

Chinese verbs: The relation between the semantics and the finiteness of the complement

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ABSTRACT. *The verb can select not only a DP/NP but also a clause as its complement. There are two types of complement clauses, the finite and the non-finite, depending on whether the Tense is defective. Non-finite clauses are not limited to future events or non-future events as proposed by Wurmbrand [1-4], Adger [5], Huang [6] etc. Instead, they shall be divided into four categories based on the relation between the event denoted by the main clause and that by the subordinate clause: general meaning, relative future, relative past and simultaneous occurrence. Interestingly, the simultaneity of the main clause event and the subordinate clause event can trigger the so-called "structural reconstruction" phenomenon. This paper classifies about 2200 Chinese verbs, taking the criterion raised by Dixon and Aikhenvald [7] based on whether the verb can select a complement clause or not, pointing out that only 57 verbs in Chinese obligatorily select a complement clause, 414 verbs optionally selecting a complement clause or DP/NP as the argument, 1729 verbs obligatorily rejecting a complement clause. Among the 471 verbs capable of selecting a complement clause, this paper classifies the types of complement clauses according to their semantics. It is pointed out that the verb directly denoting the concept of speech tends to select a finite clause; while the verb indirectly denoting the concept of speech is capable of selecting a finite complement clause, yet the basic complement type is determined by the most salient sense of the verb. Moreover, the differences on modality directly impact on verbs' selection of non-restrictive clauses.*

Keywords: Chinese verbs, Complement clauses, Finite and non-finite distinction, Structural reconstruction

1. **Introduction.** Generally speaking, many studies on verbs concern about whether the verb itself can take an object, leading to the distinction between transitive and intransitive verbs. Moreover, transitive verbs can be subdivided based on what kind of objects they select, such as noun phrases, verb phrases, or clauses. In terms of the embedded clauses, the distinction between finite and non-finite clauses can be made based on whether the clause contains an overt subject or tense marker:

- 1a. Zhengfu touru le shiwan minbing [**canjia**
Government dispatches Asp one hundred thousand militiamen participate
kanghongzhandou]. (Non-finite clause)
the fight against the floods
Government has put one hundred thousand militiamen to fight against the floods.
- 1b. Wo xiwang [**ta neng qude hao chengji**]. (Finite clause)
I hope he can get good grades
I hope he can get good grades.

The researches on the Finiteness are mainly based on the Tense Sentence Condition [8], according to which the finiteness of an embedded clause is determined by the opacity considering whether the clause has a time-dependent componential analysis boundary. The embedded clauses containing time-dependent components are opaque finite clauses, to which grammatical transformational rules such as subject raising cannot be applied to the extent of crossing the boundary of the clauses (as in (2)). The clauses without Tense components are non-finite clauses (as in (3)):

- 2a. John believes that [he is honest].
 2b. *John believes that [himself is honest].
 3a. John believes [himself to be honest].
 3b. John is believed [t to be honest].

However, this definition confronts a problem about whether a language without overt tense markers still distinguishes finite and non-finite clauses. Although there are many discussions on this issue, the definition of the finiteness of Chinese still remains unclear given that Chinese lacks overt tense markers. Huang [9] believes that there is a syntactic Tense projection in Chinese with an empty T head, and the finite and non-finite distinction in Chinese can be proved through various grammatical performances of the embedded clauses. But this analysis is rejected by Hu et al. [10]. Based on the subclassification of non-finite clauses proposed by Wurmbrand [1-4] and Adger [5], Huang [6] believes that the non-finite clauses in Chinese can also be divided into two categories, according to whether they can take components denoting the future time.

As for the distinction between finite and non-finite clauses in Chinese, this paper puts forward a basic criterion: The embedded clause is non-finite if its event time is restricted by the event time of the main clause; it is finite if its event time is not restricted by the event time of the main clause. The restrictions put by the main clause on the non-finite embedded clause are not necessarily the requirement for simultaneity; the modality of the verb also

affects the relative time. The finite embedded clause can freely choose its event time.

