The Sentence-Internal Topic and Focus in Chinese

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The purpose of this study is two-fold. First, it argues that Rizzi's (1997) "fine structure of the left periphery" can be applied to the sentence-internal domain in Chinese (i.e., between TP and *v*P) and that this domain can license both Topic and Focus under distinct functional projections, with TopicP dominating FocusP. The result of this paper supports claims in Bellettis (2004) and Paul (2005) about functional projections in the lower INFL domain, and shows that an analysis of single projection proposed by Lambova (2004) for Topic and Focus in Bulgarian cannot carry over to Chinese data. Second, by taking this joint approach of syntax and information structure, different from previous analyses, I argue that pre-posed objects can be either Topic or Focus in the sentence-internal domain. The present study in turn shows that the so-called verb-copying sentences in Chinese can be analyzed on a par with the pre-posed object construction. A unified account to the pre-posed object construction and the so-called verb-copying sentences is provided.

1. Introduction

In the literature on pre-posed object construction, there is no consensus whether objects pre-posed to the domain between subject and the verb is Topic or Focus.[1,2] Here,

[1] In this paper, I use "Topic" and "Focus" as labels to refer to the linguistic items that carry such informational roles.
[2] The abbreviations for the glosses used in examples are: CL, classifier; PERF, perfective aspect marker; EXP, experienced aspect marker; PROG, progressive aspect marker; Q-PART, interrogative particle; ASP, aspect marker; RESULT, resultative particle; BA, disposal marker.

I refer to such a domain as "sentence-internal domain," approximately below TP and above *v*P.

(1) Zhangsan   na.ben.shu$_1$ kanguo.le   ec$_1$
     Zhangsan   that.CL.book   read.PERF
     'Zhangsan has read that book.'

Some linguists argue for such sentences as involving a Secondary Topic, as opposed to the sentence-initial Topic (e.g. Tsao 1990 and Paul 2002, 2005). Differently, some linguists refer to such sentences as involving Focus, based on the contrastive interpretation conveyed by the sentence-internal element (e.g. Tsai 1994, Ernst and Wang 1995, Shyu 1995, and Huang, Li and Li to appear).

In this paper, I will show that the sentence-internal domain in Chinese is relevant to both Topic and Focus but in a specific, restricted and highly systematic way.[3] Agreeing with Paul's (2005) claim for Topic and Focus in the lower INFL domain in Chinese, I depart from Paul (2005) and previous analyses that the "pre-posed object" itself can be either Topic or Focus sentence-internally in an appropriate context (section 2). In section 3, I argue that two distinct projections are needed for the Topic and Focus interpretations, and that an analysis of single-projection as proposed by Lambova (2004) for Bulgarian is not supported by Chinese data. The discussion will then proceed to show how the proposed analysis accounts for the so-called verb-copying sentences in Chinese (section 4). Section 5 briefly concludes the paper.

2. The Sentence-internal Domain in Relation to the Information Structure

Assuming Chinese can license Topic and Focus in the domain of CP, the following discussion will show that the differences between Topic and Focus also carries over to the sentence-internal domain. The discussion will be centered on differences between Topic and Focus in the cleft-construction, answers to (*wh-*)questions and sentences with indefinite NPs.

Generally, Topic can be either overt or covert in answering questions, but answers to *wh*-questions are Focus that cannot be optional. This generalization holds to elements in the sentence-internal domain in Chinese. (2a) and (2b) show that the sentence-internal item *zuoye* 'assignment' is optional when it is mentioned in the previous discourse, i.e., Topic (see Paul 2002).

(2) ni   zuoye   xiewan.le   ma?
     you   assignment write.PERF   Q.PART
     'Are you done with your assignment?'

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[3] I center the discussion on Topic and Focus that are syntactically licensed and assume that such information can also be realized by other linguistic devices, such as prosodic contour.

a. wo   zuoye   xiewan   le
   I   assignment write   PERF
  'I am done with the assignment.'

b. wo   ec   xiewan   le
   I   write   PERF
  'I am done with [it].'

However, I find that when (2a) is used to answer a *wh*-question (3a), the sentence-internal element *zuoye* 'assignment' is obligatory, since it is the answer to the *wh*-question.

(3)   a. ni   shemo   xiewan.le?
        you   what   write.PERF
     'What have you finished?'

    b. wo   *(zuoye)   xiewan   le   (*zuoye* can be stressed)
       I   assignment write   PERF
    'THE ASSIGNMENT, I have finished it.'

The same domain now is relevant to Focus. The fact that *zuoye* 'assignment' in (3b) can be stressed further indicates its Focus status. Examples (2) and (3) suggest that the sentence-internal domain can be used for both Topic and Focus.

