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STRUCTURAL ANALYSIS OF THE VERB COPYING CONSTRUCTION IN MANDARIN CHINESE[*]

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Abstract. This paper examines a Chinese-specific sentence structure conventionally called **verb copying construction**, within the framework of generative grammar. It is aimed at providing a descriptive account of this structure as well as explaining the syntactic constraints of its occurrence.

The verb copying construction refers to the type of sentences in which a transitive verb reoccurs after the direct object in the presence of certain adverbial phrases. The Chinese equivalent to the English sentence He washes clothes very fast may serve as an illustration.

[Ta xi   yifu] xi   de   hen   kuai.
He wash clothes wash MOD very fast

It is apparent that the verb wash is reduplicated after the direct object. In previous studies, this phenomenon has been viewed with relation to the word order change or surface conditions in Chinese.

Assuming a different point of view, the present research reanalyzes verb copying in the light of the general characteristics of Chinese sentences. It is proposed that as a topic-prominent, pro-drop language, Chinese has a basic S´ structure: TOP (topic) + S. In view of this, verb copying construction is realized as having a topic-comment structure due to the application of 'Move-α' (postulated as Move-to-TOP) which moves the subject, verb, and direct object to the topic node and leaves overt in S a lexically recovered trace of the verb and the post-verbal adverbial phrase. In support of the postulation of Move-to-TOP, the grammatical properties of the verb copying construction are discussed and some theoretical issues relevant to movement are also addressed. Finally, as an attempt to account for the structural difference between sentences with a copied verb and those without it, the paper concludes that Move-to-TOP can operate at least in five different ways as regards what is extracted from S.

Goal. This paper examines a Chinese-specific sentence structure conventionally called **verb reduplication** or **verb copying**, within the framework of generative grammar. It is aimed at providing a descriptive as well as explanatory account of this sentence.

The verb copying construction refers to sentences in which a transitive verb reoccurs after the direct object in the presence of certain adverbial phrases. For example, to express the idea 'He washes dishes very fast,' a Chinese speaker would say:

(1) ta xi   wan   xi   de   hen   kuai.
     he wash dishes wash MOD very fast

Sentences (2)-(4) below are some other examples of verb copying:

(2) ta nian naben shu nian le   sange zhongtou.
     he read that   book read PFV three hours

(3) ta kai che kai dao Taipei.
    he drive car drive to Taipei

(4) ta fang yifu fang zai yijia shang.
    he put clothes put at clothes-rack on

These examples help to illustrate some of the characteristics of verb copying construction:

1. There is always an adverbial element at the end. It can be a manner adverb as in (1), a time-frequency adverbial phrase as in (2), or a prepositional phrase, either directional as in (3) or locative as in (4). So, we can outline the surface structure as:

NP + Vt + O + Vt + ADVP

2. The Vt-O sequence can be a verb-object compound or phrase. By verb-object compound, I mean a semantic unit composed of two morphemes having the syntactic relation of a verb and its direct object. Some examples are: zhao-xiang ('reflect-image' = 'photograph'), jie-hun ('tie-marriage' = 'marry'), etc. (see Li and Thompson 1981:73-80).

Previous Studies. The verb reduplication construction has been dealt with in a number of studies from different perspectives. For example, Li (1975), and Light (1979) looked at this construction with relation to Chinese word order and argued about which verb is the main verb.

Huang (1984) used this structure to argue for his hypothesis concerning the relationship between morphology and syntactic change. He postulated a surface filter which says Chinese does not allow more than one postverbal constituent. To comply with this constraint, the second occurrence of the verb is then necessary.

All these three studies attempted to associate this comparatively unusual construction with a more general, almost all-encompassing mechanism in Chinese. However, they did not provide any detailed account of the internal structure of verb copying and sometimes they failed to capture the fact that verb copying is not always necessary given the condition they proposed.

In contrast to the above three studies, Li and Thompson (1981) viewed this structure as the output of a grammatical process of copying and were primarily concerned with its obligatory or optional application. They postulated two constraints on the occurrence of verb copying.

The first constraint says that only with one particular type of adverbs--quantity adverbs (eg. twice, three hours, ten days, etc.)--can verb copying be optional. With these adverbs, it is the direct object that determines the occurrence of verb copying. If the object is referential and animate or definite, verb copying is optional; otherwise, it is obligatory.