Non-finite clause:

- 4a. Ta jianyi wo [mingnian qu Beijing]. (Future)
 He advised me next year go Beijing
 He advised me to go to Beijing next year.
- 4b. Wo kanjian ta [da Lisi]. (Simultaneous)
 I see him hit Lisi
 I saw him hit Lisi.
- 4c. Ta hen houhui [shuohuang]. (Past)
 He very regretted tell a lie
 He regretted lying.
- 4d. Wo taoyan ta [chouyan]. (General)
 I hate him smoking
 I hate him smoking.

Finite Clause:

5. ZhangSan shuo [Ta {xihuan/zuotian/ mingtian/ zhengzai}da bangqiu].
 ZhangSan say he likes/yesterday/tomorrow/ now playing baseball.
 ZhangSan said that he liked playing baseball.
 ZhangSan said that he had played baseball the day before.
 ZhangSan said that he would play baseball the next day.
 ZhangSan said that he was playing baseball.

The paper argues that the differences in the post-argument structure of verbs are due to the semantic and modal differences of the verbs, which directly affect the finiteness of the embedded clauses. Non-finite clauses can be subdivided into four categories based on the differences between the time of the main clause event and that of the non-finite clause. Section 2 introduces the finite and non-finite distinction in Chinese complement clauses and the phenomenon of "structural reconstruction", pointing out that the type selection of the post-verb structure is determined by the semantic and situational differences among verbs. Section 3 classifies more than 2200 Chinese verbs based on the semantic types of verbs proposed by Dixon and Aikhenvald [7] given whether the verb obligatorily selects a complement clause.

2. The distinction between Finiteness and Non-finiteness in Mandarin Chinese.

Generative syntax clearly defines finiteness and non-finiteness. The T feature of finite clauses can assign a Nominative case to the subject, and non-finite clauses lack the TP projection, incapable of assigning the Nominative case, for which the subject of non-finite clauses cannot get a case. Under such a circumstance, the clause can only take an empty subject (PRO) to form a control clause, or move its subject to a position where the case can be assigned. The Generative syntacticians regard TP as a part of the Universal Grammar, which is the most important reason why they hold that there are no finite and non-finite

distinctions in Mandarin Chinese though it does not have overt tense markers.

Although there are no overt Tense makers in Chinese, Huang [6,9,11-12], Li [13-14], Tang [15], Lin [16-17] and others have proposed that Mandarin Chinese indeed has finite and non-finite distinctions. Their arguments are mainly based on several syntactic phenomena of the non-finite clauses: its prohibition of time-independent references, the lack of the aspect marker, the allowance for the movement of the aspect marker from the main clause to the embedded clause, the prohibition of an overt subject, the disallowance of subjective adverbs, the disallowance of sentence-final particles, etc. They believe that non-finite clauses only contain a verb phrase (VP) instead of an inflection layer (IP), which explains why the modal auxiliaries like “yao, neng, bixu” are disallowed in non-finite clauses (as in (6)). Hu et al. [10] point out that certain non-finite clauses obviously allow the future modal auxiliary “yao”(want) (as in (7)):

6a. Wo zhunbei [PRO {***yao**/***neng**/***bixu**} mingtian qu Beijing].

I prepare want can must tomorrow go Beijing

Correct: I am ready to go to Beijing tomorrow.

6b. Wo yijing xiguan [PRO (***yao**) ting ta laodao].

I already used to want hear him chatter

Correct: I’m used to hearing him chatter.

7a. Wo quan ta [**yao** lai].

I persuade her must come

I persuaded her to come.

7b. Ta bi wo [**yiding yao** zailiangtianzhinei wancheng renwu].

He forced me must in two days complete task

He forced me to complete the task within two days.