    The distinction between sentence-internal Topic and sentence-internal Focus is clearer with the help of emphatic *shi*. In Chinese cleft sentences, emphatic *shi* can mark Focus phrases sentence-internally.[4]

(4)   a. wo [***shi* zuotian**]   huilai   de   (bushi jintian)
       I SHI yesterday   return   DE   (not   today)
       'It is yesterday that I came back (, not today).'

   b. wo [***shi*   kanwanshu.le**]
      I   SHI   read.book.PERF
     'I did finish the reading.'

Assuming that cleft sentences represent Focus (see É.Kiss 1998), but not Topic, we expect that sentence-internal NPs with different informational statuses show different compatibility concerning the cleft construction. Such a conjecture is correct. We find that when the pre-posed object is the answer to *wh*-questions, as in (5b), it is compatible with emphatic *shi*.

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[4] The cleft construction in Chinese is represented in the form of "shi … (de)." While there is a dispute over the function of the optional marker *–de*, it is generally assumed that *shi* shows the emphatic function. I take this assumption in the following discussion.

(5) a. ni   shemo   xiwan.le? (Baogao?) [5]
     you   what   write.PERF
     'What did you finish? (Paper?)'

  b. wo   [(*shi*) **zuoye**]   xiewan.le   (baogao hai.mei)
     I   SHI assignment   write.PERF   paper   not.yet
     'It is the assignment that I finished (, not the paper).'

However, example (6) shows that when the pre-posed object involves given information, it is not compatible with emphatic *shi*.

(6) a. ni   zuoye   xiwan.le   ma?
     you   homeowkr write.PERF   Q-PART
     'Did you write the homework?'

  b. wo   [(*shi)   zuoye]   xiewan.le
     I   SHI   homework   write.PERF
     'I wrote the homework.'

The contrast between (5b) and (6b) indicates the difference between Focus and Topic in the sentence-internal domain.

       Such distinction can also be found in sentences with indefinite phrases. It is pointed out by Li and Thompson (1981) that Topic in Chinese must be either generic or definite; an indefinite Topic is not allowed.

(7)   guo/na.zhi.guo/*yi.zhi.guo, wo yijing   kanguo.le
     dog/that.CL.dog/one.CL.dog I   already   see.EXP.PERF
     'Dog/That dog/A dog, I have already seen.'

However, Tsai (1994) reports that an indefinite phrase is allowed in the sentence-internal domain, e.g. *yi.pian.lunwen* 'one paper' in (8).

(8)   wo yi.pian.lunwen   keyi yingfu   (, liang.pian jiu bu xing le   )
     I one.CL.paper   can handle   2.CL.paper then not can ASP
     'I can handle ONE PAPER (, but not two).'

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[5] I adopt É. Kiss's (1998) analysis that "identificational Focus," which is related to semantic features [+/-exhaustive, +contrastive], should be distinguished from "information Focus," since the latter involves no syntactic reordering and only conveys new information. Given Chinese as a *wh*-in-situ language and the fact that questions like (5a) are not marginal, I deem that *wh*-questions in the SOV order, e.g. (5a), represent a sub-type of Focus, identificational Focus, which is different from the information Focus conveyed by canonical *wh*-questions (cf. Rooth 1992, É. Kiss 1998, among others).

Nonetheless, we can see that sentences like (8) are only licit when the indefinite phrase is quantitative, or sentences are ungrammatical (, as in (9)).

(9) *wo   yi.pian.lunwen   zai.kan
      I   one.CL.paper   PROG..read
     'I am reading A PAPER.'

Examples (7) to (9) suggest that besides Topic, the pre-posed object can get the Focus status when proper contexts are provided. Recall that emphatic *shi* is compatible only with Focus but not with Topic, the quantitative indefinite NP in (8), *yi.pian.lunwen* 'one paper', fits emphatic *shi* as expected (as in (10)).

(10)   wo   shi   yi.pian.lunwen keyi yingfu (, liang.pian   jiu bu xing le)
        I   SHI   1.CL.paper   can handle   2.CL.paper then not can ASP
       'It is one paper that I can handle (, but not two).'

Example (10) supports (5) and (8) that the pre-posed object in the above situations has the status of Focus. The foregoing discussion shows that both Topic and Focus are available to NPs in the sentence-internal domain in Chinese, and that such Topic and Focus do show different syntactic properties. It then further suggests that treating the pre-posed objects as either Topic (e.g., Tsao 1990 and Paul 2002) or Focus (e.g., Tsai 1994 and Shyu 1995) only illustrates part of the facts. In the section to come, in the spirit of Rizzi (1997), I will propose that two functional projections, TopP and FocP, are available in the sentence-internal domain to host Topic and Focus when needed.

