三 BECOME 一本书送. Then the first two arguments are in a CAUSE-BECOME structure and therefore should be able to be alternatively realized as a *bǎ*-construction, with 张三 appearing directly after 把. This, however, doesn't seem to be the case: the correct *bǎ*-version is 我把一本书送给了张三, instead of 我把张三送了一本书.

however, the CAUSE-BENEFICT-BECOME construction has a internal makeup comparable to the DO-AFFECT construction, where the argument representing the object being transferred in the event is a rather internal and syntactically inactive one (§ 5.4.4). Few Old Chinese CAUSE-BENEFIT-BECOME verbs are directly inherited by Mandarin; for those Mandarin verbs with etymological relation with Old Chinese CAUSE-BENEFIT-BECOME verbs, the verb frame usually has already gone huge reanalysis, with the alternation shown in (52, 56) being unavailable (57).

(56) Old Chinese
    a. 王授我牛羊三千
    b. 我受牛羊三千

(57) 我接受了三千头牛羊

The number of prototypical CAUSE-BENEFIT-BECOME verbs is limited. Most GIVING verbs in modern Mandarin fall under the category introduced in § 5.4.9.2, which employs a strategy that uses a verbal complement structure with close tie with CAUSE-BENEFIT-BECOME construction.

5.4.9.2 With resultative complement

which is a standard ambitransitive CAUSE-BECOME structure, with the receiver argument 我 being an internal object or prepositional complement, depending on the nomenclature, and the preposition 给 is attached to the verbal complex (§ 5.3.4). There are several pieces of evidences that 给 is a preposition: it *has to* be deleted when the receiver argument governed by it is topicalized
(Paul and Whitman 2010)

(58) [他] 送 给 了 [我] 一 本 书
    3 give.gift give.towards ASP 1 one CL book
    'He gave me a book as a gift.'

(59) [他]$_{subject, CAUSE}$ 送 了 [这 本 书] [给 我]
    3 give.gift ASP DEM CL book give.towards 1
    'He gave the book to me as a gift.'

(60) % 李四这人真的看人下菜碟。 [我]$_{topic,i}$ [他]$_{subject}$ 送了一本书 $-_i$ ，王大爷他就啥也没送
    '(colloquial).'

(61) *我他送给了一本书

(62) 他送给了我一本书

(63) 他送了给我一本书

(64) 他给了一本书给我

(65)

5.4.10 The BE-BECOME alternation

A verb or adjective (TODO: what category?) that usually appear in a BE structure (66) can be semi-regularly (see below) inserted into a BECOME structure (67) or further, in a CAUSE-BECOME structure (68).

(66) 他 对　物理学 的　知识　一向 丰富
3　towards physics POSS knowledge always abundant

'His knowledge in physics is always abundant.'

(67) 经过　　　这　次 实地考察，　　我们 对　这　片
going.through DEM CL real-place-investigation 1pl　towards DEM CL
山区　　　的 知识　更加 丰富　了
mountain-area DE knowledge more abundant ASP

'After this field work, our knowledge of this mountain becomes more abundant.'

(68) 这　次 考察　　丰富　了 我们 对　地质学 的　认识
DEM CL investigation abundant ASP 1pl　towards geology POSS KNOWING

'This explanation makes our knowledge of geology abundant.'

Note that if the predicator of a clause with the structure of (68) is usually found in a BE structure, then it is clearly to be interpreted as a CAUSE-BECOME structure, but this doesn't mean the CAUSE-BECOME structure is always available: (70) seems problematic, although its predicator, 红火, clearly is an adjective (TODO: ref) and is able to appear in a BE structure (69).

(69) 我们 家　的　日子 真是 越来越　红火　了
our　home POSS live　truly more.and.more booming ASP

'Our lives are increasingly improving.'

(70) ???新政策红火了我们的日子

Bǎ- or *bèi-*constructions are less productive for BECOME-structures or CAUSE-BECOME structures derived from BE-structures (71, 72, 73), though not completely unattested. The problem with the *bèi-*constructions seems to be that the BECOME construction headed by an adjective tends to pick up the "spontaneous state change" meaning and therefore is semantically incompatible with the *bèi-*constructions (§ 5.4.14.3, § 5.4.8). The problem with the *bǎ-*construction also seems to be semantic: the *bǎ-*construction is not compatible with a main predicator that is too stative. By adding suffixes that are usually applied to verbs like 起来, the acceptability is slightly improved (74).

