

Ellipsis and Focus

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1. Setting the Stage

Since Ross (1967), several syntactic processes and characteristics of VP ellipsis have been recognized. Summarizing the discussions in Jackendoff (1971), Williams (1977), Chao (1987), Lobeck (1995) and Lightfoot (2000), we can demonstrate the syntactic characteristics of VP ellipsis with the examples below:

- (1) a. John left on Wednesday, but Bill didn't [VP e].
- b. * John left for New York but Bill didn't [VP e for London].
- c. John left for New York although Bill didn't [VP e].
- d. Although John couldn't [VP e], Bill was able to leave for New York.
- e. John went to New York. Yes, but Bill didn't [VP e].
- f. Don't [VP e].

VP ellipsis can, but need not, apply clause-finally, as in (1a), and it cannot apply to anything smaller than a full VP (1b). It may occur in a subordinate clause (1c); the elided VP may precede its antecedent (1d); it may occur across sentence boundaries (1e). The elided elements may even have a non-overt antecedent (1f).

Semantically speaking, VP ellipsis exhibits the well-known strict/sloppy ambiguity in reading. Namely, a sentence like “John saw his mother, and Bill did, too” is understood ambiguously. It can be understood as saying either that Bill saw John's mother—the *strict* reading—or that Bill saw Bill's mother—the *sloppy* reading. This phenomenon is accounted for by the analyses proposed by William (1977) and Sag (1976). William and Sag propose a treatment of VP ellipsis which combines some aspects of the semantic approach and deletion in the case of Sag or reconstruction in the case of William. They invoke a syntactic operation, the Derived VP Rule, to convert the antecedent VP into a lambda expression which denotes a property. However, the lambda expression is not a pure semantic representation, but an LF/lf expression which is subject to syntactic constraints. Hence, ellipsis resolution consists in identifying an antecedent lambda expression which satisfies certain correspondence conditions relative to the elided VP; or in the case of Sag, finding an appropriate antecedent lambda expression to license deletion of the lambda expression in the elided VP. According to Sag's account, for example, the empty VP corresponds in LF

to a lambda expression that is an “alphabetic variant”¹ of the lambda expression associated with the antecedent VP. If the antecedent VP is translated into λx (x saw *his* mother), the pronoun *his* is taken to be referential. The empty VP will be translated into the same expression, and we have the strict reading (they saw the same woman). On the other hand, if the antecedent is translated into λx (x saw *x’s* mother), then the pronoun is taken to be a variable bound to whoever the lambda expression predicate is a predicate of, and we have the sloppy reading (they each saw their own respective mothers).

In English, VP ellipsis requires the presence of an auxiliary, an instance of *do*-support. On the other hand, since there is no *do*-support in Chinese, one may simply assume that VP ellipsis does not happen in Chinese as Kuno (1978) claims. Nevertheless, I argue that there are four types of ellipsis construction in Chinese, and that all the ellipsis constructions are instantiations of the focus projection (FP).

2. Chinese Ellipsis Data

Shi in Chinese and *do* in English are in many ways alike. For example, *shi* in Chinese cleft sentence (2a) and *do* in English (2b) emphatic sentence are both used to highlight the following VP.

- (2) a. Zhangsan shi gei-le wo wu-bai-kuai.
 Zhangsan be gave me five-hundred-dollar
 ‘Zhangsan did give me five hundred dollars.’
 b. Zhangsan did give me five hundred dollars.

Furthermore, in the predicate-elided sentences *shi* has to be inserted just like the case for *do*-support, as the comparison shown in (3) and (4).

- (3) a. Zhangsan kanjian-le tade mama, Lisi ye kanjian-le tade mama.

¹ Sag (1977) defines alphabetic variants as below, where L designated a lambda operator:

For two L-expressions, $Lx(A)$ and $Ly(B)$, to be alphabetic variants,

- a. Every occurrence of x in (A) must have a corresponding occurrence of y in (B), and vice versa.
 e.g. $Lx(x \text{ is happy}) = Ly(y \text{ is happy})$
 $Lx(x \text{ is happy}) \neq Ly(y \text{ is sad})$
- b. Any quantifier in A that binds variables (in A) must have a corresponding (identical) quantifier in B that binds variables in all the corresponding positions (in B).
 e.g. $Lw((\forall y) [w \text{ likes } y]) = Lz((\forall q) [z \text{ likes } q])$
 $Lw((\forall y) [w \text{ likes } y]) \neq Lz(z \text{ likes Mary})$
- c. If there are any variables in A that are bound by some quantifier outside of $Lx(A)$, then the corresponding variable in $Lx(B)$ must be bound by the same operator in order for alphabetic variance to obtain.

- Zhangsan saw his mother Lisi too saw his mother
 ‘Zhangsan saw his mother, and Lisi saw his mother, too.’
- b. Zhangsan kanjian-le tade mama, Lisi ye *(shi).
 Zhangsan saw his mother Lisi too be
 ‘Zhangsan saw his mother, and Lisi did, too.’
- (4) a. Zhangsan saw his mother, and Lisi saw his mother, too.
 b. Zhangsan saw his mother, and Lisi *(did), too.

From this viewpoint, it seems that the property of *shi* is on a par with *do*-support in English. However, when we take more data into consideration, it will be revealed that *shi* in Chinese and *do* in English exhibit distinct syntactic behavior. Compare the sentences (5) and (6). In (5), the missing VP of the second clause equals the string *see his mother*; the negator *not* has to be left stranded together with the auxiliary in English. But in (6) when ellipsis applies, the negator *meiyou* has to be elided along with the VP. In other words, while *shi* in Chinese ellipsis can ‘encompass’ negation, *do* in English ellipsis can not.

- (5) John didn’t see his mother, and Bill didn’t, either.
 (6) Zhangsan meiyou kanjian tade mama, Lisi ye shi.
 Zhangsan not see his mother Lisi also be
 ‘Zhangsan didn’t see his mother, and Bill didn’t, either.’

Moreover, as (7) shows, VP ellipsis in English is possible with the INFL filled with a modal like *will*. In this case, *will* of the second clause cannot be replaced by *do*. However, as we can observe in (8), in Chinese even if a modal appears in the first clause, *shi* can still be inserted when the whole predicate is elided. That is, *shi* can ‘cover up’ modals in Chinese ellipsis while *do* in English cannot. To put it more clearly, in English ellipsis construction the pleonastic *do* and modals stand in complementary distribution whereas this relationship does not hold for *shi* and modals in Chinese.