The second constraint is basically what I've mentioned as the first characteristic of verb copying construction. It states that verb copying can only occur when an adverbial phrase follows the direct object. Other elements, e.g., another verb, following the object will not give rise to the copied verb.

The study by Li and Thompson proves to be a valuable effort in describing the occurrence of verb copying, but it is still short of descriptive and explanatory adequacy. What

is provided is essentially a systematic observation of this isolated construction without examining the Chinese language as a whole.

It is my belief that any syntactic analysis of a language-specific structure has to be done with reference to that language in general. Verb copying construction needs therefore to be viewed in the light of the general characteristics of the Chinese language.

Typological account of Chinese Sentence Structure. According to Li and Thompson (1981), Chinese is a topic-prominent language, with a topic-comment construction. At the beginning of most Chinese sentences, there is a 'topic' indicating what the sentence is about and the rest of the sentence functions as a comment on that topic. Examples (5)-(9) all contain an overt topic:

(5) Wang xiansheng, wo jintian zaoshang kanjian ta.
    Mr. Wang I today morning saw him
    'Mr. Wang, I saw him this morning.'

(6) zheben zidian, zi hen xiao.
    this dictionary words very small
    'This dictionary, words are very small.'

(7) pengyou, lao de hao.
    friend old NOM V-good
    'Friends, the old are good.'

(8) da lanqiu, wo mei you xingqu.
    play basketball I not have interest
    'Playing basketball, I have no interest (in).'

(9) mali yao qu meiguo, wo juede hen qiguai.
    Mary want go America, I feel very strange.
    'Mary wants to go to America; I feel very strange (about it).'

It has to be noted that the topics in Chinese are by no means an abstract semantic notion. Instead, they have distinct syntactic status and should be treated as a separate element from the subject.

Because of the distinct role of the topic, Huang (1987) in his paper characterized Chinese as a 'discourse-oriented' language in contrast to 'sentence-oriented' languages like English. He proposed two parameters to distinguish these two types of languages. And Chinese belongs to the category of being 'non-zero-topic' and 'pro-drop' since it requires a sentence topic and allows an empty subject.

Within the GB framework, the best way to capture the importance of topic is to postulate a phrase structure rule at the highest level which contains the node 'topic' (TOP). Under TOP we may have either a phrase or a clause:

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S'   --- >   TOP + S
TOP  --- >   NP
             VP
             S
S    --- >   (NP) + VP
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The main reason for postulating TOP instead of COMP is roughly due to the fact that Chinese has no complementizer like _that_ or _which_ in embedded constructions and there is no surface WH-movement.

According to Li and Thompson (1981), there are three general specifications about the TOP:

1. It can be instantiated by either a NP, a VP, or a S.
2. Anything under TOP has to be definite or generic.
3. TOP can be separated from S by a pause or a pause particle (a, ma, ya).

As regards S, my hypothesis is that the head or nucleus of an S is the verb since Chinese has no inflections and sentences can be formed with only a verb plus tense/aspect marker. For example, in answering the question 'Have you eaten dinner?,' I can say 'eaten' meaning 'I have had dinner.' So, subject NP is optional under S.

Structural Analysis of Verb Copying Construction. Given the above preliminary description of Chinese sentence types, it becomes clear that the verb copying construction should be considered as having a topic-comment structure. Under the TOP node is a topicalized clause, consisting of the subject, the first verb, and the object; under the S node are the second verb plus the adverbial phrase, functioning as the speaker's comment on that topic. In general, the verb copying construction has a surface configuration as illustrated below:

$$_{S'}[\ _{TOP}[\ NP_i \quad V \quad NP_j\ ]\ _S[\ e_i \quad V \quad e_j \quad ADVP]\ ]$$

By proposing the topic-comment distinction, we can then explain why it is possible that two identical verbs occur in the same simple utterance. As indicated in the above representation, the two verbs actually belong to two separate bounding nodes. But what evidence do we have in support of such an analysis?

The major supporting argument can be formulated with regard to the properties of the topic. Using sentence (1) as an example (reprinted here as 10):

(10) [ta   xi   wan]   [xi   de   hen   kuai.]
     he   wash dish   wash MOD   very   fast
     'He washes dishes very fast.'

To postulate _ta xi wan_ in (10) as the topic is theoretically valid since _ta xi wan_ satisfies all the requirements for being a topic: It is itself an S, and therefore definite, and it can be separated by a pause particle.

