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doi:10.6519/TJL.2010.8(1).4

Taiwan Journal of Linguistics, 8(1), 2010

臺灣語言學期刊, 8(1), 2010

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頁數/Page: 95-128

出版日期/Publication Date: 2010/06

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**TRANSITIVITY AND THE BA CONSTRUCTION\***

Pei-Jung Kuo

**ABSTRACT**

In this paper, I discuss the legitimacy of positing a Transitivity Projection (= TrP cf. Bowers 1993, 1997, 2001 and 2002) in the BA construction in Mandarin Chinese. BA has been proposed to be a semantically-bleached verb, inserted in the *v* position (Huang 1997 and Lin 2001). Several pieces of evidence such as manner adverbial placement (cf. Huang, Li and Li 2009) and GEI-insertion (cf. Tang 2001) indicate that there must be a functional projection between the *v*P and VP to host the BA NP. I propose that a TrP is probably the most apt candidate for the XP. I also argue, in contrast to the proposal by Huang, Li and Li (2009), that the present proposal which employs a TrP captures most of the properties of the BA construction. A comparison with the structure of the BEI construction also shows that the TrP proposal fits into the general picture of current linguistic theory on transitive constructions without extra stipulations.

Key words: Transitivity Projection, the BA Construction, the BEI Construction

**1. INTRODUCTION**

The BA construction, being a complicated syntactic issue, has received much attention in the discussions of Chinese syntax. The discussions include the categorical status of BA (cf. Hashimoto 1971, Chao 1968, Lü 1980, Travis 1984, Cheng 1986, Li 1985, 1990, Huang

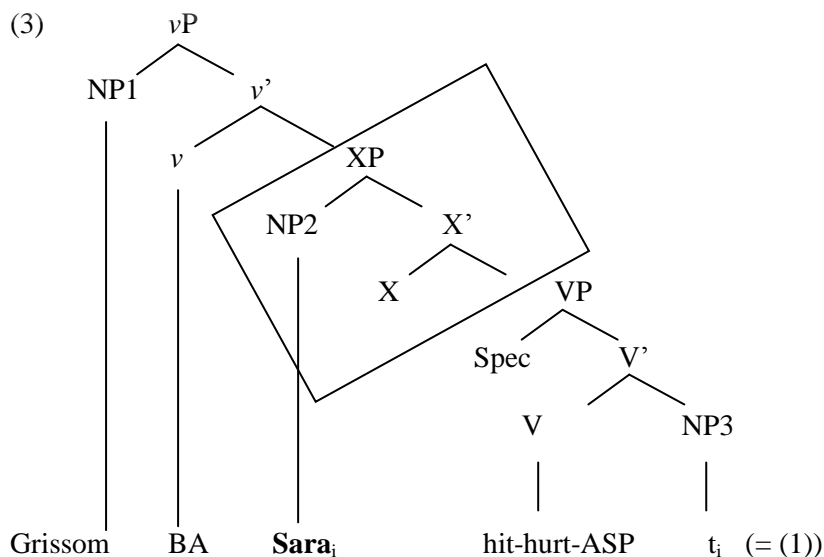
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\* This paper is part of my research project sponsored by the National Science Council, Taiwan (Grant No. NSC 99-2410-H415-027). I hereby acknowledge the financial support of the NSC. The author would also like to thank the two anonymous reviewers for their comments and suggestions on the previous version of this paper. Their observations have prompted me to pay deeper attention to the issue whether the BA construction employs a TrP in the structure. All errors remain mine.

1982, Koopman 1984, Goodall 1987, Sybesma 1999, and Zou 1995), the semantic/pragmatic properties of the BA NP (cf. Wang 1954, Wang 1957, Chao 1968, Hashimoto 1971, Thompson 1973, Li 1974, Li and Thompson 1981, Tsao 1986, Tsee 1990, Wang 1987, Li 1995, Li 2006 and Huang, Li and Li 2009), the structure of the BA sentence (cf. Zou 1995, Sybesma 1990, Li 2006, and Huang, Li and Li 2009), and so on. In this paper, I focus on the discussion of the syntactic structure of the BA construction.