- (7) a. John will go to Taipei, and Bill will, too.
 b. *John will go to Taipei and Bill does too.
 (8) Zhangsan hui lai, Lisi ye shi.
 Zhangsan will come Lisi also be
 ‘Zhangsan will come, and Lisi will, too.’

To sum up, negators and modals – NegP and ModP— can be elided in the presence of

shi in Chinese but they must not be replaced by *do* alone in English. A point worth emphasizing is that supporting *do* and the real verb *do* are treated as belonging to the same category V in this paper. When used as a support, *do* is simply devoid of semantic content and might be used for purely structural purposes. Therefore, I propose that *do* should not be categorized with modals, as proposed by Roberts (1993), but that it has to be considered as a sort of expletive verb, projecting a verbal node lower than INFL. Besides, since NegP and ModP belong to INFL component according to Pollock's Split IP Hypothesis (1989), they occupy a higher position than *do* in X-bar schema. Thus we claim that *do* in English can only be viewed as a sort of pro-VP but *shi* in Chinese must be structurally higher, possibly higher than INFL.

Next, consider the ellipsis cases in (9) and (10). We can observe that when the VP *kanjian-le tade mama* gets elided, the omission of the negator *meiyou* 'not' would lead to ungrammaticality. Therefore, *meiyou* seems to be capable of licensing the empty VP.

(9) Zhangsan *kanjian-le tade mama*, Lisi *(*meiyou*).

Zhangsan saw his mother Lisi not

'Zhangsan saw his mother, but Lisi did not.'

(10) Zhangsan *meiyou kanjian tade mama*, Lisi *ye* *(*meiyou*).

Zhangsan not see his mother Lisi also not

'Zhangsan didn't see his mother, and Lisi didn't either.'

However, it is noteworthy that in licensing VP ellipsis, *meiyou* cannot be replaced by its variant *mei* 'not' as illustrated in (11):

(11) a. Zhangsan *kan-le na ben shu*, Lisi *meiyou*/**mei*.

Zhangsan read that CL² book Lisi not not

'Zhangsan read that book, but Lisi didn't.'

b. Zhangsan *meiyou kan na ben shu*, Lisi *ye meiyou*/**mei*

Zhangsan not read that CLbook Lisi also not not

'Zhangsan didn't read that book, and Lisi didn't either.'

What's more, it has been noted in Chinese literature that *bu* 'not' cannot occur freely except when it is used as rejecting a statement as in the sentence *Bu, ta mei lai* 'No, he didn't come' (See Yang (1971) and Huang (1988) among others). Hence, it follows naturally that we can not find acceptable examples of VP ellipsis with *bu*:

² CL is abbreviated for classifiers.

- (12) * Zhangsan xihuan tade che, Lisi bu.
 Zhangsan like his car Lisi not
 ‘Zhangsan likes his car but Lisi doesn’t.’
- (13) ?? Zhangsan bu canjia kaoshi, Lisi ye bu.
 Zhangsan not take exam Lisi too not
 ‘Zhangsan won’t take the exam, and Lisi won’t either.’

To conclude, among the negators in Chinese only *meiyou* is compatible with VP ellipsis.

Now let us move on to the third type of ellipsis -- modals. Chinese, like many other languages, has two types of modality, i.e., deontic and epistemic modality. Deontic modality indicates permission, obligation, ability or disposition, while epistemic modality states the possibility or necessity of a proposition. According to this classification, modals³ like *keyi* ‘may’, *hui* ‘be able to, will’ belong to the former and modals like *yinggai* ‘possible’, *keneng* ‘likely’, *hui* ‘possible’ the latter type. In the following, we will discuss some intriguing behavior of Chinese modals in VP ellipsis.

Chomsky (1957) proposed a special node AUX to generate modals in English, and assumed that only modals can be inserted under this node. In the same spirit, Chomsky (1981, 1986) assumes that English modals are generated under INFL. As I mentioned above, VP ellipsis in English is possible with a modal filled in the verb-elided second clause, regardless of a deontic or an epistemic one:

- (14) John can speak French, and Bill can, too. (deontic)
 (15) John might have gone to France, and Bill might, too. (epistemic)

However, the situation is different in Chinese. Consider the following sentences:

- (16) Zhangsan hui/keyi shuo fayu, Lisi ye hui/keyi. (deontic)
 Zhangsan can speak French Lisi too can
 ‘Zhangsan can speak French and Lisi can too.’
- (17) * Zhangsan keneng/yinggai qu-le faguo, Lisi ye keneng/yinggai. (epistemic)
 Zhangsan likely/possible went France Lisi too likely/possible
 ‘Zhangsan might have gone to France, and Lisi might too.’

In contrast to the modals in English, VP ellipsis in Chinese is only feasible with the

³ The modals *gan* ‘dare’, *ken* ‘willing’, *xiang* ‘want’, *yuanyi* ‘willing’ are not included in the deontic modals in this paper. We are inclined to regard them as ‘dynamic modals’, which bear a thematic relation with the subjects (Tsai pc.)

occurrence of a deontic modal in the second clause. That is, an epistemic modal seems to be void of the ability to license the empty VP.

Fourth, it was first noted in Huang (1988, 1991) that some apparent null object constructions in Chinese in fact bear identical behavior with English VP-ellipsis sentences. More precisely, such constructions may exhibit strict/sloppy ambiguity, a feature typical of VP-ellipsis as we described in the last section. Thus, just as (18) in English is ambiguous between a strict (referential) reading and a sloppy (bound variable) reading, the Chinese sentence (19) displays the same ambiguity likewise.

(18) John saw his mother, and Bill did, too.