Based on Wurmbrand [1-4], Adger [5] etc., Huang [6] points out that there are three types of complement clauses in Mandarin Chinese: CP, IP and vP, depending on the size of the structure. Huang [6] divides Chinese verbs into three categories based on the differences in the structure and semantics of their complement clauses. Moreover, he proposes that the non-finite clauses in (7) allow the existence of a modal auxiliary verb because the structure of the complement clause of the Type 2 verbs can project a Modality Phrase, while the non-finite clauses in the traditional analysis can project a VP at most:

TABLE 1. THREE TYPES OF VERBS RAISED IN HUANG [6]

	Type of complement clauses	Semantic of complement clauses	Structure of complement clauses
First type of verbs	Finite	Proposition, Interrogative, Statement	CP
Second type of verbs	Finite/ Non-finite	An event or action that can refer to the future	IP (Not include TP)
Third type of verbs	Non-finite	action	vP

In the classification above, two phenomena are worth noticing. First, Huang [6] points out that the complement clauses of the second type of verbs such as “quan” (persuade) and “bi” (force) are mainly non-finite, but they can also select a finite clause. Therefore, Huang analyzes them as “finite/non-finite” verbs, indicating that some verbs can select both finite and non-finite complement clauses:

- 8a. Wo bi Zhangsan [PRO jiaochu na feng xin].
 I force Zhangsan hand over that letter
 I forced Zhangsan to hand over that letter.
- 8b. Wo bi Zhangsan [buguan fashengshenmeshi ta dou bixu qu Beijing].
 I force Zhangsan no matter what happened he still must go Beijing
 I forced Zhang to go to Beijing no matter what happened.

Second, Huang [6] thinks that non-finite clauses generally do not have an aspect marker, but the non-finite clauses which disallow the modal auxiliary allow the aspect marker. For example, in (9) the aspect marker “le” (perfect marker) and “guo” (experience marker) in the embedded clause is associated with the main verb “quan” (persuade) or the entire verb group “quan ta chi” (persuade him to eat) instead of with the embedded verb “chi” (eat):

- 9a. Wo quan ta [chi {guo/le} nakuaidangao].
 I advise him eat Asp that piece of cake.
 I advised him to eat that piece of cake.
- 9b. *Wo quan ta [yao chi {guo/le} nakuaidangao].
 I advise him must eat Asp that piece of cake.
 *I advised him to obligatorily eat that piece of cake

The “le” and “guo” in the embedded non-finite clause are regarded by Huang [6] as resulting from a syntactic reanalysis called the “structural reconstruction”. He claims that when there is no CP or TP blocking the main verb and the embedded verb, the main clause and the embedded clause can be modified by the same aspect marker, expressing the same event, such as “quan ta chi” (persuade him to eat). The finite clause is opaque due to the existence of a CP/TP, making the permeation from the main clause to the interior of the embedded clause impossible. This paper finds that the permeation from the main clause to the embedded non-finite clause is not limited to the aspect marker, but applicable to all temporal elements:

10. Zuotian xiawu youren kanjian ta [zai xuexiao da lanqiu].
 Yesterday afternoon someone see him at school play basketball
 Yesterday afternoon, someone saw him playing basketball at school.
11. Youren kanjian ta [zuotian xiawu zai xuexiao da lanqiu].
 Someone saw him yesterday afternoon at school playing basketball
 Someone saw him playing basketball at school yesterday afternoon.

Such syntactic phenomena can be explained by the “structural reconstruction.” However, the non-finiteness of the embedded clause is not enough. The following non-finite clauses

obviously disallow the permeation of the aspect marker or temporal element:

12a. Ta jianyi **guo** wo [mingnian qu riben].

He advise Asp me next year go Japan

He has advised me to go to Japan next year.

12b. *Ta jianyi wo [mingnian qu **guo** riben].

He advise me next year go Asp Japan

*He advised me to have gone to Japan next year.

The non-finite clauses with a future time or a past time disallow the dropping of the aspect marker. The key condition for the dropping, in addition to the non-finiteness of the embedded clause, is that the event of the main clause and that of the non-finite clause must occur simultaneously. The event time of the non-finite clause is possible to precede, follow or overlap with that of the main clause. However, only the simultaneous type allows the permeation of the aspect markers or temporal words.