My major interest is in regard to the question of where the BA NP is located. I will first argue that the BA NP cannot be located at Spec, VP. Instead, the BA NP has to be located in the specifier of a functional projection higher than VP. Hence, a typical BA construction has the structure as in (3). Here I follow previous proposals in that a typical BA construction like (1) involves the movement of *Sara* from its counterpart example (2) (cf. Goodall 1987, Sybesma 1999, Li 2006 among many others). Also following Huang (1997) and Lin (2001), I assume that BA is inserted as the *v* head in the structure to fulfill the requirement that the *v* head must be overtly realized in Chinese.

- (1) Geruisen ba Sala da-shang-le.  
Grissom BA Sara hit-hurt-ASP  
'Grissom hurt Sara.'
- (2) Geruisen da-shang-le Sala.  
Grissom hit-hurt-ASP Sara



In what follows, I will first argue for the necessity of an XP in the BA construction in Section 2. Two pieces of evidence from the literature will be presented: the manner adverbial replacement of Huang, Li and Li (2009), and the GEI-insertion of Tang (2001). I also argue that the interaction of the above two syntactic phenomena points to the direction of an XP hosting the BA NP above VP. In Section 3, I propose that the best candidate for XP is a Transitivity Projection as proposed by Bowers (2002). The TrP proposal may capture most of the object-related properties in the BA construction. In Section 4, I compare the present proposal for the BA construction to the one proposed by Huang, Li and Li (2009). I argue that the present proposal has an advantage in explaining the behaviors of the BA construction in relation to subject location and the GEI-insertion. In Section 5, I show that the TrP proposal can be carried over to the BEI construction, explaining the similarities/differences between the BA and BEI construction. I conclude the paper in the last section.

## 2. THE NECESSITY OF AN XP

In this section I discuss the syntactic position of the BA NP in the BA construction. Recall that postulating an XP above VP gives us the structure in (4), following a movement approach.

- (4) Geruisen ba [<sub>XP</sub> Sala<sub>i</sub> X [<sub>VP</sub> da-shang-le t<sub>i</sub> ]].  
 Grissom BA Sara hit-hurt-ASP  
 ‘Grissom hurt Sara.’

Several of the recent analyses of the BA construction indicate that the BA NP must be located higher than VP, such as in Tang (2001), Li (2006), Huang, Li and Li (2009). Here I present two pieces of evidence to support this initial proposal. First, it is well-known that there are two possible positions in which to place a manner adverbial in the BA sentence (cf. Huang, Li and Li 2009): one is right before the BA, the other one is right before the verb, as shown in (5a) and (5b), respectively.

- (5) a. Geruisen henhen-de ba Sala da-shang-le.  
 Grissom cruelly BA Sara hit-hurt-ASP  
 ‘Grissom hurt Sara cruelly.’  
 b. Geruisen ba Sala henhen-de da-shang-le.  
 Grissom BA Sara cruelly hit-hurt-ASP

In Example (5a), the manner adverbial is assumed to adjoin to *vP* or *v'* (cf. Chiu 1993 and Tang 1990). As for Example (5b), if one follows the general assumption that manner adverbials adjoin to VP or V' (cf. Pollock 1989), the BA NP then has to be located somewhere higher than the VP domain.

Second, it has been noted in the literature (cf. Xu 1994, Tang 2001, and Shi 2004, etc.) that a head-like element *gei* (‘GEI’) can be optionally inserted into the BA construction. As Li and Thompson (1981) and Shi (2004) observe, the adding of GEI imposes an emphatic stress on the VP. However, it does not change the essential meaning of (6).

- (6) Geruisen ba Sala (gei) da-shang-le.  
 Grissom BA Sara (GEI) hit-hurt-ASP  
 ‘Grissom hurt Sara.’

Tang (2001) has proposed that *gei* ('give') can function as a marker of Affectedness in Chinese. And this Affectedness marker is a head located in a functional projection XP right above VP. Converting Tang's proposal into the current analysis, we can assume that the head of the XP can be overtly realized as *gei* ('give'), as shown in (7).