(19) Zhangsan kanjian-le tade mama, Lisi ye kanjian le

a. Lisi saw Zhangsan's mother. (strict identity)

b. Lisi saw Lisi's mother. (sloppy identity)

(20) Zhangsan kanjian-le tade mama, Wangwu zhidao Lisi ye kanjian-le

Zhangsan saw his mother Wangwu know Lisi also saw

~~(tade mama).~~

his mother

'Zhangsan saw his mother, and Wangwu knew that Lisi did, too'

In (19), either Zhangsan and Lisi saw the same woman (Zhangsan's mother), or both of them saw their own respective mothers. There is no third reading; that is, if they saw different women, then they must have seen their own mothers. If the second clause is assumed to have merely a null object, a second sloppy reading (meaning, as in (20), Lisi saw Wangwu's mother) cannot be excluded since no constraints can forbid the omitted pronoun *tade* 'his' referring to a non-local subject *Wangwu*. In this case, it would be necessary to provide ad hoc conditions on the null objects so as to derive one and only one sloppy reading in (20). However, this range of facts receives a satisfactory explanation if it is hypothesized that the verb is raised to a higher position, leaving an empty VP which corresponds to a λ -expression associated with the antecedent VP. This account not only makes clear how the strict and sloppy readings are obtained⁴, but also predicts the lack of second sloppy reading in (20). Because the antecedent of the sloppy pronoun is restricted to the binder of the λ -expression (the local subject of the empty VP), (20) does not have another sloppy reading meaning *Lisi saw Wangwu's mother* although it has a sloppy reading

⁴ When the antecedent VP in (20) is translated into λx (x kanjian-le tade mama), the pronoun *tade* is taken to be referential. The empty VP will be translated into the same expression, and we have the strict reading. And when the antecedent is translated into λx (x kanjian-le x 's mama), then the pronoun is taken to be a variable bound to whoever the λ -predicate is a predicate of, and we have the sloppy reading.

according to which *Lisi saw Lisi's mother*. Crucially, all this is achieved under the assumption that the availability of an empty VP, which denotes properties and thus corresponds to a λ -expression.

Interestingly, the same phenomenon is prevalent in Japanese and Korean as well. Otani and Whitman (1991) points out the similarity between the null object contexts in the following Japanese and Korean sentences and VP ellipsis in English:

(21) *Korean*

Chelswu-ku [caki-uy phyenci-ul] peli-ess-ta; Yengmi-to [e] peli-ess-ta.

‘Chelswu threw out his letter, and Yengmi did too.’

- a. Yengmi also threw out Chelswu’s letters. (strict identity)
- b. Yengmi also threw out Yengmi’s letters. (sloppy identity)

(22) *Japanese*

John-wa [zibun-no tegami-o] sute-ta; Mary-mo [e] sute-ta.

‘John threw out his’s letters and Mary did too.’

- a. Mary also threw out John’s letters. (strict identity)
- b. Mary also threw out Mary’s letters. (sloppy identity)

(O&W 1991:346)

According to this, Huang (1988, 1991) and O&W propose to analyze sentences like (19)-(22) as a case of VP-ellipsis, which involves raising of the verb into an INFL node from the VP that contains the null object. However, if we take the analyses of Huang and O&W to be correct, the conception seems to conflict with another idea prevalent in Chinese linguistics; that is, verbs do not move to the INFL position in Chinese (Huang 1992, 1997, Tsai 1994). As a result, in this paper I will follow the insight of Huang’s analysis and postulate that the second occurrence of the verb *is*, as Huang points out, an instance *do*-support and that the apparent null object construction *is* VP ellipsis in disguise. But with some modifications in Huang’s proposal, I argue that, instead of moving into INFL, the verb moves to the head of Focus Phrase (FP), which takes the VP as its complement, in the second clause. That is, what follows the repeated verb in the second clause is an empty VP, not merely a null object⁵. The motivation of projecting the FP layer in ellipsis and its detailed mechanism will be discussed in the next section.

The following table summarizes the four ellipsis constructions in Chinese:

⁵ As a matter of fact, various phenomena show that verb-copy mechanism in Chinese and *do*-support in English resemble in many ways, not only in VP ellipsis, but also in question- answer pair and some focus-related constructions. It needs further investigation and we will not go into the details here.

Ellipsis Construction Type	Example	
(1) shi-support	Zhangsan kanjian-le tade mama, Lisi ye shi	Unlike <i>do</i> in English, which can only be viewed as a sort of pro-VP, <i>shi</i> in Chinese must be higher than INFL.
(2) negation	Zhangsan kanjian-le tade mama, Lisi meiyou	Among the negators, Chinese VP ellipsis is only compatible with <i>meiyou</i>
(3) modals	Zhangsan hui/keyi shuo fayu, Lisi ye hui/keyi	Chinese VP ellipsis is only possible with the occurrence of a deontic modal, rather with an epistemic one
(4) verb	Zhangsan kanjian-le tade mama, Lisi ye kanjian le	In ellipsis, the verb is copied at the head of the Focus Phrase (FP), leaving behind an empty VP

3. Ellipsis Licensing Configuration and Focus Projection

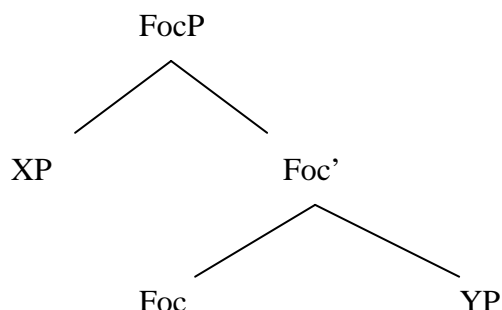
A central ongoing question in studies of ellipsis is whether and how an occurrence of ellipsis is related to an antecedent in discourse. Various proposals have been put forward, varying from strict syntactic equivalence to much more abstract notions of discourse or semantic parallelism. At one end of the spectrum, Sag 1976, Fiengo and May 1994, Fox 2000 and others propose that an ellipsis site (i.e., an elided XP) must be syntactically identical to some overt, antecedent YP at the level of LF. Others, such as Hardt 1992, Dalrymple, Shieber, and Pereira 1991, argue that the relation is semantic or pragmatic equivalence. Further, there are mixed theories, such as that of Rooth 1992 and Kehler 1999, who claim that for some structures or at some levels, parallelism must be syntactic, but for others, parallelism is semantic or pragmatic. From a close examination of the data in Chinese, we must recognize the role of syntactic identity plays in ellipsis, but at the same time we can not deny the inadequacy of purely syntactically-based parallelism. Taking these into consideration, I argue for a focus-based theory of ellipsis parallelism since, as Rooth (1992), Tomioka (1995) and Fox (1998) point out, the function of ellipsis is to bring the subject to focus or contrastivity. This point can obtain its support from Chinese data, as demonstrated in (23). In (23), the subject *Lisi*, the agent who actually carries out the action of liking, is accentuated by means of eliding the VP i.e. VP ellipsis helps downplay the old information (the action) and highlight the new information (the second subject).