(71) *我们的知识被丰富了

(72) ?这场展览把我们的知识丰富了

(73) ?我们的知识被这场展览丰富了

(74) iPad 版　需要 把 功能　丰富 起来!
iPad version need BA function rich TODO

'The iPad version (of this software) needs to enrich its functionalities!' (an online user feedback)

5.4.11 The DO-BECOME alternation

The verb 跑, for example, can appear in the EXPERIENCE-BECOME verb frame (75), but insertion of the aspect marker 正在 rules out the EXPERIENCE-BECOME verb frame (76) but permits the DO construction (77).

(75) 昨天　　城北　　那　座 监狱　跑　了　一　个 犯人
yesterday north.city DEM CL prison run ASP one CL inmate
'Yesterday, an inmate escaped (lit. 'ran') from the prison to the north of the city.'

(76) *城北那座监狱正在跑一个犯人

(77) 有一个犯人现在正在逃跑

Not all verbs can appear in the notional passive construction. There exists another construction – the *gěi*-passive construction – that has similar meaning with the notional passive (i.e. the internal state of the subject somehow changes without the external cause – if any – being specified) and can be observed on its own in very colloquial and non-standard speech (78), sometimes for stylist and humor purposes.

(78) % 李四给杀了

The alternation between the notional passive and the *gěi*-construction is quite intriguing. It means the two are not free variants of the marker of the BECOME argument structure, but are in contrast distribution: 给 usually appears with verbs that prototypically appear in the DO structure (79, 80, 81). 给 also renders the whole predicate strongly telic. It seems to never appear without the aspectual marker 了. It's likely that 给 has already developed a distinct usage as a valency changing marker, which turns a DO verb into a BECOME one, while the notional passive construction directly applies to BECOME verb.

(79) a. ???我给喝醉了
    b. 我喝醉了

(80) a. ??? 茶给泡好了
    b. 茶泡好了

(81) a. % 我给灌醉了
    b. *我灌醉了

给 also appears as a part of the *bǎ*-construction (82) and the long *bèi*-construction (83), although after removing 给, the instances of the *bǎ*- and *bèi*-constructions above are still grammatical. In *bǎ*- and *bèi*-constructions, the appearance of 给 seems to have no link with the DO-BECOME distinction (85; c.f. 79). The *gěi*-construction however is not compatible with the short *bèi*-construction (84). A reasonable guess, then, is that in the *bǎ*-construction and the long *bèi*-construction, 给 marks an embedded BECOME structure, regardless of whether a DO structure is embedded inside, while the short *bèi* construction is completely isolated from this pipeline.

(82) 他们把李四给杀了

(83) 李四被他们给杀了

(84) *李四被给杀了

(85) 这瓶酒把我给喝醉了

5.4.12 The short *bèi*-passive construction

Although the only difference between the short bei-construction and the long bei-construction seems to be that the former lacks the semantic agent, the two constructions have important grammatical differences that seem to be not motivated by semantics.

Although 给 and 被 seem similar at the same glance, the former is able to appear in a ba-construction, while the latter is never able to do so.

(86) 李四被他们杀了

(87) 李四给他们杀了

(88) *他们把李四被杀了

把, 给, 被 appearing together: 给 is the BECOME verb; 李四给人杀了 = 李四 BECOME [人杀了 e], where 李四 moves out of the DoP.

(89) 李四给杀了

(90) 李四给他们杀了

(91) 他们把李四杀了

(92) 他们把李四给杀了

(93) *他们把李四被杀了

(94) 李四被他们杀了

(95) 李四被他们给杀了

On the other hand, long bei-constructions are probably from the CAUSE-BECOME structure, which can be demonstrated by the long-distance dependency relations observed in both the ba-construction and the long bei-construction (James Huang, Audrey Li, and Li 2013, § 4.2.1.5). 那块手表被李四用一个锤子砸烂了 Here the BECOME-structure would be ?那块手表用一个锤子给砸烂了. 李四 appears as a CAUSER, and if the derivation stops here, 把 is inserted, and we get 李四用一个锤子把那块手表给砸烂了. If, however, on top of the CAUSE-BECOME structure, we insert 被 and move 那块手表 out, 把 is no longer spelt out and we just get 那块手表被李四用一个锤子砸烂了. Note that in the above procedure, the most internal clausal dependents are completely inactive: we can replace 砸烂 by 砸成了一堆破铜烂铁, and everything is still completely grammatical.

> **Box 5.5: Valency increasing, or just different subcategorization frames?**
>
> One difference between my analysis here and the analysis in Deng (2010, p. 202) is that the latter assumes that the input to the gei-construction is a verb in the BECOME frame. This however is unable to explain why we get 他给人家杀了, in which the agent 人家 appears after 给. There are however definitely vagueness in whether the gei-construction can be applied to an existing DO argument structure.