Having shown that the clause _ta xi wan_ is well-qualified for being the topic, let's take a look at the S part. As mentioned previously, Chinese is pro-drop and the nucleus of a sentence is the verb. Therefore, Chinese allows a sentence to have only a verb without subject and object. It is then fairly reasonable to take the verb and the adverbial phrase as an S.

The above analysis seems well-established in terms of the surface representation. But the next question would be: Where does the topic originate from? There are two solutions:

1. One way of looking at this is to postulate that the topic is base-generated; it exists in the d-structure. Then there's really nothing more to say.

2. The other alternative is to consider the topic as originating in the S and then being moved to TOP by a movement rule, which I call Move-to-TOP.

The second solution is preferred because it is stronger in explanatory account. In the following discussion, I will show that only by postulating a movement operation can we account for (1) similar structures with identical meaning, and (2) syntactic properties specific to verb copying construction.

Take sentence (10) as an example. Its underlying structure should be stipulated as follows:

$$_{S'}[\ _{TOP}[\quad]\ _S[\ ta \quad xi \quad wan \quad de \quad hen \quad kuai\ ]\ ]$$

Due to the movement rule (Move-to-TOP), the subject NP _ta_, the verb _xi_ and the object _wan_ are taken out of S and adjoined under TOP. This results in a S-structure as follows:

$$_{S'}[\ _{TOP}[\ ta_i \quad xi \quad wan_j\ ]\ _S[\ e_i \quad xi \quad e_j \quad de \quad hen \quad kuai\ ]\ ]$$

The first solution, although simpler and more straightforward, lacks the explanatory power to deal with apparently related sentences. Consider sentences (11)-(13) which can be interpreted the same as sentence (10).

(11) [ta   wan]   xi   de   hen   kuai.
     he   dish   wash MOD   very   fast

(12) [wan]   ta   xi   de   hen   kuai.
     dish   he   wash MOD   very   fast

(13) [xi   wan]   ta   xi   de   hen   kuai.
     wash dish   he   wash MOD   very   fast

Although these sentences have a distinct surface construction, they share exactly the same meaning despite slight variations in discourse focus. I feel obliged to ask: What would be the relationships between these four sentences?

The first solution would be simply to say that they are three different sentences because each of them has a distinct base-generated topic. But such an analysis is dispreferred on the basis that it obviously fails to capture the structural relationship between these sentences.

The second solution appears to be more powerful and convincing with regard to explanatory principles. By postulating the movement rule, we can explain the relatedness of sentences (10), (11), (12), and (13). They actually share the same deep structure. The only difference between them is that different elements are moved from S to TOP.

The explanatory power of the postulation of Move-to-TOP also manifests itself in predicting some of the syntactic properties of verb copying construction. Li (1975) and Li and Thompson (1981) have pointed out that it is always 'the second verb' that can undergo grammatical modifications such as modal addition, negation, and aspect marking:

1. Only the second verb can take a modal:

(14a) [ta   xi   wan]   hui   xi   de   hen   kuai.
      he   wash dish   will   wash PFV   very   fast
      'he will wash dishes very fast.'

(14b) *[ta   hui   xi   wan]   xi   de   hen   kuai.

2. Negative sentences result from negating the second verb, not the first one:

(15a) [ta xi wan] bushi xi de hen kuai.
                     Not
     'He does not wash dishes very fast.'

(15b) *[ta bushi xi wan] xi de hen kuai.

3. Only the second verb can take a tense/aspect marker (note: Le indicates perfective aspect):

(16a) [ta xi wan] xi le   sange zhongtou.
                        PFV   three hours
     'He has washed dishes for three hours.'

(16b) *[ta xi le wan] xi sange zhongtou.

Li and Thompson (1981:450) concluded without giving any explanation that 'the first verb plus the direct object behaves as a 'frozen' unit in the sense that it is not subject to any grammatical modification.' This is not surprising at all and even predictable, given the movement operation I proposed. As the result of Move-to-TOP, the first verb is under the TOPIC node and by definition it is an unbranched chunk, while the second verb is under S.

Issues Concerning Movement. The postulation of the movement rule in Chinese, Move-to-TOP, can be considered as a realization of the universal principle of 'Move-α'. However, there are still three questions to be answered:

1. What motivates the movement?

2. Among the three moved elements, why does only the verb leave a full phonetic form at the place it originates, but the other two (subject and object) both leave an empty category behind?