(23) wo zhi shuo Zhangsan xihuan binshi, wo mei shuo Lisi xihuan.

I only say Zhangsan like Benz I not say Lisi like
‘I only said that Zhangsan liked Benz, not Lisi did.’

Combining the semantic and syntactic needs, I suggest that ellipsis constructions have the following structure:

(24)



XP= Focus (subject, in our case)

YP= IP or VP

In this structure, a focus head takes the focus as its specifier and the old information or presupposition as its complement. A constituent endowed with focus features (i.e. the subject of the second conjunct in VP/IP ellipsis) must end up in a Spec-Head configuration and the focus head must be lexicalized so as to license the deleted IP or VP according to the Empty Category Principle (ECP).

(25) **The Empty Category Principle**

A non-pronominal empty category must be properly head-governed⁶. (Rizzi, 1990)

Elliptical constructions must satisfy this formal licensing condition; more precisely, empty VP/IP should be properly head-governed by functional heads. That is, the empty category should be the complement of functional heads in terms of Minimalism. This line of reasoning is compatible with the analyses of Lobeck (1995) as well as Saito and Murasugi (1990). They note that, in English and Japanese respectively, deletion of a constituent is possible only when the constituent is a complement of a certain kind of functional categories. The configuration like (24) guarantees the Ellipsis Licensing Condition be fulfilled since the elided constituent will always be

⁶ Noteworthy is that here we adopt Rizzi's definition of head-government. In Rizzi's definition of head government, as in Chomsky's (1986b) definition of government, the set of possible governors includes the lexical heads N, V, A, and P. Rizzi departs from barriers theory in his treatment of the non-lexical heads; that is, non-lexical heads in his theory thus form a natural class of potential head-governors, in contrast to barriers theory, in which INFL, but not COMP, is a potential proper governor.

the complement of the functional head – focus. However, my proposal might encounter some theoretical difficulty at the first sight. To see this, consider the syntactic representation of a sentence with two identical VPs, as in (26a), the input to the PF-deletion process.

- (26) a. Zhangsan [_{VP} kanjian-le tade mama], Lisi ye [_{VP} kanjian-le tade mama].
 Zhangsan saw his mother Lisi too saw his mother
 ‘Zhangsan saw his mother, and Lisi saw his mother, too.’
 b. Zhangsan kanjian-le tade mama, Lisi ye shi.
 c. * Zhangsan kanjian-le tade mama, Lisi ye [e].

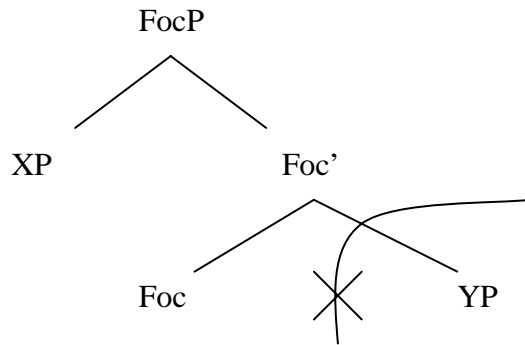
If VP ellipsis merely involves PF deletion of a VP under parallelism with an antecedent VP, as we discussed, the obligatoriness of *shi* is utterly unexpected. In other words, if we follow Chomsky’s inclusiveness condition, by which no new objects should be added in the computation other than the elements already present in the lexical items selected for Numeration, the insertion of *shi* here blatantly violates this ban on addition of lexemes out of Numeration throughout the computation. Accordingly, we have to make some adjustment on the working principles of Minimalism. As (26b-c) illustrates, *shi*-support is obligatory even though the two VPs are in all relevant regards identical in surface structure and in LF. The impellent difference that triggers *shi*-support in the second conjunct does not emerge until PF under a PF-deletion approach (cf. Bobaljik⁷ 2001). Namely, *shi* support must be a PF process. Under this assumption, the ellipsis operation should go as in (27):

(27)

⁷ Bobaljik argues that *do* support in English is in fact a PF process. In addition to VP ellipsis, his argument is also based on the phenomenon of *do* in negation. As the diagram below shows, the adjacency of affix *-s* and verb *eat* is disrupted by negation element *not* and this disruption of adjacency blocks the Affix Hopping (in the sense of Chomsky 1955) of *-s* and *eat*. Arguably, the hopping is a PF process termed as PF-merger (cf. Halle and Marantz 1993, Bobaljik 1994, Lasnik 1995, 1999). The sequence is that *do* insertion applies when PF-merger fails, so it is obvious that *do* support must be a PF process.

- i. [_{IP} Sam [_{I'} -s] not [_{VP} eat- ham]].
 ii. O ----- * ----- O ← Adjacency Disrupted
 iii. Ø → *do* ← *do* insertion
 iv Sam does not eat ham.

(Bobaljik 2001:12)



XP= Focus (subject, in our case)