(7) [IP Grissom [vP ba [XP Sara<sub>i</sub> (gei) [vP hurt t<sub>i</sub> ]]]

Since the BA NP *Sara* has to be higher than GEI, this again indicates that the BA NP is not inside the VP domain.

One may argue that the above two lines of argument are not strong enough to show that the BA NP has to be higher than VP. For example, one may argue that in example (5b), the manner adverbial may adjoin to V' as in (8). And the optional head-like element GEI in (6) may be considered as a member of the verbal complex as in (9). With these two assumptions, the BA NP does not necessarily have to be placed outside VP.

(8) [IP Grissom [vP ba [vP Sara<sub>i</sub> [v' cruelly [v' hurt t<sub>i</sub> ]]]]]

(9) [IP Grissom [vP ba [vP Sara<sub>i</sub> [v' (gei) hurt t<sub>i</sub> ]]]]

However, I argue that the structures in (8) and (9) cannot explain the following examples in (10). If we try to place the manner and the optional GEI together in the BA construction, the orders GEI-ADV and ADV-GEI are both allowed.

- (10) a. Geruisen ba Sala gei henhen-de da-shang-le.  
 Grissom BA Sara GEI cruelly hit-hurt-ASP  
 'Grissom hurt Sara cruelly'  
 b. Geruisen ba Sala henhen-de gei da-shang-le.  
 Grissom BA Sara cruelly GEI hit-hurt-ASP

The structures in (8) and (9) together predict that the manner adverbial has to precede the optional GEI, which is confirmed by the grammatical example as shown in (10b). However, the other grammatical sentence (10a) is not predicted. The manner adverbial cannot simply be inserted into the complex head with GEI in it under any syntactic analysis.

On the other hand, if the BA NP is placed at Spec, XP as the structure in (4), the examples in (10) can be explained easily. The optional GEI is in an independent head position X higher than VP, hence, there is no problem for the manner adverbial to intervene between GEI and the verb. The structure of the grammatical Example (10a) is shown as in (11).

- (11) Geruisen ba [<sub>XP</sub> Sala<sub>i</sub> gei [<sub>VP</sub> henhen-de  
 Grissom BA Sara GEI cruelly  
 [<sub>VP</sub> da-le t<sub>i</sub> yi-duan]].  
 hit-ASP once  
 ‘Grissom hurt Sara cruelly.’

As for the other grammatical example (10b), we may assume that the manner adverbial can also adjoin to X’, as to the v’ or V’ in vP or VP.<sup>1</sup>

Furthermore, placing the BA NP at Spec, XP higher than VP also has a theoretical advantage. Saito and Murasugi (1993), Bošković (1994), Abels (2003) and Lee (2005) have argued that in addition to the restrictions on the maximal distance of movement, there are restrictions on the minimal distance of movement as well. In other words, movement

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<sup>1</sup> Note that judgments of the order between GEI and the adverbial seem to vary greatly when there is a complement in the BA construction. For example, my consultants and I have the following judgments for (i) and (ii). As pointed out by one of the reviewers, Example (ib) is only slightly deviant to him/her, and Example (iia) should be rejected. And, as one can see, these judgments do not give us a coherent grammatical order between GEI and the adverbial.

- (i) a. Geruisen ba Sala gei henhen-de da-le yi-duan.  
 Grissom BA Sara GEI cruelly hit-ASP once  
 ‘Grissom hurt Sara cruelly’ (GEI-ADV)  
 b. ?\*Geruisen ba Sala henhen-de gei da-le yi-duan.  
 Grissom BA Sara cruelly GEI hit-ASP once (ADV-GEI)
- (ii) a. ?Zhangsan ba nazhang zhi gei yong jiandao jian cheng liang pian.  
 Zhangsan BA that-CL paper GEI use scissor cut into two piece  
 ‘Zhangsan cut that paper into two pieces with a scissor.’ (GEI- PP ADV)  
 b. Zhangsan ba nazhang zhi yong jiandao gei jian cheng liang pian.  
 Zhangsan BA that-CL paper use scissors GEI cut into two piece  
 (PP ADV-GEI)

