

Light Verb Construction as a Case of Remnant Movement

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In this paper, based on Chinese data, I propose that the so called light verb construction can be subsumed under the analysis of internal topicalization, following the analysis of remnant movement. First, I argue that a light verb does assign theta-roles. Second, I argue that all the particular syntactic behaviors observed in Grimshaw and Mester (1988) - the verbal noun cannot undergo topicalization, passivization or dislocation in a cleft construction - are in fact the consequence of violating the constraint on remnant movement. With this new proposal, we do not need a special mechanism of transferring theta-roles from the VN to the arguments at the sentence level for the light verb construction, as proposed by Grimshaw and Mester (1988) or Saito and Hoshi (2000).

1. Introduction

In this paper, I provide a new analysis of the so called ‘light verb construction’ (see Grimshaw and Mester (1988) and many others). A typical Japanese light verb construction is shown in (1).

- (1) Tony-wa Kate-to aiseki-o shita
-TOP -with table-sharing-ACC did
“Tony shared a table with Kate.”

According to Grimshaw and Mester (1988), the verb *shita* (the past tense of *suru*) in example (1) does not assign any theta-roles. Although *suru* is a main verb in (1), it does not have an argument structure but rather behaves like the auxiliary *do* in English. This claim is based on the following three observations regarding *suru*. First, *suru* imposes no restriction on the theta-role of its subject. Thus the subject can be Agentive or not. Second, the noun taken by *suru* can have any number of arguments and any type of argument structure. This means that the noun can be derived from intransitive, transitive or ditransitive verbs. Third, the verbal properties of *suru* are quite clear: it assigns accusative case and it is transitive. This can be seen from the accusative case-marker on the verbal noun (henceforth VN) in sentence (1).

If *suru* does not assign any theta-roles, then how can the arguments in (1) get their theta-roles? It has been proposed that it is the VN which is taken by the light verb as its complement that assigns theta-roles to the arguments in the sentence. For example, in

Grimshaw and Mester's terms, the VN must be a theta-transparent NP, i.e. one that takes outside arguments. Only the light verb *suru* takes a theta-transparent object. Other verbs take only theta-opaque objects, which allow only inside arguments.

The latter case can be seen in (2). Notice that *suru* can also act as a heavy verb. As such, it takes a verbal noun whose Agent argument is the only argument outside its VN projection as in (2).

- (2) Grissom-ga [Sara-e-no hanashi]-o shita.
 -NOM -to-GEN talk-ACC did
 "Grissom talked to Sara."

There are some special characteristics of the light verb construction. One of them, from Grimshaw and Mester (1988), is that at least one argument apart from the subject must be outside the VN. As one can see, this is exactly the property that distinguishes (1) from (2). Though in both sentences the subject is at the sentence level, only sentence (1) contains a non-subject argument outside the VN projection. Thus only sentence (1) fits into the criterion and qualifies as a light verb construction.

A light verb construction also shows some particular syntactic differences from its heavy counterpart. For example, in a true light verb construction, the VN cannot be topicalized, as pointed out by Grimshaw and Mester (1988).¹ Similarly, Saito and Hoshi (2000) also pointed out that the VN in a light verb construction cannot be dislocated in a cleft construction and it cannot be passivized, either. On the contrary, the VN in a heavy verb counterpart shows no problem with the operations mentioned above.

There are several analyses trying to solve the mysterious behaviors of the light verb construction, such as Argument Transfer by Grimshaw and Mester (1988), LF incorporation by Saito and Hoshi (2000) and LF category lowering by Aihara (2004), among many others. Overall, Grimshaw and Mester (1988) and Saito and Hoshi (2000) both propose that these syntactic differences in a light verb construction are due to some theta-role transferring mechanisms. This is because the arguments at the sentence level have to get theta-roles from the VN, since the light verb itself does not assign any of them. However, since nouns do not usually assign theta-roles, there has to be some ways for the light verb to get theta-roles from the VN and assign them to the arguments. Because of this kind of transmission of theta-roles, there is a tightly bound relationship between the VN and the light verb, which then results in the immobility of the VN.