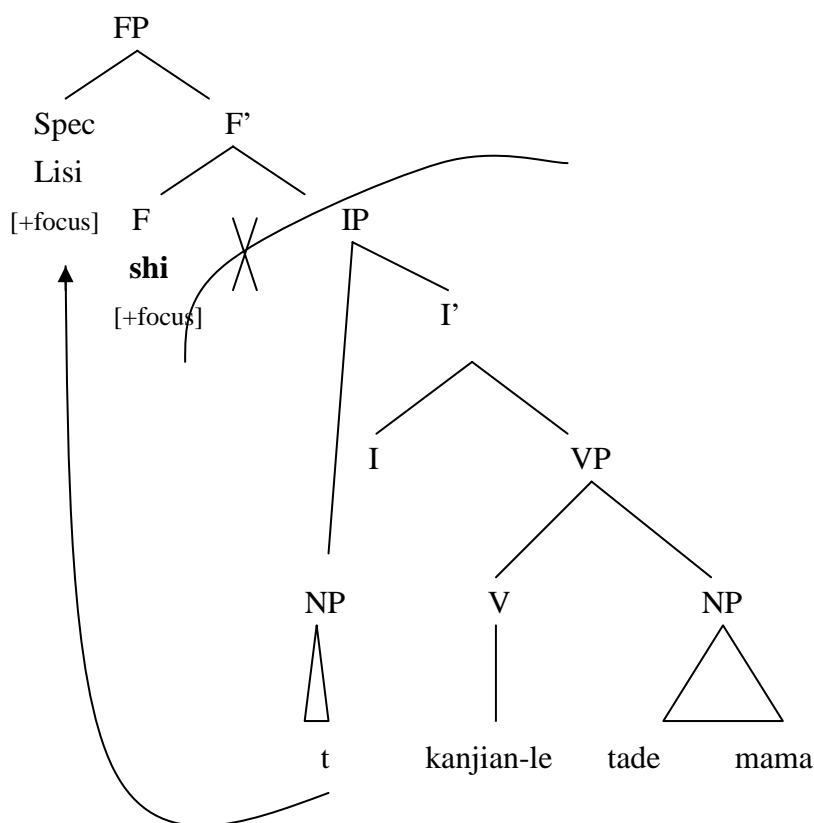
YP= IP or VP

YP, being identical with an antecedent VP, phonologically gets deleted; subsequently, a lexical item is inserted at the focus head in PF to ensure the head-complement relationship and perhaps also to signal for a completed ellipsis ensuing. In this structure, the focus head can be fulfilled in two ways: either by insertion or by movement. The term *movement* here takes the definition in the copy theory of movement proposed by Chomsky (1995). Under the copy theory of movement, the trace left behind is a copy of the moved element, deleted by a principle of the PF component in the case of overt movement. But in LF the copy remains, providing the materials for “reconstruction”. In our case, this means that the focus head can be realized by movement of the head of the YP; there would be a phonological identical copy of the head of the *adjacent* YP. In other words, ungrammaticality nevertheless arises when the focus head right above IP is lexicalized by a phonological copy of the head of VP, for example.

In the Chinese ellipsis data we discussed above, three types of elliptical construction -- shi-support, negation and modal—involvement of the FP above IP since the licenser of the elided constituent comes from INFL component. Figure (28), (29) and (30) represent their structures respectively⁸ (only the second conjunct is represented in the tree diagram).

(28) Zhangsan kanjian-le tade mama, Lisi ye shi.

⁸ We omit the position of *too* in the tree diagram here. The problem of *too* will be discussed in the last section.

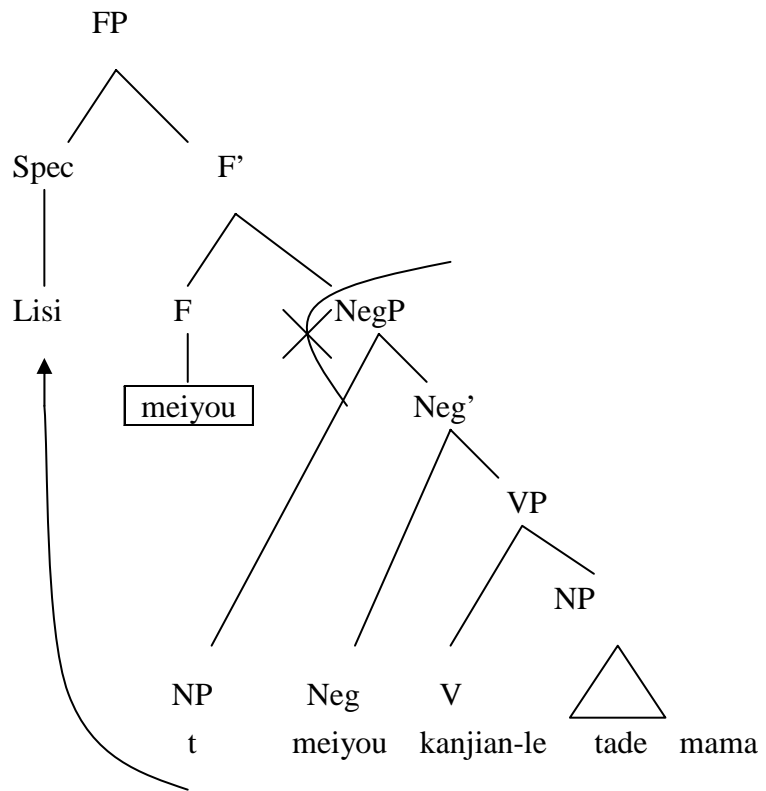


In (28), since *Lisi* bears [+focus] feature, it has to move up into the position [Spec, FP] to check off the strong feature. On the other hand, the reason for *shi* to be inserted in the focus head is twofold: first, to check off the head-features of its specifier, and, second, to properly license the deleted adjacent empty IP. Thus, the insertion of *shi* here can both satisfy the Principle of Full Interpretation and ECP.

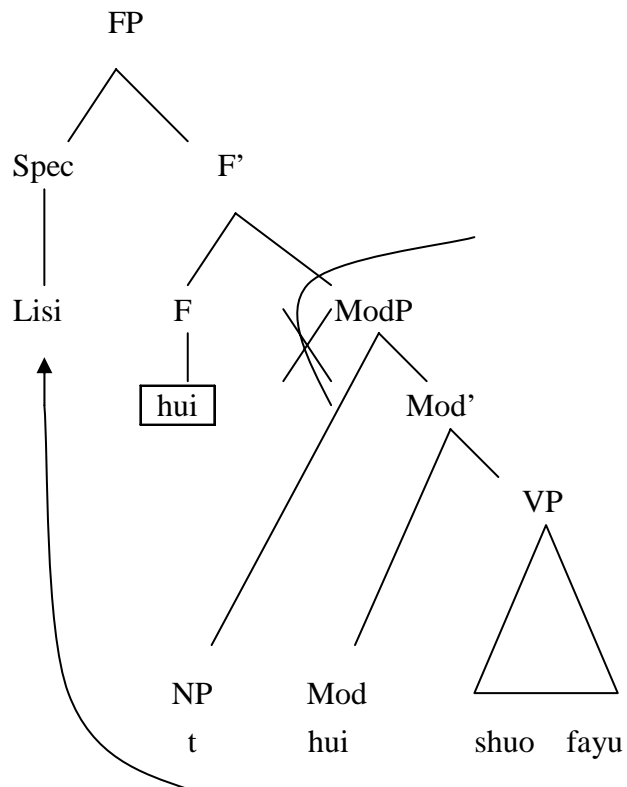
In (29) and (30)⁹, the subject *Lisi* moves into the [Spec FP] position, and, by movement, the phonological copy of the negator *meiyou* or the modal *hui* occupies the focus head. The strong [+focus] feature is checked via the spec-head relation.