There may be other intervening factors to influence the judgment of the order between GEI and the adverbial when there is a complement. Since this may be attributed to the semantic complexity of the BA construction, I leave this problem for further research.

cannot be too far (locality, such in as Phase Theory), but it cannot be too local (anti-locality) either. The gist of their proposals can be summarized in (12), whereby an XP is prevented from moving from the complement position to the specifier position of the same phrase.

(12) Anti-locality constraint:  $*[_{XP} YP_i X t_i ]$  (Abels 2003: 12)



If the BA NP is at Spec, VP, this movement violates the anti-locality constraint. On the other hand, the movement from the complement position of V to the specifier position of the XP does not cause an anti-locality violation under the definition of (12).<sup>2</sup>

### 3. THE XP = TRP

In this section, I discuss the nature of the XP. My goal is to seek for a functional projection which not only hosts the BA NP, but also captures the relevant properties of the BA construction. I propose that the best candidate for XP is the Transitivity Projection proposed by Bowers (1993), (1997), (2001) and (2002).

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<sup>2</sup> There are different versions of anti-locality proposals. For example, Grohmann (2003) proposes that an element can only move to the next higher Prolific domain  $\alpha$ , where  $\alpha$  ranges over thematic ( $\nu$ P), inflectional (IP) and discourse-related (CP) domains. As one of the reviewers of this paper pointed out, movement from the complement of V to Spec, XP violates the anti-locality of Grohmann (2003). Following this logic, Grohmann's anti-locality version also predicts that the movement approach proposed so far in the literature for the BA construction has to be banned. To the best of my knowledge, the placement of BA and a moved BA NP is never out of the domain of  $\nu$ P. If Grohmann's proposal is on the right track, this conclusion renders the previous proposals of the BA construction invalid. However, it has been noted that Grohmann (2003)'s version of anti-locality may be too strong in a sense. For example, Lee (2005) points out that under Grohmann's (2003) proposal, McGinnis (2001)'s account for symmetric passive languages has to be banned, too. This is because movement from the complement position of V to the multiple specifier position of high ApplP (located between VP and  $\nu$ P) is predicted to be impossible. On the other hand, if the anti-locality version of Abels (2003) is adopted, the problem noted above can be solved. Since the correct version of anti-locality is still under debate at this time, here I simply point out the differences and predictions between Grohmann (2003) and Abels (2003) and leave this issue for further clarification.



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To figure out what the XP is, we need to discuss the nature of the BA NP first. The most salient syntactic property of the BA NP is probably that it is always almost object-related (Tsao 1986 and Li 2006). First of all, the BA NP can be the direct object of the verb. Hence, in an example like (1), repeated here as (13), the BA NP *Sara* is the person being hit and hurt.

- (13) Geruisen ba Sala da-shang-le. (=1)  
Grissom BA Sara hit-hurt-ASP  
'Grissom hurt Sara.'

In addition to the direct object of the verb, the BA NP also allows another possibility: the V'-object (Huang 1982, 1987, 1988, 2007, 2008) or Outer Object (Thompson 1973), as illustrated in (14a) and (15a), respectively.<sup>3</sup> As shown in (14b) and (15b), the locative BA NP and the relational BA NP are introduced by a PP in the non-BA counterparts. That explains why Tsao (1986) has proposed that locative and relational BA NPs are non-argument NPs of the verb in the BA construction. However, the locative or relational BA NP can still be interpreted as an "object" since it can be logically affected by the whole predicate, which gives it the name of V'-object or Outer Object. Hence, in Example (14a), the logical object is the fireplace since it is the location where the event of starting the fire happens. As for (15a), the logical object is "that matter" since it is what the report tries to describe.