5.4.13 The *bǎ*-construction

5.4.13.1 The overall structure

The *bǎ*-construction is also referred to as the disposal construction or the causative construction. The formation of the *bǎ*-construction is relatively clear: the "direct object" (see below) is first moved out before the core VP (and then appear before the main verb), and the auxiliary 把 is then inserted before the direct object, and then the subject is promoted before the auxiliary 把 (96).

(96) a. [他们]~subject~ [杀 了 李四]~VP~
        3pl   kill ASP (name)
        'They killed Li Si.'

     b. [他们]~subject~ [把 [李四]~object~ 杀 了]~predicate:*bǎ*-VP~
        3pl   BA (name)   kill ASP
        'They killed Li Si.'

The auxiliary 把 is frequently analyzed as a preposition in the literature; the *bǎ*-construction therefore may be considered as an exceptional object marking construction, where the object is transformed into a prepositional phrase. But the 把-NP sequence is never observed outside of the *bǎ*-construction; also, the omission of 把 is accepted by some (97), which is rare – if not impossible – for other prepositions in coordination constructions in Mandarin. Thus, in this note 把 is considered an auxiliary verb.

(97)   % 他把饭做完了，衣服也洗好了

The "direct object" here depends on the original argument structure. For monotransitive constructions the direct object is just the object; for the CAUSE-BENEFIT-BECOME construction the direct object is the THEME argument (§ 5.4.9, 52). The DO-AFFECT construction however usually doesn't participate in the *bǎ*-construction. The conditions under which the *bǎ*-construction is licensed are discussed in § 5.4.13.2.

5.4.13.2 The input argument structure

The *bǎ*-construction prototypically take a verb frame already with the CAUSER role, i.e. the CAUSE-BECOME structure and the CAUSE-BENEFIT-BECOME construction (§ 5.4.7, 44; § 5.4.9; Deng 2010, pp. 98-99). A BECOME verb without a CAUSER argument can't receive one by appearing in the *bǎ*-construction (41).

Some DO verbs are also able to appear in the *bǎ*-construction, but DO verbs deviating severely from the structure and semantics of the CAUSE-BECOME are prohibited from appearing (32a, 37, § 5.4.7).

The durative aspect marker 着 almost never appears with the *bǎ*-construction, TODO: why?? which shouldn't be the case if the *bǎ*-construction can contain a DO-structure.

It should however be emphasized that the CAUSE-BECOME structure appearing in the *bǎ*-construction doesn't necessarily have a BECOME counterpart, when the main verb is originally a DO verb.

(98)   *我害惨了

(99) 你这下把我害惨了

(100) 你这下害惨我了

(101) 我被你害惨了

Due to the prosodic constraint (§ 5.9), in the *bǎ*-construction, it's not acceptable if the verb is monosyllabic and is not followed by other complements, since now the VP-final stress falls on the verb which is too light to receive the stress. Thus, in the *bǎ*-construction, monosyllabic verbs usually have the aspectual suffix 了. This doesn't seem to be due to inherent properties of the *bǎ*-construction: when the prosodic problem is not present, the aspectual marker 正在 is also acceptable.

(102) 他已经把这项工作做完了

(103) 他正在把三种溶液放进一个瓶子里

5.4.13.3 Argument structures only appearing in *bǎ*-construction

(104) 我把卡车装满了稻草 (James Huang, Audrey Li, and Li 2013, p. 153)

5.4.13.4 Comparison with *bèi*-constructions

It is observed that the *bǎ*-construction and the long *bèi*-construction have close relation to each other, and the latter is usually analyzed as a variant of the former. However, the *bǎ*-construction is required to be somehow similar to a CAUSE-BECOME construction, while this is not necessarily true for the long *bèi*-construction gives rise to some mismatch between the *bǎ*-construction and the long *bèi*-construction.

In some cases where the *bǎ*-construction is not available (§ 5.4.13.2), the long *bèi*-construction is available (§ 5.4.14.2).

On the other hand, the S=O ambitransitive valency alternation in examples 105, 108, as well as the non-availability of the long *bèi*-construction (107, 110) and the state-changing semantics, means these examples contain a typical CAUSE-BECOME structure described in § 5.4.7. In both examples, *bǎ*-constructions are available (106, 109), while the long *bèi*-construction seems problematic (107, 110).

(105)   a. 我喝醉了
        b. ?这瓶酒喝醉了我

(106) 这瓶酒把我喝醉了

(107) ???我被这瓶酒喝醉了

(108)   a. 我走得累死了
        b. 这条路走得我累死了

(109) 这条路把我走得累死了

(110) ???我被这条路走得累死了

5.4.13.5 Comparison with lexical causatives

It should be noted that the *bǎ*-construction is not a causative construction that *blindly* takes any existing argument structure as the input. It seems what appears after 把 is never quite agentive: this is only possible with a lexical causative verb like 让 (111,

112). Thus, the *bǎ*-construction is unable to attach a CAUSER argument to any existing argument structure.