(29) Zhangsan kanjian-le tade mama, Lisi meiyou.

⁹ Since negation and modal belong to the INFL component, we simplify the sophisticated internal structure of IP here, using NegP or ModP to represent it instead. Also, since *ye* 'too' is assumed to be an adverb, perhaps the sister of F', we omit it as well for the ease of understanding.

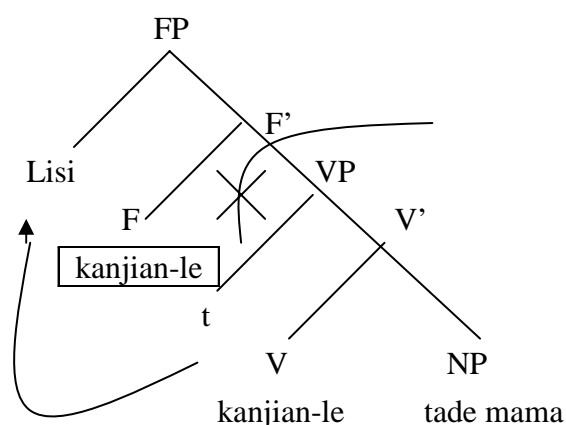


(30) Zhangsan hui/keyi shuo fayu, Lisi ye hui/keyi.



Finally, an elliptical construction involving a verb has the structure as (31) shows. In the same fashion, the verbal element *kanjian-le* moves into the focus head of the FP right above the VP so as to satisfy the checking of strong [+focus] feature in elliptical construction.

(31) Zhangsan *kanjian-le* tade mama, Lisi ye *kanjian-le*.



4. Implications and Cross-Linguistic Correlations

The syntactic configuration on ellipsis I propose can explain the ellipsis data not only in Chinese, but also in other languages such as Japanese, Korean and French. As my proposal shows, in principle, all languages potentially have both IP-ellipsis and VP-ellipsis in the contrastive structures; however, as I will illustrate in the below, situation may vary from language to language as a consequence of its interaction with language-specific mechanisms. There is one point worth emphasizing first, though. In my analysis, the lexicalization of the focus head can be accomplished either by insertion or by movement. We must make a stipulation here that once insertion is available for a language to satisfy the licensing condition, movement is forbidden to fulfill the need. In other words, movement is the last resort to salvage an otherwise crashing derivation.

Japanese and Korean have similar operations to Chinese in ellipsis. In VP ellipsis, Japanese and Korean employ verb movement to realize the focus head, as (32) and (33) show:

(32) *Japanese*

John-wa zibun-no tegami-o sute-ta, Mary-mo sute-ta
 -Nom self-of letter-Acc discard-Perf -also discard-Perf
 ‘John threw out self’s letters, Mary did, too.’

(33) *Korean*

John-i ku-ui ememi-lul manna-ss-ko, Bill-to manna-ss-ta
-Nom his mother-his met-Conj -also meet-past-Dec¹⁰
'John met his mother, and Bill did, too.'

On the other hand, like in Chinese, in Japanese and Korean a kind of pro-IP can be inserted so as to ensure the head-complement licensing condition, as exemplified in (34-37). Particularly, as *shi* in Chinese, the scope of *souta* in Japanese and *kuleta* in Korean is higher than the scope of negation, which serves to prove its pro-IP status.

(34) *Japanese*

John-wa tanoshi desu, Bill-mo sou-ta
John-Nom happy be Bill-also so-Perf.
'John is happy and Bill is, too.'

(35) *Japanese*

John-wa ano okasan-ni kaenakat-ta, Bill-mo soudatta.
John-Nom his mother-? meet-Perf Bill-also so-Perf
'John didn't meet his mother, and Bill didn't, either.'

(36) *Korean*

John -un aju kippeha-yess-ko, Bill-to kule-ess-ta
-Top very happy-past-Conj -also so-past
'John is happy and Bill is too.'

(37) *Korean*

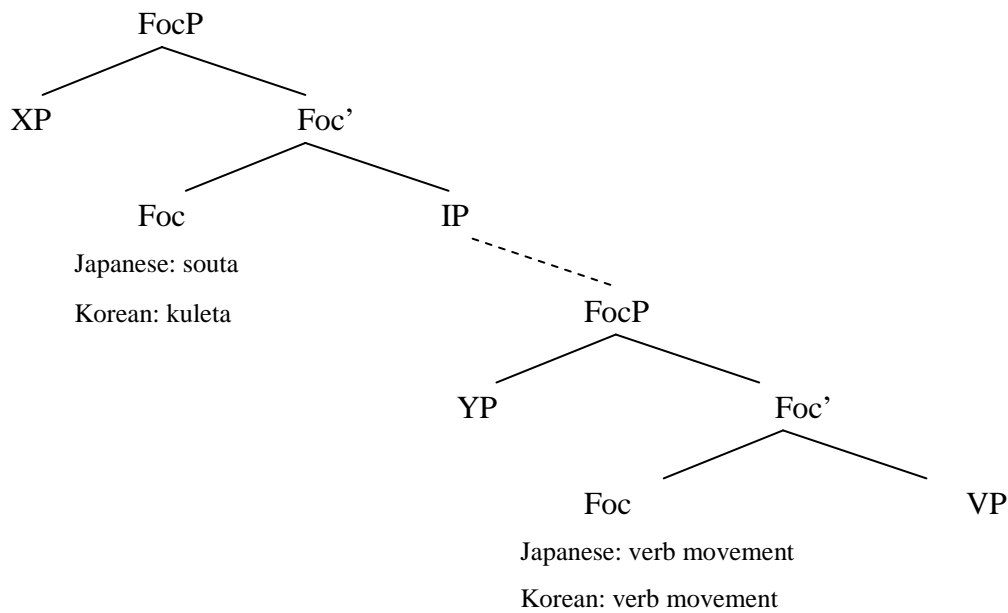
John-i ku-ui enemi-lul mot manna-ss-ko, Bill-to kule-ess-ta.
-Nom his mother-Acc not meet-past-Conj -also so-past-Dec
'John didn't meet his mother, Bill didn't, either.'