- (14) Locative BA NP  
a. Geruisen ba bilu sheng-le huo.  
Grissom BA fireplace start-ASP fire  
'Grissom started the fire in the fireplace.'  
b. Geruisen zai bilu li sheng-le huo.  
Grissom in fireplace in start-ASP fire

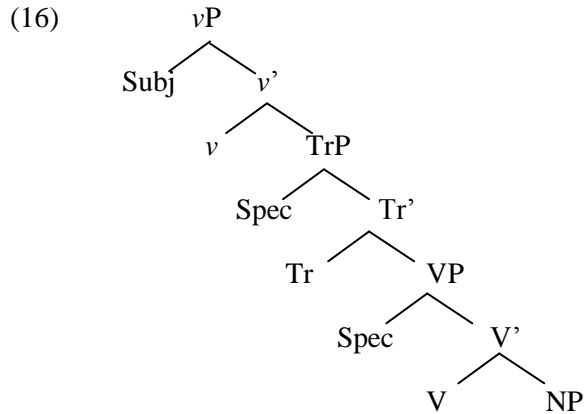
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<sup>3</sup> Here the term of V'-object/Outer Object is employed according to a narrower definition. Originally the definition of V'-object/Outer Object by Thompson and Huang includes the cases of inalienable nominal as discussed below. But in this paper I adopt Tsao (1986)'s categorization and separate the two. The V'-object/Outer Object only refers to cases where the BA NP is not an argument of the verb, and inalienable nominal refers to case where the BA NP (semantically) can be viewed as an argument of the verb.

(15) Relational BA NP

- a. Geruisen ba na-jian shi xie-le yi-fen baogao.  
 Grissom BA that-CL matter write-ASP one-CL report  
 ‘Grissom wrote a report about that matter.’
- b. Guanyu na-jian shi, Geruisen xie-le yi-fen baogao.  
 about that-CL matter Grissom write-ASP one-CL report

Intuitively, the object-related properties of the BA NP in the BA construction remind us of the proposal of the employment of Transitivity Projection [TrP]. Adopting the split-VP hypothesis, Bowers (2002) proposes that in addition to the general *v*P and VP projections, for transitive verbs, their *v*P also selects an extra and optional TrP. Under this proposal, the traditional functions of the light verb *v* have been split into two: the new *v* head assigns the Agent theta-role but specifies no accusative Case, and the Tr head assigns no theta-role but specifies the accusative Case. The TrP is associated with of transitivity and the specification of the accusative Case, and hence it is not available in intransitive or unaccusative cases. The relevant structure for a transitive construction is shown in (16).



Bowers (2002) proposes that Tr may contain phi-features and specifies accusative Case via Agree. It may also contain an EPP-feature, which attracts an accusative Case-specified NP to Spec, TrP. One of the predictions made by this proposal is of Short Object Movement [SOM]. That is, an accusative Case-specified object may move from the

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complement position of V to the specifier position of the TrP, satisfying the EPP feature. One piece of supporting evidence is from the V-modifying adverbs in English discussed in Bowers (1993) and (2001). Although these V-modifying adverbs are assumed to be VP-adjoined, they can only emerge after the object, as shown in (17).

- (17) John (\*perfectly) rolled (\*perfectly) the ball (perfectly) (down the hill).

(Bowers 2002: (7a))

Assuming that the  $v$  and Tr both have strong features in English, the verb has to undergo successive cyclic movement to the  $v$  head position. The uninterpretable phi-features of Tr agree with the interpretable phi-features of the object NP, and the accusative Case of the object NP will be specified as a reflex under phi-feature agreement (Chomsky 2000). The Case-specified object NP then moves to Spec, TrP to satisfy its EPP feature.

- (18) [TP T [<sub>VP</sub> John  $v$  [TrP Tr [<sub>VP</sub> perfectly [<sub>VP</sub> [<sub>V'</sub> roll] [the ball]]]]]]
- 

In the above discussion, the SOM is reminiscent of the movement of the BA NP in the BA construction. Assuming that TrP is generally available in a typical transitive construction universally, the structure for a typical SVO order sentence like the one in (19a) is the same as the one in (19b). The verb undergoes V-to- $v$  raising, as proposed in Huang (1993), Tang (1998), Sybesma (1999), and Huang, Li and Li (2009). And the object NP moves to Spec, TrP to satisfy the EPP feature, after the agreement of the phi-features and specification of the accusative Case.