In this paper, however, I will make the claim that there is no such a distinction between light or heavy verbs. I consider them all heavy. Hence, I resort to a different

¹ They also point out that the VN cannot be relativized or modified by a numeral. We do not mention these two properties for the following reasons: For the former, relativization cannot be applied to Chinese since Chinese uses a different relativization strategy (see Aoun & Li 2003). For the later, this is not relevant to our discussion here.

proposal to deal with the special syntactic behaviors which have been observed in light verb constructions. Based on Chinese data, I provide a new analysis of the light verb construction following the idea of remnant movement. I expect this new finding to shed more light on the study of light verb constructions in general.

2. Chinese Data

In Mandarin Chinese, the light verb construction was first discussed in Zhu (1985). He pointed out that there are five verbs functioning as light verbs in Chinese, one of them being *jinxing* ('proceed'). It can take a transitive VN such as *diaocha* ('investigation') which takes two arguments: Agent and Theme. The VN is derived from its verbal counterpart, as shown in sentence (3).

- (3) CSI diaocha le zhege anzi.
 CSI investigate ASP this case
 'CSI investigated this case.'

Kuo and Ting (2007) have done some preliminary investigation of the light verb construction in Chinese. We show that in the following examples, only (4a) fulfills the requirement of a true light verb construction as stated in Grimshaw and Mester (1988), since only in (4a) can one find another argument (the Theme argument of the VN) apart from the subject appearing at the sentence level. In (4b), the Theme argument is inside the VN projection. As for (4c), there is simply no Theme argument at all.

- (4) a. CSI (dui) [NP zhege anzi] jinxing le [NP diaocha].
 CSI to this case proceed ASP investigation
 b. CSI jinxing le [NP zhege anzi de diaocha].
 CSI make ASP this case GEN investigation
 'CSI made an investigation of this case.'
 c. CSI jinxing le [NP diaocha].
 CSI make ASP investigation
 'CSI made an investigation.'

If only sentence (4a) is a light verb construction, a prediction that we can make here is that the VN in (4a) cannot be topicalized, passivized or dislocated in a cleft construction, just like its Japanese counterpart. But these operations should be allowed in (4b) and (4c), since they are heavy verb constructions. This prediction is borne out, as shown from (5) to (7).

(5) VN topicalization

- a. *?[_NP Diaocha]_i, CSI (dui) [_NP zhege anzi] jinxing t_i le .
 investigation CSI to this case proceed ASP
- b. [_NP Zhege anzi de diaocha.]_i, CSI jinxing t_i le
 this case GEN investigation CSI make ASP
- c. [_NP Diaocha]_i, CSI jinxing t_i le .
 investigation CSI make ASP

(6) VN passivization

- a. *[_NP Diaocha] bei CSI (dui) [_NP zhege anzi]] jinxing le .
 investigation by CSI to this case proceed ASP
- b. [_NP Zhege anzi de diaocha] bei CSI jinxing le
 this case GEN investigation by CSI make ASP
- c. [_NP Diaocha] bei CSI jinxing le .
 investigation by CSI make ASP

(7) VN in a cleft construction

- a. *Shi [_NP diaocha] CSI (dui) [_NP zhege anzi] jinxing le
 is investigation CSI to this case proceed ASP
 ‘It is the investigation that CSI has made of this case.’
- b. Shi [_NP zhge anzi de diaocha], CSI jinxing le.
 is this case DE investigation CSI proceed ASP
 ‘It is the investigation of this case that CSI has made.’
- c. Shi [_NP diaocha] CSI jinxing le
 is investigatio CSI proceed ASP
 ‘It is the investigation that CSI has made.’

Based on the parallel syntactic behaviors between Japanese and Chinese, we can conclude that Chinese example (4a) is a true light verb construction, which is not the case like in (4b) or (4c).

3. The Analysis

In the previous section, I have shown that like Japanese, Chinese also shows the distinction between light and heavy verbs. Though it should then follow that the previous analyses may apply to the above Chinese data, I would like to provide a new analysis which not only explains the above contrasts but also gives some new insights into the overall analyses of the light verb construction.

My proposal is as follows: I argue that the particular syntactic behavior of a light verb construction is not due to the light versus heavy verb difference (or some theta-role

transferring mechanism), but depends on whether there is at least one argument moving out of the projection of the VN.