To conclude, a simplified¹¹ ellipsis configuration in Korean and Japanese might be represented as in (38):

¹⁰ Dec is abbreviated for declarative mood.

¹¹ The configuration proposed here for Japanese, Korean and the subsequent English, French and Italian is somewhat simplified. What's more important in my work here is trying to find out some basic operations that shared across languages. More detailed mechanism in different languages requires deeper inquiry and research.

(38)



However, the situation seems to be the reverse for English. In English, since *do*-insertion¹² at the focus head above VP is available, movement of the verb head to the focus head leads to ungrammaticality like in (39).

- (39) a. John met his mother, and Bill did, too.
b. * John met his mother, and Bill met, too.

The fact that *do* in English often occupies a [+focus] position can be further demonstrated in other focus-related construction. It is well-known that in a declarative sentence like (40) the occurrence of *do* is to emphasize the action the agent carries out. If we assume that *do* heads the FP, just like we do in ellipsis construction, the pattern follows naturally without extra stipulation.

(40) I do like your gift!

One may wonder how the pro-VP *do*, which is located below the INFL component, could bear inflectional features in my analysis; to account for this, I return to something like Chomsky's (1955) Affix-Hopping¹³ analysis of English inflection (see also Travis 1984, Halle & Marantz 1993, Bobaljik 1994b, Lasnik 1995b). In this

¹² Although some people (like Chomsky 1995) argue that *do*-support may be shown to be a reflex of parameter fixing (choice of weak Agr, for example), which means that it is not language specific rule, we here temporarily assume it to be an insertion rule of the overt syntax for expository purposes.

¹³ Affix Hopping is a PF process demanding adjacency.

theory, the verb comes together with the inflectional features via PF merger but not by syntactic (either overt or covert) raising of the verb, as illustrated in (41) with the joined circles indicating Merger in a post-syntactic component.

- (41) a. [IP Sam [I' -s] [VP eat- Spam]].
 b. O ----- O ← PF Merger
 c. Sam eats Spam.

(Bobaljik 2001:11)

By the same token, the attachment of the inflectional affix to the focus head *do* now poses no problem under Affix-Hopping hypothesis, roughly schematized as (42).

- (42) a. John likes Mary, and [IP Bill [I' -s] [FP do [~~VP like Mary~~]]], too.
 b. O ----- O ← PF Merger
 c. John likes Mary, and Bill does, too.

However, pro-IP insertion is not ready for use in English; as a result, only modals¹⁴ (or auxiliaries) can move into the focus head above IP to license the deletion as in (43).

- (43) John met his mother, and Bill will, too.

There is another kind of language where VP ellipsis is prohibited, such as French and Italian. As (44) and (45) show, verbs in French and Italian cannot license the ellipsis, neither do they have the insertion mechanism to ‘incarnate’ the focus head.

(44) *French*

- a. * Pierre a rencontré sa mère, Paul a rencontré aussi.
 Pierre has met his mother Paul has met too
 b. * Jean est fatigué, je suis aussi.
 Jean is tired I am too

(45) *Italian*

- a. * Gianni ha visto la sua madre, anche Maria ha visto.
 Gianni has see his mother also Maria has see
 b. * Gianni è felice e Maria è anche.
 Gianni is happy and Maria is also

¹⁴ The negator *not* alone can not license the ellipsis but must be adjoined to another auxiliary. I assume perhaps this is because *not* is not a head of a projection but a sort of affix, and, as I demonstrate above, only a functional head can satisfy ECP.

The lack of VP ellipsis can be further testified with the unavailability of strict/sloppy ambiguity, a feature typical of VP-ellipsis. From (46) and (47), it is evident that the presence of the object clitic is indispensable, blocking the application of VP ellipsis and the derivation of the ambiguity in reading.

(46) *French*

Pierre a rencontré sa mère, Paul l'a rencontré aussi.

Pierre has met his mother Paul he has met too

'Pierre has met his mother and Paul has met Pierre's mother, too.'

(47) *Italian*

Gianni ha incontrato il suo maestro delle elementari,

Gianni has met the his teacher of elementary

anche Maria lo ha incontrato.

also Maria he has met

'Gianni has met his elementary school teacher, and Maria has met Gianni's elementary school teacher.'

The lack of VP ellipsis in French and Italian falls naturally in my analysis. It is well-known that obligatory verb movement to INFL takes place in French and Italian; for example, in (48) and (49) we can observe that verbs precede adverbs that mark the left edge of VP.

(48) Jean voit souvent Marie.

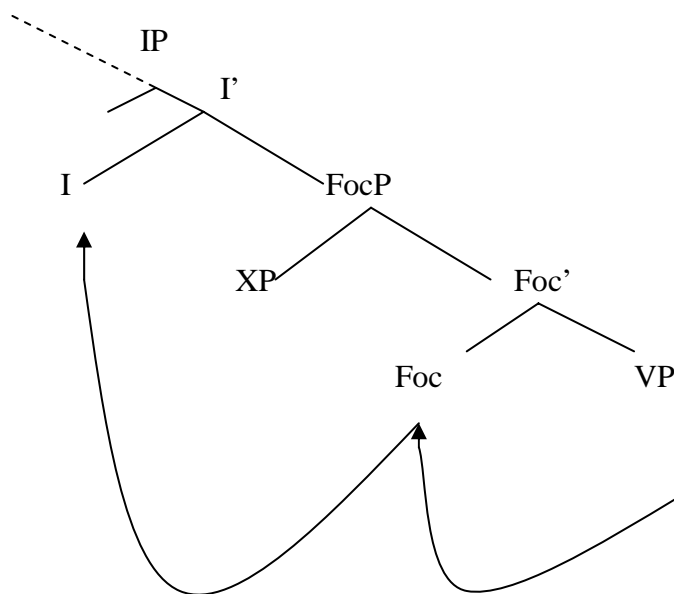
Jean see often Marie.

(49) Gianni mangia spesso pomodori.

Gianni eats often tomatoes

Therefore, it is claimed that full verb in the two languages moves through T and AGR since it passes over the VP adverbial to land in the highest projection. Combining the effects of V-to-I movement and the ellipsis configuration, it comes no surprise why VP ellipsis is not allowed in French and Italian. As illustrated in figure (50), we can see that because a verb always has to move further up after passing the focus head, the verb would never stay in the Focus head, i.e. the licensing head would never get lexicalized. So to speak, the lack of VP ellipsis is derived from the putative obligation of V-to-I movement. In other words, my analysis leads to the typological prediction that VP ellipsis would not be found in languages where V-to-I movement is obligatory in overt syntax.