- (19) a. Geruisen da-shang-le Sala.  
 Grissom hit-hurt-ASP Sara  
 'Grissom hurt Sara.'  
 b. [<sub>VP</sub> Grissom hit-hurt-ASP<sub>i</sub> [TrP Sara<sub>j</sub> t<sub>i</sub> [<sub>VP</sub> t<sub>i</sub> t<sub>j</sub> ]]]

If there is no verb raising, we may insert BA instead, following the assumption that the  $\nu$  head must be overtly realized in Chinese (Huang, Li and Li 2009). BA has been argued to be a dummy verb, since it is neither a true verb nor a preposition (Huang 1997 and Lin 2001). To place BA in the  $\nu$  head position should be licit. The EPP feature of Tr then attracts the closest object NP to Spec, TrP, forming a BA construction.

- (20) a. Geruisen ba Sala da-shang-le.  
 Grissom BA Sara hit-hurt-ASP  
 ‘Grissom hurt Sara.’  
 b. [<sub>VP</sub> Grissom BA [<sub>TrP</sub> Sara<sub>j</sub> Tr [<sub>VP</sub> hit-hurt-ASP t<sub>j</sub> ]]]

Huang, Li and Li (2009) have argued that BA does not assign any theta-role (external or internal) but does assign Case to the BA NP in the BA construction. In Structure (20b), the no-theta-role assigning property of BA can be maintained. The subject *Grissom* obtains the Agent theta-role from the  $\nu$  head, not from the BA. Note that under the current proposal, the BA is simply inserted to fulfill the requirement that the  $\nu$  must be overtly realized in Chinese. The small  $\nu$  head still functions as it does in a typical transitive sentence.

Huang, Li and Li (2009) propose that BA can assign accusative Case, which is a conclusion drawn from the observation that BA must be followed by an NP without any intervention (the Adjacency Condition, cf. Stowell 1981 and Li 1985, 1990).<sup>4</sup> Recall that in Bowers’ structure, the  $\nu$  head is not responsible for Case assigning/specification. Hence, to capture the collocation requirement of BA and the BA NP, I propose that BA comes with a subcategorization requirement. The idea that BA needs an NP is not implausible. It is well known that when BA was used as a transitive verb in ancient Chinese, it had the meaning “take, hold or handle” (cf. Wang 1954, Wang 1957, and Bennett 1981), and consequently, it had to take an NP object. However, many researchers have pointed out that BA in modern Mandarin shows evidence of having been semantically bleached over time (cf. Sun 1996). Because of the process of grammaticalization, we may assume that BA has semantically

<sup>4</sup> This is not a necessary inference under the framework of the Minimalist Program. . The ability of the verb to assign the accusative Case is replaced by the AgroP/ $\nu$ P or considered as a reflex of phi-feature agreement. Under this kind of analysis, there is no guarantee that the verb has to be next to its object because of Case.

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become a dummy verb but syntactically still needs an NP. Following this inference, it is not surprising that Huang (1997) and Lin (2001) have proposed placing BA under the  $\nu$  head. As a dummy verb, which only maintains its subcategorization ability, this is probably the most apt location.<sup>5</sup> A consequence of the subcategorization requirement of BA is that the element following BA can only be an NP. Although the EPP feature of Tr theoretically can be satisfied by any categorial feature (cf. Locative Inversion in Bowers 2002 and Footnote 8), the non-NP categories will be ruled out by the subcategorization requirement of BA.<sup>6</sup>

In short, the structures for a regular SVO sentence and a typical BA construction are basically the same. Being transitivity-related, the TrP is present in both constructions. The EPP feature of TrP is satisfied by the moved object (i.e., the object in a SVO sentence or the BA NP in the BA construction). The major difference lies in the requirement that the  $\nu$  head must be overtly realized satisfied by either verb raising or BA insertion. The former derives a SVO sentence, while the latter derives a BA construction.<sup>7</sup>