3.1. Subjects

First, I show that the so called light verb does assign an Agent theta-role (and probably the Theme role as well). Whether the subject can be non-agentive is controversial in Japanese. For example, Grimshaw and Mester (1988) provide a sentence with a non-Agent subject and judge it grammatical, as shown in (8). On the other hand, non-Agent subject sentences are rejected in Saito and Hoshi (2000), as shown in (9).²

(8) Densha-wa Oosaka-ni TOOCHAKU-o shita.

Train-TOP Osaka-to arrival-ACC suru
‘The train arrived in Osaka.’

(9) ?*Ya-ga mato-ni [_{NP} meityuu]-o sita.

Arrow-NOM target-to strike-ACC did
‘The arrow struck the target.’

Recall that this light verb is considered to be ‘light’ because it does not assign any theta-roles. Interestingly, to the best of my knowledge, Chinese only shows a strong preference for an Agentive subject. No matter whether we are dealing with a light or heavy verb construction, the subject must be an Agent-like lexical item. This is shown in (10) and (11) respectively.

(10) a. Juandui pohuai le zhezuo guji
army destroy ASP this historic spot
‘The army destroyed this historic spot.’

b. Suanyu pohuai le zhezuo guji
acid rain destroy ASP this historic spot
‘The acid rain destroyed this historic spot.’

(11) a. Juandui (dui) [_{NP} zhezuo guji] jinxing le [_{VN} pohuai]
army to this historic spot proceed ASP destruction
‘The army made has made destruction of this historic spot.’

b. *Suanyu (dui) [_{NP} zhezuo guji] jinxing le [_{VN} pohuai]
acid rain to this historic spot proceed ASP destruction
‘The acid rain has made destruction of this historic spot.’

² One may notice that there is a topic/subject marker difference in these two sentences. However, according to my informant, even if the order is switched (-*wa* becomes -*ga* in (8) and -*ga* becomes -*wa* in (9)), the result is the same.

Notice that in (10), the same verb *pohuai* ('destroy') can take both Agentive and non-Agentive subjects. However, when this verb becomes a verbal noun taken by the light verb *jinxing*, as in (11), only an Agentive subject is acceptable. I take this as evidence that the so called 'light' verb does assign a theta-role to the subject. Moreover, the theta-role in question is Agent. Thus only Agentive subjects are acceptable.

What we have observed in Chinese provides evidence that the so called light verb does assign theta-roles, at least for the subject. If the above conclusion is right, it first weakens the claim that a light verb does not assign any theta-roles. Under this view, a light verb is not 'light' anymore. In the theta-role assigning ability criterion, it behaves exactly in the same way as a heavy verb.

Furthermore, if a light verb assigns the external theta-role, it then follows that the 'light' verb now can assign accusative case to its VN (cf. the Japanese sentence in (1)), according to Burzio's generalization. This result is in fact welcome since in the literature, it has been a mystery how the VN gets case in a light verb construction. Previous analyses usually resort to explanations based on incorporation. For example, Grimshaw and Mester (1988) point out that the accusative case assigning ability is the only verbal property of the light verb. A light verb is in fact not equivalent to a verb unless it combines with a VN. Probably this is why it can be exempt from Burzio's generalization. On the other hand, Saito and Hoshi (2000) resort to a noun incorporation approach suggesting that the accusative case on the VN is licensed via its incorporation to the verb. Thus, the verb is not constrained by Burzio's generalization, either. Compared to these two explanations, my current proposal seems to provide a more natural connection to the generally accepted theta-role and case generalization.

3.2. Verbal Nouns

If the verb in a light verb construction is the same as the heavy verb, why do we observe different syntactic patterns in the two constructions? I propose that this answer lies on whether there is at least one argument moving out of the VN projection. This proposal is very similar to Grimshaw and Mester (1988)'s requirement of a light verb construction that I adopted above. Recall that in some analyses there must be at least one non-subject argument of the VN appearing at the sentence level. Also recall that for a heavy verb counterpart, there is no such requirement.

Under my proposal, the Theme argument in (4a) moves out from the VN projection. Once there is an argument moving out of the VN projection, it leaves a trace. When we move the VN which contains a trace (remnant movement), this movement has to obey the Proper Binding Condition, which requires that traces must be bound (cf. Lasnik and Saito (1992) and many others).