(111)   * 他 把 我 去 爬山
          3   BA 1   go climb.mountain
        'He lets me climb mountains.'

(112)   他 让 我 去 爬山
        3   let 1   go climb.mountain
        'He lets me climb mountains.'

5.4.14   The long *bèi*-construction

Summarizing the two subtypes of the long *bèi*-construction and one case in which it's not available (§ 5.4.14.1, § 5.4.14.2, § 5.4.14.3), I conclude that the mechanism underlying the long *bèi*-construction can be summarized as extracting an internal argument that is affected by the event and move it before 被. Whether an argument structure can be an input of the long *bèi*-construction depends on whether this affectee argument is available; the DO-BECOME distinction seems to be not important here.

5.4.14.1   Long *bèi*-construction with *bǎ* counterpart

The close relation between the long *bèi*-construction and the *bǎ*-construction has long been noticed.

5.4.14.2   Long *bèi*-construction without *bǎ* counterpart

However, the CAUSE-BECOME argument structure doesn't seem to be the only source of the long *bèi*-construction. There exist long *bèi*-constructions whose *bǎ*-counterparts are at best awkward and usually not acceptable. The argument structures appearing in these examples include the DO-AFFECT construction (113, § 5.4.4), the DO structure (114)

(113)   李四被张三抢了一顶帽子

(114)   被不喜欢的人喜欢是很让人为难的一件事

(115)   我被他批评了一番，感觉非常不爽

(116)   ??张三把李四抢了一顶帽子

(117)   *他真是把自己的老婆喜欢啊

(118)   他把我批评了一番

(113) is a good example demonstrating the long *bèi*-construction allows more freedom in choosing than the *bǎ*-construction.
TODO: compare 他被强盗杀了父亲 with 王冕死了父亲; also 他被杀了父亲

(119)   他 被 强盗   杀 了 父亲
        3   BEI robber kill ASP father
        He suffers from robbers' killing of his (*someone else's) father.

This illustrates the difference between DO and BECOME as well: 王冕死了父亲 is a BECOME argument structure with an experiencer attached, while 强盗杀了他父亲 is

他被抢了三十块钱

强盗抢了他三十块钱

The alternation of the presence of 被 between the two input argument structures may reflect the same mechanism outlined in the alternation between the notional passive and the bei passive:

5.4.14.3 Alternation between the notional passive and the long *bèi*-passive

One interesting observation is *not* every CAUSE-BECOME structure leads to a good long *bèi*-construction: the long *bèi*-construction is less acceptable for a verb that is able to appear in the notional passive construction, i.e. a verb can appear in the BECOME structure *on its own* (45, 120, 121). This might be motivated by semantic reasons: since both the long and the short *bèi*-constructions have the meaning of "being influenced by some external factors", a verb indicating an "automatic" internal state change has semantic incompatibility with these constructions. Indeed, when both situations seem plausible, both the notional passive and the long *bèi*-passive are available (122).

(120)   a. 茶泡好了
        b. ?茶被我泡好了

(121)   a. *他杀了
        b. 他被强盗给杀了

(122)   a. 你的提案已经交到程序委员会了
        b. 你的提案已经被交到程序委员会了

5.4.15   Attested variances

The above discussion is based on my own intuition. This by no means represents all Mandarin speakers. This section lists some notable variances of the patterns summarized above.

5.4.15.1   把, 被 **replaced by** 给

Sometimes, 把 in the *bǎ*-construction can be replaced by 给. It seems if the verb is BECOME (我笑麻了), then 给 has the same function as 把's, while if the verb is DO, 给 has the same function as BECOME.

(123)   % 有人给我发了一封邮件，属实给我笑麻了

(124)   % 这个情况给我整不会了

(125)   % 李四给他们杀了

5.5 Semi-objects and verb ionization

> **Box 5.6: The coverage of the term *semi-object***
>
> Apart from the numeral attributives in VP discussed above, numerals appearing at the end of VPs are also sometimes called semi-objects (Deng 2010, p. 117). The syntactic function numerals in this latter case is closer to verbal complements (TODO: ref). And actually the term *semi-object* works better in the latter case! TODO: why are we sure that the two types of semi-objects have different syntactic positions?

5.5.1 Types of verb ionization structures

5.6 Gerund in subject or object

5.6.1 In object

(126) 你看你的书去

(127) 你去当你的数学老师，不要来掺和这些琐事

5.6.2 In subject (the so-called verb copying construction)

One particular interesting property of verbal complements is that they often trigger double occurrences of the main verb. All types of verbal complements show certain degree of this phenomenon. Frequently – although not always – there exists a grammatical counterpart of the above examples with the main verb occurring only once.