3. Proposal: Sentence-Internal TopP and FocP

To account for facts mentioned in the preceding discussion, I claim that two distinct projections should be identified in the sentence-internal domain (i.e., between TP and *v*P) to host Topic and Focus, respectively.[6] Following Rizzi's (1997) postulation of TopP and FocP, I propose to extend this analysis further in such a way that Topic and Focus phrases can be projected in the sentence-internal domain of Chinese, with TopP higher than FocP (cf. Belletti 2004 for Topic and Focus in the lower IP area in Italian). The proposed structure is shown in (11).

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[6] Different from the idea of "VP periphery" (cf. Belletti 2001, Gouguet 2006) that would relate the information structure to the edge of *v*P, in the following discussion, I will show that the phenomenon at issue is pertinent to a domain higher than *v*P.

(11) Sentence-internal TopP and FocP
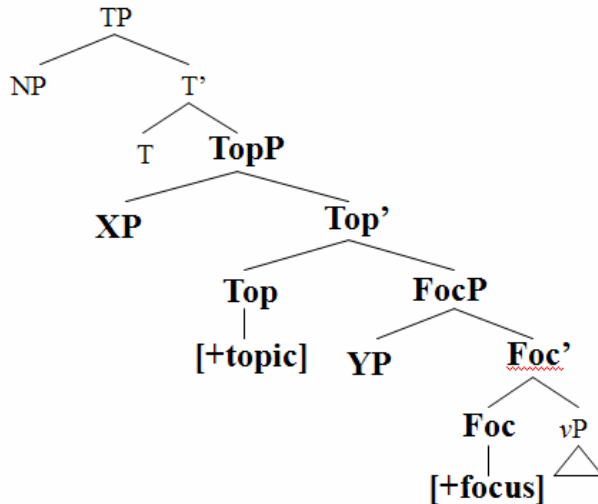
The gist of this structure is that, in the sentence-internal domain, both Topic and Focus can be licensed with proper contexts. Granted that "fixed-ordering" is often an indication of functional categories, this structure predicts that Topic and Focus can co-occur in the sentence-internal domain, but Topic is always higher than Focus. The prediction is borne out. Example (12) shows that Topic *shu* 'book' and Focus *xiaoshuo* 'novel' co-occur in the sentence-internal domain, and that Topic NP has to precede Focus NP.

(12) 'Speaking of books, it is novels that he reads most.'
  a. ta   shu-TOP   xiaoshuo-FOC   kan.de   zui duo
     he   book   novel   read.RESULT   mostmany

  b. *ta   xiaoshuo-FOC   shu-TOP   kan.de   zui duo
     he book   book   read.RESULT   mostmany.

　　With respect to *wh*-questions, the discourse in (13) shows that the Topic NP in the sentence-internal domain (i.e. *shuiguo* 'fruit') is optional, but the Focus NP is obligatory (i.e. *pingguo* 'apple').

(13) a. ta   shuiguo   shemo   zui.chang   chi?
     he   fruit   what   most.often   eat
   'Speaking of fruit, what does he eat most often?'

  b. ta   (shuiguo-TOP)   *(pingguo-FOCUS)   zui.chang   chi
     he   fruit   apple   most often   eat
   (Fruit,) he eats apples most often.'

The distinction between Topic and Focus in the sentence-internal domain is further illustrated by cleft sentences. Recall that emphatic *shi* is only compatible with Focus NP, but not with Topic. The contrast is shown in (14). Emphatic *shi* is not compatible with Topic *shu* 'book' (14a), but it is fine with Focus *xiaoshuo* 'novel' (14b).

(14) 'Speaking of books, it is novels that he reads most.'

a. *ta   [shi   shu$_{-TOP}$] xiaoshuo$_{-FOCUS}$ kan.de   zui.duo
   he   SHI   book   novel   read.RESULT   most.many

b. ta   shu$_{-TOP}$ [shi xiaoshuo$_{-FOCUS}$]   kan.de   zui.duo
   he   book   SHI novel   read.RESULT   most.many

Different analyses of emphatic *shi* have been proposed in the literature. Chiu (1993) proposes that emphatic *shi* heads a functional projection as ShiP. Lee (2005) argues that emphatic *shi* is a grammaticalized focus marker heads a focus phrase. Based on facts of ellipsis, Li (in progress) argues that emphatic *shi* is subcategorized for an IP. It has also been argued that emphatic *shi* is generated in the split INFL domain and projects its functional projection, as proposed by Huang (1988), Huang et al. (to appear). I thereby adopt the approach that emphatic *shi* is analyzed as heading its functional projection. Its intervention indicates that Topic and Focus in the sentence-internal domain do not form a constituent and are licensed by different projections (, contra Lambova 2004).

　　　Furthermore, Example (15) shows that a sentential adverb, like *dagai* 'probably', is allowed to sit after the Focus NP. The distribution of sentential adverbs suggests that sentence-internal Topic and Focus are licensed in a domain higher than *v*P.