The ungrammaticality of (12b) is due to the insufficiency of the classification in verbal semantics. Verbs capable of selecting a non-finite clause can be subdivided into four categories based on the differences in their semantic and situational representations. Huang [6] ignores some details, believing that except the non-finite clause with modal marker, all other types of verbs satisfy the “structural reconstruction.” Actually, verbs capable of selecting a non-finite complement clause are more complex than other types of verbs. In addition to the defective T, other performances are hard to be grasped by a simple rule. This paper argues that there are different types of verbs allowing non-finite clauses based on their semantic differences. These differences affect the type choice of the embedded clause, as well as the possibility of the “structural reconstruction” with the dropping of the aspect marker or the temporal adverbial.

3. The Semantic classification of verbs in Mandarin Chinese. In order to determine the semantic type of the verbs which can select a finite or non-finite clause, and the type of the verbs whose non-finite clauses allow for the structural reconstruction, a classification of Chinese verbs is made by taking the viewpoints and classification raised by Dixon and Aikhenvald [7] and Lin [18]. D&A [7] hold that in the world languages, verbs in the same semantic class show a consistency in their performances. Though there are cross-linguistic variations in the structure of the verbal complement clauses, generally speaking, whether a verb can select a clause as its complement is directly determined by its semantics. Dixon classifies the verbs with the complement clauses into two types, the main and the minor. The former obligatorily rejects or at most optionally selects the complement clause. The latter obligatorily selects a complement clause as one of its argument.

Based on the criterion mentioned above, this paper classifies 2200 verbs in Chinese into three categories: those rejecting complement clauses, those allowing complements clauses and those requiring complement clauses:

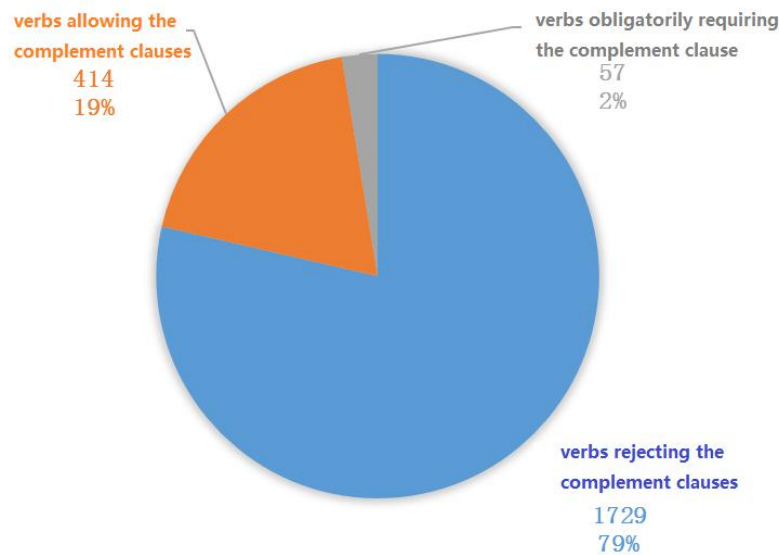


FIGURE 1. Three types of verbs differing in the selection of the complement clause

The verbs allowing or requiring complement clauses only make up a proportion of 21% among 2200 verbs, in which only 2% obligatorily require the complement clause. This is why Dixon and Aikhenvald [7] name them as minor verbs. They point out that the main verbs, with a proportion of 79% in this study, usually denote meanings of “action”, “static”, “influence” or “concrete and tangible action behaviour”. The examination of the data in this study supports their claim. Besides, among the verbs allowing or requiring the complement clause, most of them denote the sense of “listening and speaking” or “mental state.”

Verbs capable of selecting both finite and non-finite clauses include “daying” (acceptance), “tongyi” (consent), “dasuan” (intended), “yuji” (expected), etc., which corresponds to the second type of verbs proposed by Huang [6]. He points out that verbs are traditionally regarded as selecting only non-finite clauses (such as “quan” (persuasive) and “bi” (forced)) actually can also select the finite clause as its complementing argument (as in (8b) or below):

- 13a. Wo quan ta [PRO mashang likai]. (Nonfinite clause)
 I advise him immediately leave.
 I advise him to leave immediately.
- 13b. Wo quan ta [ruguo meiyoun ren mai zhebenshu, ta ye
 I advise him if no one else buy this book, he also
 buyao mai]. (Hu et al. 2001) (Finite clause)
 do not buy
 I advised him not to buy the book if no one else did.