This construction is understood as a

(128) 你找这本书找到了吗？（～你找到这本书了吗？）

(129) 他爬山永远爬不上去。（～%他永远爬不上去山。）

(130) 我找这本书就是找不到。（～我就是找不到这本书。）

(131) 我写文章写不出来啊。（～我写不出来文章啊。）

(132) 我打球打得胳膊酸痛。（*我打球得胳膊酸痛。）

(133) 我打球打得篮筐坏了。（*我打球得篮筐坏了。）

(134) 熊打他连续打了三巴掌。（～熊连续打了他三巴掌。）

(135) 我敲桌子敲了两下。（～我敲了两下桌子。）

5.6.3 In subject (the so-called pseudo-attributive construction)

(136) 他的老师当得好

There exist some examples in which no verb that is syntactically coreferential with the blank verb exists in each of them (137, 138; Deng 2010, p. 239). Also, a general tendency is that abstract nouns are less acceptable in a pseudo-attributive construction (139). These evidences supporting the analysis that the blank verb in the subject

gerund is be recovered by semantic and pragmatic factors, not by structural considerations.

(137)   a. 他的周瑜还算是比较压场的
         b. 他演周瑜还算是比较压场的

(138)   a. % 今天下午是谁的原告、谁的被告？
         b. 今天下午是谁做原告、谁做被告？

(139)   a. 他这甲方当得真是恶劣
         b. *他这对方当得真是恶劣

Despite the disputation on the details of the analysis of the so-called pseudo-attributive construction, it can be clearly seen that the "pseudo-attributive" enjoys a similar role as the status of *his* in *his playing the national anthem won him applause*. If we accept this status is a kind of attributives, then there is nothing "pseudo" with the attributive status of the pseudo-attributive (Deng 2010, p. 242).

5.7   Negation

There is no negative concord in Mandarin Chinese. There is, however, no uniform negation operator like the English *not*. Mandarin has two attested negators: 不 and 没. 不 is always used together with the habitual aspect (140). 没 is used together with a non-habitual aspect (141).

(140)   他 平时   不 吃 猪肉
       3   ordinary.day NEG eat pork

'He usually doesn't eat pork (for religious reasons, or for personal taste, etc.)'

(141)   我 那 顿 饭   没 吃 猪肉
       1   that CL meal NEG eat pork

'I didn't eat pork in that meal.'

When 不 is used together with a potential complement, we need to remove 得 and insert 不 in its position

(142)   我不是算不清楚账，但是那天不知怎么的就是没算清楚帐

5.8   The aspectual system

5.8.1   TAME categories

Mandarin lacks the category of tense – all tense information is expressed by time adverbs. Modality is marked similarly be adverbs or complement clause constructions. Yet there is a system marking the aspect (§ 5.8). (143) is an example.

(143)   a. 我 去 过 上海   了
          1   go GUO Shanghai SFP

'I have been in Shanghai.'

b. 我 去 了 上海　　了
　　1　go LE Shanghai SFP
　　'I have gone to Shanghai.'

标语贴在墙上标语已经在墙上贴着了: this means the preposition 在 actually is morphologically merged with the verb 贴, or otherwise we are unable to explain why in the first example, 着 can never appear, while in the second example, 着 can appear.

Although 着 can appear in a matrix clause, its distribution is wider in temporal adverbials.

*他笑着。他[笑着]走了进来

5.9   Prosodic constraint

All Mandarin VPs follow the following prosodic constraint: if the verbal complex is transitive, then the constituent after it should receive prosodic focus; otherwise the verbal complex should be able to receive prosodic focus. This means in a transitive clause, the verbal complex can't be too heavy, while in an intransitive clause (TODO: 把 construction), the verbal complex can't be too light.

It should be noted that this constraint doesn't apply to other type of syntactic constructions, even though a verb root appears. Thus, *[种植树]$_{VP}$ 'plant trees' is not grammatical because in this VP the verbal complex is heavier than the object, while it's the object that is supposed to receive prosodic focus, but [种植牙]$_{compound noun}$ is perfectly fine.

5.10   There is no serial-verb construction or complex predicate

The term *serial-verb construction* refers to several different things in the literature. Sometimes it refers to the verbal complement system (Chen 2016), although in the topological literature there is no longer considered as a good usage (Schackow 2015, § 10.1, note that the V2s in Yakkha complex predication highly resembles Mandarin directional verbal complements in their formal aspects). In this sense, we of course have serial-verb constructions in Mandarin.