3. What type of empty category is left by the Move-to-TOP?

The answer for the first question lies in the function of postverbal adverbs. It is recognized that a distinction between speaker-orientedness and subject-orientedness can be made for Chinese adverbs in different positions. The postverbal modification tends to be speaker-oriented: they include the speaker's judgment on the way or manner of the agent who carries out the action. For a language like Chinese which has a common topic-comment structure, 'speaker-orientedness' makes the distinction between topic and comment even more necessary. Therefore, we can view the postverbal modifier as the force initiating the movement.

The answer to the second question--why the verb is the only trace which is phonetically realized in S--has to do with the status of S. As mentioned before, the minimal requirement for a S is to have a verb. Besides, Chinese does not have any pro-form for verbs. To express the short answer 'I did' to a question such as 'Did you pass the exam?' the Chinese speaker has to say 'I passed.' These two points help to explain why the trace of a verb needs to be lexically recovered under S.

The third question is concerned with the properties of empty categories. According to Empty Category Principle (ECP), a trace must be properly governed. By looking at the tree diagram, we know that the subject trace is properly governed by 'he' under TOP. Note that TOP, like COMP, is not further branched. Hence, 'he' is able to A-bind its own trace. The

empty object coindexed with 'dishes' is properly governed by the verb 'wash' since 'wash' is lexical and c-commands it.
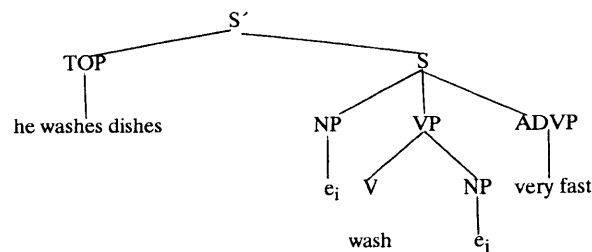
As for the typology of empty categories, GB theory distinguishes four types of EC with variations of the binary features [anaphoric] and [pronominal] (for details, see Sell 1985). In the case of Move-to-TOP, the two empty categories act most like variables because Move-to-TOP is similar to WH-movement, which starts from an A-position and ends in a Ā-position.

In addition, Move-to-TOP also observes the SUBJACENCY CONDITION along the lines with Cyclic Principle.

(17) [ta da   lanqiu] [wo tingshuo [da   de   hen   hao]]
       he play basketball   I hear   play MOD very   well
     'His playing basketball, I heard [it's] very good.'

Sentence (17) is derived from applying Move-to-TOP twice. The topic in (17) ta da lanqiu was first adjoined to the TOP of the subordinate clause, and then moved from there to the main clause TOP. Such a cyclic application is schematically presented in (18):

(18)   [TOP [wo tingshuo]   [TOP [ta da lanqiu de hen hau]
     S   S   S

What I have been trying to show is that the verb copying construction basically results from one of the Chinese versions of 'Move-α' which creates a topic-comment type of sentence by adjoining both the subject NP and the V-O sequence to TOP. As a consequence, two variables and a lexical trace of the verb are left under S.

In conclusion, it has been shown that the Chinese Move-to-TOP can apply in five different ways:

1. Move NP-V-O to TOP: results in the verb copying construction.
2. Move VP to TOP: also results in an overt verb trace.
3. Move the subject NP to TOP: if TOP is empty and the subject is definite or generic.
4. Move the object NP to TOP: the object has to be definite or generic.
5. Move the subject and object to TOP: both have to be definite or generic.

Suggestions for Further Research. My postulation of this movement operation accords with the basic Chinese structure and achieves explanatory adequacy in that it is able to predict the grammatical properties of the verb copying construction. However, one theoretical problem emerges from the above proposal as regards the status of 'copying' in its traditional sense. The fact that the moved verb leaves behind an identical lexical trace actually manifests the application of copying since the trace 'copies' the verb. Does this mean that copying should also be considered as a possible transformation triggered by movement? Are there any other

languages involving a similar process that copies the extracted verb? If copying occurs in Chinese, how would GB theory incorporate it into its Universal Grammar?

The second question I would like to bring up is about the verb. As mentioned before, it is taken for granted that verb copying can only apply to transitive verbs. But if the transitive verb phrase can be topicalized, we should expect that intransitive verbs can also be topicalized. And indeed some native speakers, but not all, agree that intransitive verbs can as well be repeated as in 'He laugh, laugh loudly.' But this kind of sentence seems to be dispreferred. Why is it so?

All these questions call for further study.

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