(15) (dagai)   Zhangsan (dagai)   haixian^{-TOP}(dagai)   pangxie^{-FOC}(dagai) bu   neng chi
     probably Zhangsan probably seafood   probably crab   probably not   can   eat
     'As for seafood, probably, it is crab that Zhangsan can't eat.'

The proposed structure with two distinct projections in the INFL domain is thus supported. It is then predicted that sentences with a ditransitive verb like *song* 'give' would allow both direct and indirect objects to be pre-posed in the sentence-internal domain.[7] The prediction is borne out (e.g. (16)). Unlike the canonical pattern as in (16a), sentences like (16b) and (16c) convey different interpretations for specific pragmatic contexts.

(16) a. wo   zuotian   song.le   Zhangsan   na.ben.Chomsky.de[8]   shu
        I   yesterday give.PERF Zhangsan   that.CL.Chomsky.DE   book
        'Yesterday, I gave Zhangsan that book of Chomsky'

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[7] Thanks Professor Daniel Büring for pointing this out to me.
[8] The marker *-de* is for pre-nominal modifiers.

b. wo, *Zhangsan* (a[9])-TOP, [na.ben.Chomsky.de shu]-FOC zuotian   song.le
   I   Zhangsan a   that.CL.Chomsky.DE book   yesterday give.PERF
   'Speaking of Zhangsan, I gave [him] THAT BOOK OF CHOMSKY.'

c. wo, [*na.ben.Chomsky.de shu* (a)]-TOP, Zhangsan-FOC song.le   (qita.ren   haimei)
   I   that.CL.Chomsky.DE book   Zhangsan   give.PERF   other.person not.yet
   'As for that book of Chomsky, it is Zhangsan that I gave [it to him] already
    (, but to not other persons).'

In sum, I agree with previous analyses of the pre-posed object proposed by Tsai (1994) and Shyu (1995) for Focus and by Paul (2002, 2005) for Topic, but depart from them in arguing that both Topic and Focus in the sentence-internal domain are allowed to license pre-posed objects in Chinese. It is shown that the present analysis tackles the information structure conveyed by the pre-posed object and also issues such as the fixed ordering of Topic and Focus, and the compatibility of emphatic *shi*. In the following section, I will show that the so-called "verb-copying" sentences can be accounted for by the same analysis.

4. Application: The So-called Verb-Copying Construction

Since Huang (1982), it has been noticed that Chinese has a construction referred as the Verb-copying Construction (or "verb duplication" in Huang 1982). The generalization is that in Chinese, a transitive verb cannot be followed by an object together with a complement phrase denoting the duration (e.g. 17a) or a resultative phrase (e.g. 17b).

(17) a. *ta   kan.le   [shu]   [liang.ge.xiaoshi]
      he   read.PERF book   2.CL.hour
      'He has read books for two hours.'

   b. *ta   kan.le   [shu] [hen lei]
     he   read.PERF book very tired
     'He read books and got very tired.'

In other words, there is at most one complement allowed for each verb in the predicate, as in (18).

(18) a. ta   kan.le   [shu]
     he   read.PERF book
     'He read books.'

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[9] The *a* indicates a pause, which is used in (16) to help getting the Topic interpretation.

b. ta   kan.le   [liang.ge.xiaoshi]
   he   read.PERF   2.CL.hour
   'He has read for two hours.'

c. ta   kan.de   [hen lei]
   he   read.RESULT   very tired
   'He read and got very tired.'

Therefore, it seems that "an extra copy of the head verb" is needed to salvage sentences like (18), as shown in (19).

(19) a. ta [kan shu]   [kan.le   liang.ge xiaoshi]
        he read book   read.PERF   2.CL.hour
      'He has read books for two hours.

   b. ta [kan shu]   [kan.de   hen lei]
      he read book   read.RESULT   very tired
      'He read books and got very tired.'

In terms of the phenomenon at issue, Huang (1982, 1992) argues for a VP adjunction analysis; the proposed structure is shown in (20). He claims that such duplication is motivated by a PF filter that requires copying the verb for extra complement, and then the original VP1 is reanalyzed to function like an adverbial of the duplicated V2 in forming a bigger VP unit (see Cheng 2007 for a similar account)[10]

(20) ta [$_{VP}$ [$_{V1'}$ qi-original   ma] [[$_{V2}$ qi-duplicated.le   xan.ge.xiaoshi]]]
      he   ride   horse   ride   PERF 3.CL.hour
        'He rode for three hours.'

In order to deal with different interpretations in sentences with resultative complement, Cheng (2007) argues that sentences with subject-reading, like (21a), are derived by "sideward movement," and sentences with object-reading, like (21b), involve "standard movement," following the framework of movement in Nunes (2004).