Chapter 6

Verb valency

The second is *doing nothing* to the verb and relying on the unusual semantic roles of clausal complements to inform the listener about the valency changing, as in TODO: ref. Since there is no morphological marking, constructions of this type are often recognized as topic-comment constructions, in which the "topic" – which is the subject under closer investigation – is said to be freely occupied by any semantic (and not necessarily syntactic) argument in the clause, though this claim can be falsified by detailed syntactic tests (§ 7.5.3).

我丢了手机、我把手机丢了 is 我 introduced by CAUSE?

6.1 Ditransitive: GIVING

6.2 Ditransitive: ROBBING

Chapter 7

Simple clauses

A sentence can be divided into several clauses linked by clause linking constructions (chap. 10). This chapter is denoted to the simple clause, postponing details in subordination and clause linking to the next several chapters. Mandarin has rich topicalization phenomena, and thus a clause can be divided into one or more topics (if any) and a comment, the latter being the nucleus clause plus possible sentence-final particles. The comment – the nucleus clause – may further be divided into a subject (if any) and a verb phrase. The verb phrase may contain a series of adverbials, and a core verb phrase, which in turn contains the verbal complex, and post-verbal constituents, the most important types including object(s), the second part of a separable verb, certain directional complements, and purpose clauses.

Matrix clauses – the core part of sentences – also involve sentence-final particles.

> **Box 7.1: The term *clause***
>
> Some people, like Deng (2010, p. 140) as well as Dixon (2009), use the term *clause* for subject-predict constructions that don't receive complete marking of speech forces. (In generative terms, *clause* is for lower level CPs or even TPs.) So in this way, sentence-final particles shouldn't be discussed in this chapter because they are of course dependents in the sentence level. They may be discussed together with other sentence-level constructions like chap. 10. But this notion of clause certainly goes against the tradition in descriptive grammars. So the approach of this note is to acknowledge everything larger than TP as a clause, which may or may not be a sentence, and discuss its structure in this chapter, while "adjunctions" – or in other words, optional dependents – are discussed in, say, chap. 10, for the sake of convenience. The narrative order of this note is not the ideal "small unit – large unit" scheme, but the "simple large unit – complicated large unit" scheme. Needless to say, when it comes to clause combining, the problem of what the clause really is – with or without sFPs, for example – is still relevant, but it is not answered by saying "the construction takes a clause, not a sentence".

As is implied by my using the term *subject*, Mandarin is an typical accusative language. Clausal dependents are recognizable from the rather rigid constituent order: Mandarin is usually classified as having a SVO clausal constituent order, and the subject and the object(s) can be told from the positions in the clause (1, 2). Certain "SOV" orders can be obtained by invoking the construction (§ ??), as in (3).

(1) 我 生病　了
1   get.sick sFP

'I got sick.'

(2) [我]_{subject} 今天 去 看　[电影]_{object} 了
    1　　　 today to watch movie　 SFP

'I went to watch a movie today.'

(3) [我]_{subject} 今天 把 [一　个 碗　]_{object} 摔　 碎　 了
    1　　　 today BA　one CL bowl　　break crack SFP

'I broke one bowl today.'

The normal tests of syntactic accusative alignment can be run on Mandarin (4).

(4) 陈　　　　 经理　 昨天　 没有 和　 他的　 客户 聊 过 。他
    Chen (surname) manager yesterday NEG　with 3sg-POSS client talk SFP　 3sg
    生病　 了　。
    get.sick SFP

'Manager Chen didn't talk with his client yesterday. He (Chen, not his client) got sick.'

7.1　Nucleus clauses

The nucleus clause is basically the subject-predicate structure.[1]

7.1.1　General properties of the subject

7.1.2　Verbal predicates

7.1.3　Nominal predicates

Unmarked nominal predication is already rare in modern Mandarin.

(5)　你这个笨蛋

7.2　Negation

Several negation operators and strategies are used frequently.

There is another negation operator 没, which has subtle differences in its meaning and syntactic properties compared with 不 (6, 7). On the other hand, the negative potential complement construction, i.e. the V不了 construction, isn't obtained by inserting a negator in the clause (8).

(6)　a. 我 不　喜欢 吃 芹菜
      1 NEG like　eat celery

     'I don't like eating celery.'

---

[1]Dixon (2009) argues against the definition of *predicate* as the main verb (or adjective) plus somehow "internal" arguments. He uses the term *predicate* to refer to the verbal complex instead. However, since I will need to compare the topic-comment construction with the inner structure of the nucleus clause, the term *predicate* will still be used in the way Dixon (2009) dislikes, because it's the counterpart of the comment role in the topic-comment construction.

b. * 我没喜欢吃芹菜

(7) a. 我 不　吃 早饭
    1　NEG eat breakfast

'I don't eat breakfast. (I usually don't, I don't want any today, etc.)'

b. 我 没　吃 早饭
    1　NEG eat breakfast

'I didn't eat breakfast. (I may usually do, but somehow I didn't today.)'