These verbs usually denote the sense of speech, which is the typical semantic type of the finite embedded clause, making the selection of a finite clause possible for those verbs. Because the verbs, as long as they denote the sense of speech, are capable of selecting a finite clause, the classification of verbs in this study confronts some difficulties. Actually,

even for the Type 2 verbs mentioned in Table 1. which can select both finite and non-finite clauses as in (8b) and (13b), they select non-finite clauses in most cases. The finite ones are rarely selected and if they do, the type of the proposition is limited.

Moreover, there are a lot of verbs which can select a non-finite clause as the complement. These verbs show a complex semantic distribution, making it hard to categorize them into several semantic classes. Though many verbs have the sense of speech or communication, many others can hardly be categorized together, such as “zhaogu” (look after), “xiying” (attract), “choubai” (prepare) and so on. Non-finite clauses are traditionally regarded as a single type, while actually there are many subtypes as this study shows.

Lin [18] points out that due to the influence of the situational type, the event time of the main clause and that of the non-finite clause may vary. Following Lin [18], this paper argues that the situational type can cause the event time of the non-finite complement clause to be earlier, later or the same compared with that of the main clause.

TABLE 2. THE TIME RELATION BETWEEN THE MAIN CLAUSE AND THE NON-FINITE EMBEDDED CLAUSE

Type	Time relation with main clause	Verbs
Non-finite clauses	Relative to the past	houhui (regret), baoyuan (complain), jielu (expose), kongsu (accuse), cangshi (try) ...
	Simultaneous	kanjian (see), ding (stare at), tingjian (hear), daiti (replace), hai (impair) ...
	Relative to the future	jianyi (advise), mingling (order), bi(force), daying (promise), dasuan (plan), ducu (press), jiaodai (leave word), jiao (ask; order) ...
	None (General meaning)	jiao/jiaoyu (teach), taoyan (sick of), xihuan (like), neng (be able to) ...

For example, the event time of the complement clause of verbs such as “kanjian”(see) and “tingjian” (hear) is the same as the event time of the main clause, so that the aspect marker or temporal word can enter the complement clause and trigger the structural reconstruction. However, if the event time of the non-finite clause precedes or follow that of the main clause, neither the aspect marker of the main clause nor the temporal word can enter the complement clause:

- 14a. Wo mingling ta [pao caochang shiquan].
 I order him run playground ten laps.
 I ordered him to run the playground for ten laps.
- 14b. Wo **shanggexingqi** mingling **guo** ta [pao caochang shiquan].
 I last week order Asp him run playground ten laps.
 I have ordered him to run the playground ten times last week.
- 14c. *Wo mingling ta [**shanggexingqi** pao **guo** caochang shiquan].
 I order him last week run Asp playground ten laps.
 *I ordered him to have run the playground ten times last week.

The verbs with a complement clause denoting the future time, such as “jianyi” (propose) or “mingling” (order), can optionally select the temporal adverbials or modal auxiliaries, yet the dropping of the temporal words or the aspectual marker is still disallowed for the non-finite complement clauses of these verbs. These verbs are different from “kanjian” (see) and “tingjian” (hear) in the way that even if there are overt modal auxiliaries or temporal adverbials in their complement clauses, that time is definitely later than the event time of the main clause, so that no matter how close the two event times are, the structural reconstruction can never be triggered.

4. Conclusions. For Chinese verbs, the semantic differences affect their capability of selecting a complement clause as well as the type of the complement clause. Verbs denoting the sense of speech or mental state can easily select the complement clause as their object argument. Moreover, when the event of the complement clause and that of the main clause occur simultaneously, the “structural reconstruction” can be triggered to unify these two events into one event, which can be modified by the same temporal word or aspect marker. This paper is concerned with the influence of semantics and situational types on the choice of the complement clause and the relative grammatical phenomena. More researches remain to be done on related issues.

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