(21) ta   qi   na.pi.ma   qi.de   hen.lei
     he   ride that.CL.horse ride.RESULT   very.tired
     a.   'He rode the horse and became tired as a result.' (subject-reading)
     b.   'He rode the horse and the horse got very tired.' (object-reading)

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[10] To simplify the discussion, I refer to the "original" verb and its complement as VP1 and its "duplicated" verb as V2. The label "VP" is only used for convenience in discussion. The internal structure of such constituents is irrelevant here.

Her proposal for (21a), sideward movement, resembles Huang's adjunction analysis in (20). As for (21b), Cheng proposes that after the verb moves from V to *v*, the lower copy of it is fused with *–de* morphologically, and then, the object *ma* 'horse' is moved to Spec-VP. Along the line of VP analysis, Gouguet (2006) proposes that verb-copying sentences are derived by head-adjoining V to *v*, and then the lower VP moves as a constituent to merge with *v*P. Taking a different type of VP analysis and showing a nice investigation into Classic Chinese, Fang and Sells (2007) claims that the seeming verb-copying sentences, in fact, involve coordination of VPs and that the first VP subsumes its following VPs semantically.

Although these VP analyses account for the issue of fixed ordering of VP1 and V2, such analyses also face some problems. Li (2006) analyzes *ba* as a less-lexical category heading a projection that dominates VP/*v*P (i.e., *ba* has a status similar to *v* or heads a projection higher than *v*P). Gouguet's (2006) and Cheng's (2007) analyses thus obviate the co-occurrence of the *ba*-phrase and VP1, since the verb is argued to undergo V-to-*v* movement in their analyses. Conversely, as shown in (22), VP1 can co-occur with the *ba*-phrase.

(22) ta   (*ba ma) [$_{VP1}$xunlian$_1$ ma] (ba ma)   xunlian$_2$.de   (*ba ma)   hen hao
      he BA horse   train   horse BA horse   train.RESULT   BA horse very well
      'He trains horses very well.'

If we adopt Li's (2006) proposal that *ba* dominates *v*P and thus a V-to-*v* movement is allowed, example (22) is still problematic for VP analyses, because it is not clear why VP1 never follows *ba*-phrases. Moreover, if VP1 and its following VP form a bigger VP and if *ba*-phrases indicate the left-periphery of VP, the distribution of *ba*-phrase shown in (22) turns to be mysterious. Example (22) shows that the *ba*-phrase occurs between VP1 and V2, but it cannot precede VP1 or follow V2. This suggests that the VP1 *xunlian ma* 'train horse' in (22) is at a position outside of the predicate-VP.

Also, as in (23a), VP1 is a constituent independent of the predicate-VP: the distribution of VP1 is similar to that of temporal or locatives expressions (e.g (23b)).

(23) a. ([$_{VP1}$kan shu]) ta ([$_{VP1}$kan shu]) keyi ([$_{VP1}$kan shu]) kan$_2$ haojige.xiaoshi
          readbook he   readbook can   readbook read   many.hour
        'he can read books for many hours.'

   b. (jintian/zai.zheli)   wo (jintian/zai.zheli) keyi (jintian/zai.zheli) kan shu
        today/at home   I   today/at home   can   today/at home   read book
      'Today/At home, I can read books.'

Put aside the motivation for the V-to-*v* movement that is unclear in Gouguet (2006) and Cheng (2007), if we consider the distribution of VP1 in (23a), it is not clear why VP1 can occur before a modal (e.g. *keyi* 'can' in (23)) and even at the sentence initial position.

Under VP-analyses, moreover, it is not clear why the "duplicated" V2 can carry aspect markers but the "original" VP1 never does. In (24), when V1 takes aspect markers (i.e. (24b) and (24c)), sentences are ungrammatical.

(24) 'He read books for three hours.'
    a. ta kan_1 shu kan_2.le   san.ge.xiaoshi
       he   read   book read.PERF   3.CL.hour

    b.*ta kan_1.le   shu kan_2 san.ge.xiaoshi
       he read.PERF   book read   3.CL.hour

    c.*ta kan_1.le   shu kan_2.le   san.ge.xiaoshi
       he read.PERF   book read.PERF 3.CL.hour

Examples (22) to (24) show problems shared by the foregoing VP analyses. In addition, there are other problems with respect to Fang et al.'s (2007) proposal. In general, conjuncts are allowed to switch order in a sentence (e.g. (25)). Given Fang et al.'s (2007) VP-coordination analysis, one would expect the order of VPs to be free, contra the truth (cf. (26)).

(25) a. ta   [kan.shu]   ye   [mai.shu]
     he   read.book and:also buy.book
     'He reads books and also buys books.'

    b. ta   [mai.shu]   ye   [kan.shu]
     he   buy.book   and:also   read.book
     'He buys books and also reads books.'