(8) a. 我 做 [不　了　]$_{\text{potential complement, negative}}$ 这　件 事
    1　do　NEG finish　　　　　　　　　　　this CL affair

'I'm not able to do this.'

b. * 我 没有/并非/不 做 [得 了　]$_{\text{potential complement, positive}}$ 这　件 事
    1　NEG　　　　do　DE finish　　　　　　　　this CL affair

7.3 Sentence final particles

7.4 Cleft construction

The cleft construction is formed by inserting 是 and 的 before a clause and extracting one constituent in the clause before 是 (9, 10). The construction seems to be a biclausal construction, since it has the same structure as the ordinary predicative construction (11). The preposed constituent is usually the subject (9) or the direct object (10; TODO: direct object def). Peripheral arguments are unable to be moved out.

    An interesting property of Mandarin cleft construction is what is focused – semantically and phonologically – is *not* the preposed constituent, but the clause from which it's moved out.

(9) a. 他昨天才知道这个消息
    b. [他]$_{\text{preposed},i}$ 是 [$-_i$ 昨天才知道这个消息] 的

(10) a. 王教授把他招进来了
    b. 他是王教授招进来的[2]

(11) 天空是蓝色的

(12) 是他昨天发现了这个故障

7.5 The topic-comment construction

I follow Shi (2000)'s approach and define a topic as an NP without extra syntactic marking that has certain relations with a position in the clause after it and is indeed the topic in the information structure (i.e. some (probably already known) object to which new information is added). Constructions like 连… 都… are not discussed in this section – they are to be found in TODO: ref.

---

[2]Here the verbal complex 招进来 is too heavy, and the ba-construction is used to meet the prosodic constraint.

TODO: analysis of 这个能吃吗 – without the presence of the modal verb (?) 能, the clause is no longer acceptable. Why? The clause can also be extended by an agentive NP, which apparently is the subject 这种植物一般人能吃吗 The initial NP then seems to be a topic. Indeed, 这个吃吗 is acceptable in casual speech; it can be attested when two people are discussing on what to eat tonight, and one points at an item on the menu and propose it to another.

7.5.1 Topicalization of possessor

(13a) and (13a) are a pair of sentences with and without topicalization of the possessor in the subject.

(13)   a. [他]$_{topic}$ [[个子]$_{subject}$ 高高   的]$_{comment}$
        3sg   stature   tall˜TODO DE
        'As for him, the stature is tall.'

      b. [他 的 个子]$_{subject}$ 高高   的
         3sg POSS stature   tall˜TODO DE
         'His stature is tall.'

7.5.2 Topicalization of preposition objects

(14)   这件事你不能就麻烦他一个人

(15)   你不能[为了这件事]$_{adverbial:PP}$ 就麻烦他一个人

This is also a demonstration of the preposition status of 在 in this sentence (§ 3.6), because if it's a verb or an auxiliary verb, it will be hard to have its object topicalized and have it deleted at the same time, but deletion of the preposition in topicalization is well-attested cross-linguistically.

7.5.3 Origins of so-called "dangling topics"

Some people, like Zhu (2009, § 7.1), equate *subject* with *topic* in Mandarin grammar. Some (especially those from the functional-typological tradition) go further and assert that "the notion of the subject (as the position of the most agentive argument) isn't grammaticalized in Mandarin Chinese", and therefore the topic is just an NP which the comment is "about", and this base-generated and syntactically unconstrained topic is called a "dangling topic". This view is rejected in this note, because such accounts usually end up in severe overgeneration. Here I briefly summarize Shi (2000)'s argumentation.

7.5.3.1 Type 1: Idiomatic phrasal predicate looking like a comment

In the first type of "dangling topic", it's impossible for any NP in the comment to be syntactically related to the topic. Such cases are however rather unproductive. In (16) and (17), the orders of the constituents can never be changed. Nor is it possible to change a word or two in the bracketed "comments". A reasonable assumption is these bracketed "comments" are actually idioms, which are to be regarded as a single verbal element that can't be further analyzed. Thus, in (16) and (17), the so-called topic is an ordinary subject, and the so-called comment is a predicate.

(16) 他们[大鱼吃小鱼]（，厮杀成一片）

(17) 他们[你看看我我看看你]

7.5.3.2 Type 2: Quantificational adverbial looking like the inner subject

The second type of "dangling topic" is like (18). A topic-comment analysis of (18)

(18) 他们 谁 都 不 怕
     3pl who even NEG fear

'They don't fear anyone.'