However, as pointed out by Müller (1996) and Saito (2003), in the case of remnant movement, the Proper Binding Condition has to be obeyed only when the phrase which undergoes remnant movement undergoes the same kind of movement as the one which leaves a trace in it. The generalization is given in (12).

- (12) A phrase containing a trace of movement cannot undergo movement of the same type (operator movement, scrambling, NP-movement). (Saito (2003): (54), p500)

Take German, for example. In (13a), the scrambling of the object, followed by the topicalization of the remnant VP, is grammatical. On the other hand, multiple scrambling in (13b) is illicit.

- (13) a. $[_{VP} t_i \text{ Gelesen}]_j$ hat das Buch $_i$ keener t_j
 read has the book no one
 ‘No one has read the book.’
- b. *daß $[_{VP} t_i \text{ gelesen}]_j$ das Buch $_i$ keener t_j hat
 that read has book no one has
 ‘that no one has read the book’
- (Saito (2003): (52), p499)

I propose that this is exactly what happens with the ‘light’ verb construction. Recall that in a so called true light verb construction, the VN cannot undergo topicalization, passivization or dislocation in a cleft construction. A shared property of these three operations is that they are all cases of operator movement. The long passivization, like (7), in Chinese has been argued to involve operator movement, as in Ting (1998). The example is illustrated below.

- (14) $[\text{Zhangsan}_i \text{ } [_{VP} \text{ bei } [_{XP} \text{ OP}_i \text{ Lisi } \text{ piping } t_i]]]$
 Zhangsan BEI Lisi criticize
 ‘Zhangsan was criticized by Lisi.’

One inference that we can make is that if the movement of the Theme out of the VN projection is also some kind of operator movement, it follows that the VN cannot undergo further operator movement.

There is evidence showing that this seems to be the case in the light verb construction. In Chinese, the movement of an object from a postverbal position to a preverbal position (between the subject and the verb) has been argued to be an operation of internal topicalization, as in Ting (1995) and Paul (2002). One of the examples is shown in (15).

- (15) a. CSI diaocha le zhege anzi. (= (3))
 CSI investigate ASP this case
 ‘CSI investigated this case.’

- b. CSI (dui) zhege anzi diaocha le
 CSI to this case investigate ASP

Thus in sentence (4a), the Theme Argument at the sentence level can be viewed as being topicalized from the VN projection. Assuming that this internal topicalization is also some kind of operator movement, we then expect that the VN cannot undergo other operator movements.³ This prediction is borne out in the previous discussion.

As for the heavy verb counterparts like (4b) or (4c), there is no trace left in the VN since there is no movement happening at the very beginning. The VN can then undergo operator movement without causing any violation.

4. Further Support from Japanese

Before closing, I would also like to present some supporting evidence from Japanese. A Japanese light verb construction is presented in (16). This sentence is slightly degraded because of the double-o constraint.

- (16) ??Honda-ga akoodo-o seisan-o siteiru
 -NOM Accord-ACC production-ACC do-ing
 ‘Honda is producing Accords.’

If one tried to scramble the VN to the sentence initial position, the sentence becomes ungrammatical, as shown in (17). Under my approach, this ungrammaticality results from the violation of the Proper Binding Condition. The trace of the Theme argument in the VN cannot be properly bound since the binder is in a lower position than the trace.

- (17) *Seisan-o_i Honda-ga akoodo-o t_i siteiru
 production-ACC -NOM Accord-ACC do-ing

On the other hand, if the Theme argument is also scrambled to a position higher than scrambled VN, now the sentence is improved. The contrast is shown in (18).

- (18) ?*Akkodo-o_j seisan-o_i Honda-ga t_j t_i siteiru
 Accord-ACC production-ACC -NOM do-ing

This improvement also follows the Proper Binding Condition since the Theme argument can bind its trace in the VN in (18) now.

³ Though the movement here is topicalization, there is much evidence showing that this internal topicalization is A'-movement, rather than A'-movement.

5. Conclusions

With a preliminary investigation of Chinese data, I propose a new analysis to deal with the light verb construction: there is no distinction on the verb itself. The only difference causing different syntactic behaviors depends on the status of the VN, i.e. whether there is movement out of it or not. As a case of remnant movement, the unique syntactic patterns of a 'light' verb construction then follow.

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