(26) 'He read books for three hours.'
    a. ta   [kan_1 shu]   [kan_2.le   san.ge.xiaoshi]
      he   read book   read.PERF   3.CL.hour

    b. *ta   [kan_2.le   san.ge.xiaoshi]   [kan_1 shu]
      he   read.PERF   3.CL.hour   read   book

Furthermore, according to Ross's (1967) Coordination Structure Constraint, movement within a coordination structure is restricted, e.g. a conjunct is not permitted to be moved out (27). Sentences like (28b) that seem to involve an extraction of a conjunct would be ruled out by Fang et al.'s (2007) analysis, contrary to the fact.

(27) 'He bought books and also bought pens'
    a. ta [mai.shu] ye   [mai.bi]
      he buy.book and.also   buy.pen

b.*[mai.shu]$_i$, ta   t$_i$ ye   [mai.bi]
  buy.book   he   and.also buy.pen.

(28) 'He has read books for three hours.'
  a. ta [kan.shu]   [kan.le   san.ge.xiaoshi]
    he see.book   see.PERF   3.CL.hour

  b. [kan.shu],   ta   [kan.le   san.ge.xiaoshi]
    see.book   he   see.PERF 3.CL.hour

The contrast between (27b) and (28b) is not expected under an analysis of VP-coordination. Therefore, I relinquish VP-analyses and turn to the approach of functional projections. I argue that the so-called verb-copying sentence in Chinese is better accounted for under the present analysis. I propose that the VP1 at issue is base-generated at TopP or FocP in the sentence-internal domain, where it gets the corresponding interpretation. By this analysis, I will show that problems with VP analyses are dealt with straightforwardly, such as distributions of *ba*-phrases (22) and modals (23), the restriction on aspect markers (24) and the fixed ordering (26). The realization of the sentence-internal VP in each functional projection is discussed as follows.

In structure (29), VP1 is a base-generated Topic in the sentence-internal domain, while VP2 is the predicate of the sentence.

(29)   VP1 as Sentence-internal Topic
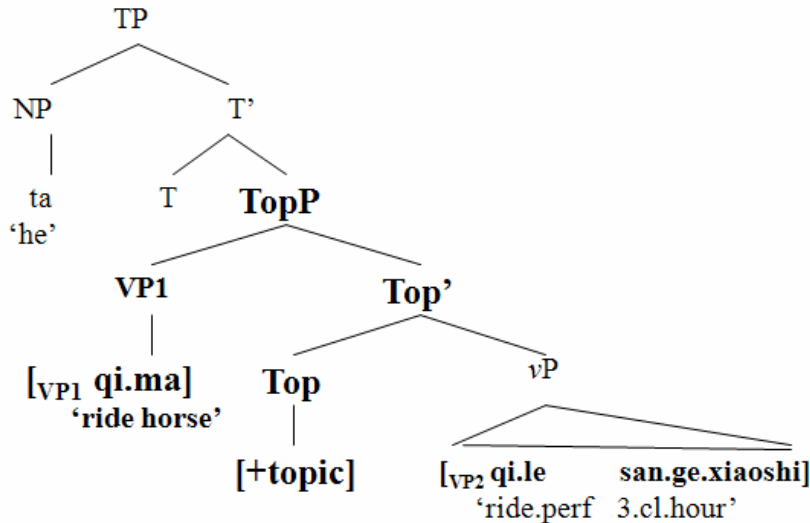
The discourse in (30) shows that VP1 *xue zhongwen* 'learn Chinese' in (30b) is optional in answering (30a), because it is already mentioned in the question, i.e., Topic.

(30) a. ni [_{VP1}xue zhongwen]   xue₂.le   wu nian   ma?
       you   learn Chinese   learn.PERF   five.year   Q.PART
     'Did you learn Chinese for 5 years?'

   b. dui, wu ([_{VP1}xue zhongwen])   xue₂.le   wu nian
      yes, I   learn Chinese   learn.PERF   5.year
   'Yes, I spent five years learning Chinese.'

Another piece of evidence comes from *lian*-phrases. *Lian*-phrases are analyzed as Focus phrases with the marker *lian*- 'even' in Chinese (see Shyu 1995 and Paul 2002, 2005). We find that when a *lian*-phrase occurs in the sentence-internal domain, VP1 is most naturally interpreted as Topic and VP1 must precede the *lian*-phrase.

(31) ta (*lian   minima) [_{VP1} qi   ma]   lian minima   dou   qi₂   bu hao
     he   even mini.horse   ride horse even mini.horse   all   ride not.well
     'As for riding, he can't even ride a mini horse.'