7.5.3.3 Type 3: Ellipsis leaving a subject and one predicate

Some people accept (19). Here the NP 那所房子 definitely doesn't come from the words following it, and is therefore recognized as a topic by some (TODO: ref). Note, however, that 幸亏 serves as a clause linker outside (19): (20) is a demonstration of the 幸亏……不然…… linking construction, and we also have its topicalized version (21). (TODO: whether this is parenthesis) We also know in a clause linking construction, often one clause can be omitted in the utterance because it's content can be easily inferred (TODO: ref). So now the origin of (19) is clear: We can get it by omitting the second clause in the comment part of (21). Indeed, if we replace 幸亏 by anything that is adverbial but not a clause linker, the resulting sentence – which now contains a real dangling topic – is not grammatical.

(19) %那 所 房子 幸亏 没 下雪
     that CL house fortunate NEG snow

'For that house, fortunately it didn't snow (or otherwise something bad would happen).'

(20) [幸亏] 去年 没 下雪 ， [不然] 那 所 房子 早就 塌 了
     fortunate last.year NEG snow   otherwise that CL house already collapse SFP

'Fortunately it didn't snow last year, or otherwise that house has already collapsed.'

(21) [那 所 房子]topic [幸亏 去年 没 下雪 ， 不然 早就
     that CL house   fortunate last.year NEG snow   otherwise already
     塌 了]comment
     collapse SFP

7.5.3.4 Type 4: Extraction from prepositional adverbials

(14) in § 7.5.2 is sometimes regarded as an instance of the dangling topic construction. However, as is shown in § 7.5.2, it may just be from topicalization of an NP in an adverbial, with the preposition (and/or the locative particle) removed.

7.5.3.5 Type 5: Nominal predicate

(22) 这种青菜一斤三十块钱

7.5.3.6   Type 6: Locational adverbial mistaken for the subject

(23) ℅ 物价 纽约　　最　　贵
　　　price New.York most expensive

'The price in New York is the most expensive.'

7.5.3.7   Tentative conclusion

The conclusion is all topics in Chinese are closely linked to a position in the comment, be it a core argument position or a peripheral one. So the notion of dangling topics is to be rejected in Mandarin grammar, and we can always recover the "canonical" i.e. non-topic-comment clause from a topic-comment construction. After this, if the canonical clause can be divided into an NP or a complement clause and a verbal constituent following it, we can uncontroversially say the first is the subject while the second is the predicate. (TODO: predicate def) So equating the subject with the topic is also wrong.

It's possible to find the semantic role of the subject isn't agentive; in this case I assert there is a valency changing mechanism here.

> **Box 7.2: What to expect when people talk about the subject or the topic**
>
> Unfortunately, despite the syntactic tests presented above, there are still many people – even many native speakers – promoting the idea that the Mandarin topic has nothing different with the subject. Here is a list of TODO: ref

7.6   Focusing

The focused argument, when being a interrogative pronoun, should always be stressed.

(24)　我们这里什么都有

Chapter 8

Relative clause constructions

Chapter 9

Complement clause constructions

Chapter 10

Clause linking

Mandarin Chinese has usual clause linker devices (chap. 10), as well as complement clauses (§ 9) and relative clauses (TODO: ref). TODO: what else?

Chapter 11

Summary and discussion

11.1   A typological summary

11.2   About the theoretical framework

Many linguists call for a framework-less and completely open-minded approach towards syntactic analysis. It's true (almost tautologically) that a grammar of a language should be organized according to the object language's own features. Still, there exists the problem about *how much* variation a linguist should expect when working with a totally unfamiliar language.

I'm not in the position to discuss whether the generative community is on the right track or whether the tendency to work on complex clause structures hinders the race against time to capture endangered languages. What I do know – which is illustrated in the discussion above – is that kind of generativism I adopted in § 1.2 does seem to work for Mandarin Chinese, despite the latter didn't play a strong role in the historical development of this framework. We see the lexical-decomposition analysis and the VP-shell theory neatly capture the structure of Mandarin VP. We see the category of clause can and should be further divided into subcategories with various internal complexities, and the sizes of these subcategories can be placed on a monotonically increasing hierarchy, which agrees well with the vP-TP-CP hierarchy. We see that on one hand, we can recognize grammatical words in Mandarin, and on the other hand, grammatical words are just mini-phrases. And, most importantly, we have shown that most – if not all – mysterious traits of Mandarin have ingredients already well-known in other languages. This is by no means a denial of linguistic diversity: on the contrary, that languages have choices over how to recombine these ingredients helps us understand *why* there is linguistic diversity at all.

11.2.1   Necessity of large-volume grammars

The next question is, since all natural languages have comparable complexity, whether the same thing should be done for less known languages.

11.2.2   About how to teach Mandarin

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