(50)



5. Conclusion and Remaining Issues

Although Chinese does not employ *do*-support as English does in VP ellipsis, in this paper I argued that nevertheless there are four types of ellipsis constructions in Chinese. All of the four patterns of ellipsis exhibit strict/sloppy ambiguity, a feature typical of VP ellipsis. Also, they all meet the Ellipsis Formal Licensing Condition: the empty VP must be the complement of a functional head. Moreover, this paper set out to establish a focus-based analysis of ellipsis in which FP may be projected above VP *or* above IP. That is, the projection of FP is situated immediately above either VP or IP. In this, I am suggesting that focus can occur in only one syntactic position in one sentence, compatible with the implicit assumption in Rizzi (1997). In this way, the elided constituent can get licensed by the functional head Focus. The ellipsis configuration I propose is demonstrated to be basically applicable to other languages, though many mysteries remain due to some language-specific mechanisms. All in all, VP ellipsis as well as IP ellipsis exists in Chinese, and its properties conform to those in other languages.

There is one more issue that the previous studies have not paid enough attention to yet: the occurrence of *too*. As we can observe in the sections above, universally, the presence of a lexical item meaning *TOO*¹⁵ (*ye* in Chinese, *mo* in Japanese, *aussi* in French, etc.) is obligatory in the elliptical construction. However, traditionally, the

¹⁵ *Too* (capitalized T) in this article refers to lexical items, in different languages, that bear the meaning of *too*.

obligatoriness of this *too* is either treated as a purely discourse-functional marker or simply dismissed as an adverb. In this section, I will present the intricate data that need to be taken into consideration and provide a tentative solution to the problems. I will demonstrate that the semantic and discourse factors alone are not sufficient in explaining the syntactic anomaly. By doing so, the ellipsis licensing configuration proposed above is further validated to be correct.

The obligatoriness of *too* in English is first noted by Green 1968, and subsequently discussed by Kaplan (1984). Green proposes that the obligatoriness results from what *too* conventionally implicates¹⁶ and Kaplan argues that *too*'s obligatoriness stems from its discourse function, which is to emphasize the similarity between the members of a pair of contrasting items. This constraint applies to both VP-ellipsis and non-VP-ellipsis constructions, as shown below. Sentence (51) and (52) have only one semantic difference between the conjuncts; thus, *too* is required.

(51) Jo had fish and Mo did *(too).

(52) Jo wrote an article to debunk Guildenstern's theory, and she wrote it to improve her tenure file *(too).

Nonetheless, even if what they claim to be true, the pragmatic proposals by Green and Kaplan fail to explain the contrast as illustrated in (53) and (54). If the obligatoriness of *too* can be accounted for by the conventional implicature or the number of semantic contrasts, it is not clear why the semantically synonymous *also* exhibit opposite syntactic behavior.

(53) a. John went to New York and Mary too.

b. John went to New York and Mary also *(did).

(54) a. * John had fish and Bill had soup too.

b. John had fish and Bill had soup also.

Most important of all, the semantic or discourse-functional account can not predict or explain the cross-linguistic variation. In other words, if we regard *TOO* merely as a pragmatic marker, we can not tell why in some languages *TOO* alone can license the elided constituent (as in 55i, ii, iii) whereas in others *TOO* must be accompanied by a supporting element (as in 55iv).

(55) i. English: John went to New York.

¹⁶ Too conventionally implicates: What I say about the contrasting (or focused) constituent in the second clause, I also say about the contrasting constituent in the first clause.

	Mary too.	
ii. Japanese:	John-wa Tokyo-e itta. John-Top Tokyo-to went 'John went to Tokyo. Mary too.'	Marry-mo. Mary-too
iii. Korean:	John-un Seoul-e/lo ga-ss-da. John-Top Seoul-to went-declarative 'John went to Seoul. Mary too.'	Mary-to Mary-too
iv. Chinese:	*John qu-le Taipei. John went Taipei 'John went to Taipei. Mary too.'	Mary ye. Mary too

Here I would like to provide a tentative answer to this problem. *Ye* in Chinese is a VP adverbial, just like *also* in English. Because of its syntactic status, namely, not being a head of VP or IP which can move into the focus, by no means can *ye* and *also* fulfill the Focus head. Similar situation can be witnessed in Korean as well. The adverb *yæski* is forbidden to occur independently, though it can co-occur with the postposition *to*.

(56) a.	*John-un Seoul-e/lo ga-ss-da. John-Top Seoul-to went-declarative	Mary yæski. Mary too
b.	John-un Seoul-e/lo ga-ss-da. John-Top Seoul-to went-declarative	Mary-to yæski. Mary-too too

However, *too* in English, *mo* in Japanese and *to* in Korean might sometimes have the predicative power; that is, when the supporting verb or auxiliary does not occur, it itself behaves like a predicate, moving into the head of Focus Phrase. The predicative power of postpositions in Japanese and Korean can further be observed in the following examples¹⁷, where the entire predicate can be omitted as long as the postposition or case marker is present.

(57) a.	shimasha Oonokazushi, mone gekijou no ongaku kantoku ni conductor Oonokazushi Monet theater of music supervisor at 'Conductor Oonokazushi became the music supervisor at the Monet theater.'
b.	kendai bijutsu no kikakuten, Mito to Obihiro de modern art of exhibition Mito and Obihiro in 'The exhibition of modern art was held in Mito and Obihiro.'

¹⁷ The sentences are taken from the lecture notes of Tzong-hong Jonah Lin's seminar. Many thanks go to him for inspiring me thinking deep into this issue.

In other words, it is highly possible that *mo* and *to* behaves as a normal predicate in ellipsis construction, especially in colloquialism, thus able to move to the head of FP. However, this is only a tentative stipulation; further evidence is needed to validate this assumption.

To conclude, a lexical item meaning *too* is indispensable in an elliptical construction across languages; that is, the ellipsis configuration can only be triggered by the presence of *too*. However, whether this *too* can appear independently (or need a supporting auxiliary) depends on its own syntactic status in different languages.

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