Therefore, I argue that VP1 can be licensed as Topic in the sentence-internal domain. Given the proposed structure, it follows that such Top-VP1 cannot take aspect markers (e.g. (24)) and that it has a seemingly freer distribution, because Chinese also allows Topic in the CP domain (e.g. (23)). Moreover, it comes as a natural result that *ba*-phrases cannot precede Top-VP1 (e.g. (22)). The present analysis also predicts that VP1 has to precede VP2, since Top-VP1 is higher than the predicate-VP. Examples that are problematic to VP analyses are explained.

Given the proposed two-projection analysis, another possible location for VP1 is the Spec-Foc. The corresponding structure is shown in (32).

(32) VP1 as Sentence-internal Focus
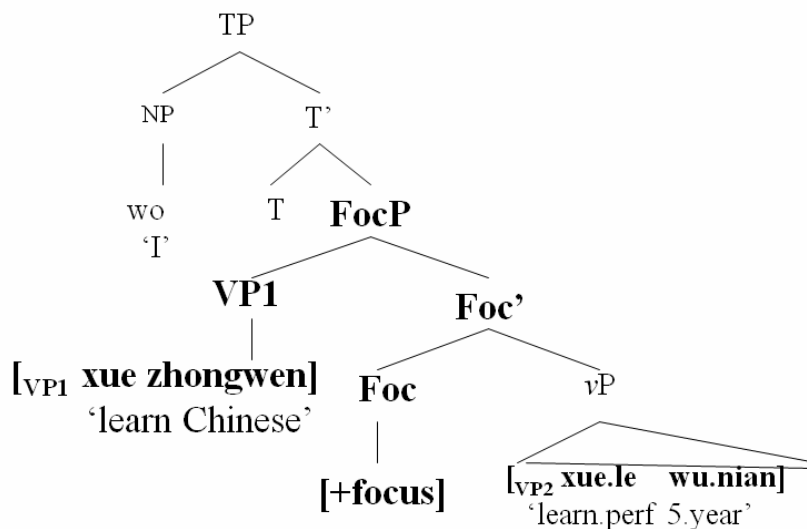
The Focus status of VP1 can be shown by answers to *wh*-questions. We see that VP1 *xue zhongwen* 'learn Chinese' in (33b) is used to answer the question (33a), which suggests that VP1 is Focus.

(33) a. ni   shemo   xue.le   wu.nian?
     you   what   learn.PERF   5.year
   'What have you learned for five years?'

   b. wo [$_{VP1}$ xue   zhongwen] [$_{VP2}$xue.le   wu.nian]
     I   learn   Chinese   learn.PERF 5.year
   'I have learned Chinese for five years.'

Given the status of VP1 and the proposed structure (32), it comes as a nature result that *ba*-phrases cannot precede it (e.g. (22)), that such Foc-VP1 and the one in the CP domain show a distribution different from a constituent within the predicate (e.g. (23)), and that such Foc-VP1 can cannot take aspect markers (e.g. (24)).

      The preceding discussion shows that the sentence-internal domain can license base-generated VPs as Topic or Focus. Based on the proposed structure (as in (11)), one may expect the co-occurrence of internal Topic and internal Focus to be allowed. This inference is borne out. The discourse (34) shows that two VPs occurr before the predicate and after the subject of the sentence in (34b), where the former VP *zuo yundong* 'do exercise' receives the Topic interpretation, and the latter VP *da wangqui* 'play tennis', the Focus.

(34) a. ta   [zuo yundong] na.yi.zhong   keyi henjiu?
     he   do exercise   which.one.kind   can   very.long-time
     'When doing exercise, which kind (of exercise) he can do for a long time?'

   b. ta   [$_{Top-VP}$ zuo yundong] [$_{Foc-VP}$ da   wangqui] keyi [$_{vP}$ [$_{VP}$ da   haoji.xiaoshi]]
     he   do exercise   play   tennis   can   play many.hour
    'Speaking of doing exercise, it is playing tennis that he can play for a long time.'

It is thereby confirmed that Topic and Focus can both be licensed in the sentence-internal domain in Chinese and that the so-called verb-copying sentences in fact involves base-generated VPs as Topic/Focus.[11]

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[11] Given VPs base-generated in the sentence-internal domain to serve as Topic/Focus, I suppose that such constituents have to comply with the argument structure of verbs. It is shown that with respect to VP1, a intransitive verb like *ku* 'cry', still, doesn't allow extra complement (ia), whereas a ditransitive verb like *song* 'give' can take both direct and indirect objects (ib).

(i)   a. *ta   [$_{VP1}$ ku.yanjing]   [ku.de   yanjing.tong]
     she   cry.eye   cry.RESULT   eye.hurt
     'She cried and pained her eyes. '

Following this line of analysis, there are examples which further support the proposed analysis. The relative order of sentential adverbs (e.g. *xianran* 'obviously' (35)) suggests that VP1 is licensed at the INFL domain, higher than *v*P. The distribution of modals (e.g. *yinggai* 'should' in (36)) demonstrates the same point.

(35) ta (xianran)   qi.ma   (xianran)   qi.de   (*xianran)   hen.lei
    he   obviously ride.horse obviously   ride.RESULT obviously   very.tired
    'Obviously, he got very tired because of riding.'

(36) ta (yinggai)   kan.shu (yinggai) kan.le   (*yinggai)   shi.ge.xiaoshi
    he   should see.book   should   see.PERF   should   ten.CL.hour
    'He should have read book for 10 hours.'

Sentences like (35) and (36) discourage proposals involve *v*P (or VP) but support the present analysis about functional projections in the INFL domain. In addition, sentences with emphatic *shi* show the distinction between Top-VP and Foc-VP in the sentence-internal domain. As in (37a), when VP1 *xue zhongwen* 'learn Chinese' is the Focus of the sentence, it is compatible with emphatic *shi*. However, in (37b), the same VP1 with a Topic interpretation is not compatible with emphatic *shi*.

(37) a. Focus
    wo shi xue.zhongwen   xue.le   wu nian (, bu shi xue.hanyu)
    I   SHI learn Chinese   learn.PERF   5.year   not be learn.Korean
    'It is learning Chinese that I spent five years (not learning Korean).'

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    b.   ta   [VP1 song   Zhangsan zhe.ge.liwu]   [song.de   hen.hao]
      he   give Zhangsan this.CL.present   give.RESULT   very.good
    'As for giving Zhangsan this present, he did it very well.'
Furthermore, I find it is not impossible to license an intransitive verb in the sentence-internal domain. As in (iia), when there are a sentential adverb and a modal, the sentence is good, but (iib) without intervening elements yields an ungrammatical sentence.
(ii) a. ta   [VP1 ku]   dagai   keyi [ku   haoji.xiaoshi]
    she   cry   probably   can   cry   many.hour
    'As for crying, she probably can cry many hours. '
    b.*ta   [VP1 ku]   [ku.de   yanjing.tong]
    she   cry   cry.RESULT   eye.hurt
    'She cried and pained her eyes. '
I suggest that the contrast in (ii) may due to a PF constraint (e.g. Obligatory Contour Principle) that prohibits phonologically identical elements from being adjacent.

b. Topic
    *wo   shi   xue zhongwen   xue.le   wu nian (, bu shi si.nian)
     I   SHI   learn Chinese   learn.PERF   5.year   not be 4.year
    'As for learning Chinese, it is five years that I spent learning it (not 4 years).'

Such difference is clearer with co-occurring VPs. Example (38) shows that VP licensed as Topic (i.e., *zuo.yundong* 'do.exercise'), is not compatible with emphatic *shi* and that the following VP licensed as Focus (i.e., *da.wangqui* 'play tennis') is fine with the emphatic *shi*.

(38) 'Speaking of doing exercise, it is playing tennis that he can play for a long time.'
    ta (*shi) [$_{Top-VP}$ zuo yundong] (shi) [$_{Foc-VP}$ da wangqui]   keyi
    he SHI   do exercise SHI   play tennis   can
    [$_{vP}$ [$_{VP}$ da   haoji.xiaoshi]]
        play many hour

Thus, it is concluded that such VPs in the sentence-internal domain should be analyzed as being in the projection of TopP or FocP, rather than as part of the predicate VP.

5. Concluding Remarks

The current study supports claims in Belletti (2004) and Paul (2005), but contrary to Lambova's (2004) analysis of single projection. Given that Chinese is an SVO language, it has been a point of dispute whether an object pre-posed to the position between the subject and the predicate is Topic (e.g., Tsao 1990 and Paul 2002) or Focus (e.g., Tsai 1994 and Shyu 1995). Through the careful examination of this and other constructions, this paper argued that the "split-CP" approach *à la* Rizzi (1997) can and should be extended to the sentence-internal domain in Chinese, enabling Topic and/or Focus to appear. I argued that both Topic and Focus are available to NPs in the sentence-internal domain when proper contexts are provided. This analysis accounts for the information structure carried by the sentence-internal elements, their co-occurrence and their ordering restriction. All these facts can be captured by postulating Topic and Focus projections in this hierarchical order sentence-internally (,on a par with the CP domain).

The discussion then showed how the proposed analysis applies to the so-called verb-copying sentences in Chinese. I argued that the construction at issue is not purely for PF reason. By this joint approach of syntax and the information structure, issues related to the so-called verb-copying sentences, such as fixed ordering and aspect-marker taking, were properly accounted for, and problems with previous analyses were solved. Finally, the result of this paper showed that the pre-posed object construction and the so-called verb-copying sentences can be tackled by a unified account.

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