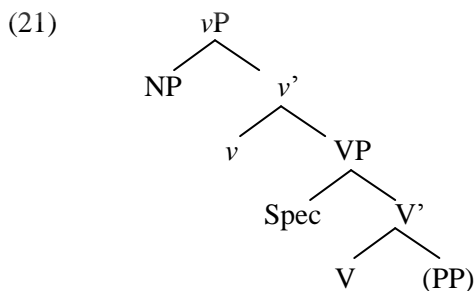
After laying out the TrP-related proposal for the BA construction, we can now examine how the present analysis may capture its relevant properties. First, it naturally explains why the BA NP is always (transitive) object-related. Recall that for intransitive and unaccusative cases, there is no TrP present in the structure, as in (21) and (22). For the intransitive case, BA may be inserted in the  $\nu$  head position in (21), but there is no potential candidate for the BA NP.

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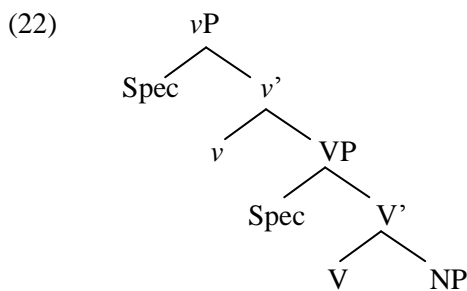
<sup>5</sup> The NP subcategorization requirement of BA also works if BA is considered a preposition (Chao 1968, Lü 1980, Travis 1984, Cheng 1986, and Li 1985, 1990).

<sup>6</sup> This subcategorization requirement also applies to the cases when the  $\nu$  head is filled by a raised transitive verb in a regular SVO sentence.

<sup>7</sup> Note that not every non-BA transitive sentence has a BA construction counterpart. I attribute this asymmetry to the semantic/pragmatic requirement for a complex predicate in the BA construction, which cannot be fully captured by the present syntactic proposal (cf. Li 2006).



As for the unaccusative case (22), the only postverbal is the Subject candidate. Even if we assume that this postverbal NP can be the BA NP when BA is inserted in the *v* head position, this derivation still has to be ruled out. I have shown that the BA NP has to be located outside the VP domain. Because of anti-locality, the movement from the V complement position to Spec, VP is not be allowed.



The current TrP proposal also explains well the syntactic behaviors of “ditransitive” verbs in the BA construction. Li and Thompson (1981) and Huang (1990) have pointed out that the BA NP cannot be an indirect object when the verb is a ditransitive verb. Hence, for a double object example like (23a), only the direct object *Sara* can become the BA NP as in (23b). The indirect object *this book* cannot be the BA NP as in (23c).

- (23) a. Geruisen song-gei-le Sala zhe-ben shu.  
 Grissom give-give-ASP Sara this-CL book  
 ‘Grissom gave Sara this book.’  
 b. Geruisen ba zhe-ben shu song-gei-le Sala.  
 Grissom BA this-CL book give-give-ASP Sara

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- c. \*Geruisen ba Sala song-gei-le zhe-ben shu.  
 Grissom BA Sara give-give-ASP this-CL book

At first sight, the syntactic patterns in (23b) and (23c) are not predicted by the current analysis. If the double object construction (23a) has the structure in (24), the BA NP should be the IO *Sara*, not *this book*. This is because the EPP feature of Tr should attract the closest NP *Sara* (Chomsky 1995).

- (24) [<sub>VP</sub> Grissom give<sub>i</sub> [<sub>TRP</sub> Sara<sub>j</sub> Tr [<sub>VP</sub> t<sub>j</sub> [<sub>V'</sub> t<sub>i</sub> [<sub>NP</sub> this book ]]]]]]

However, I argue that the contrast in (23) is indeed predicted by the current analysis. For a typical double object construction like (23a), I adopt the structure proposed by Tsai (2008). Comparing the IO/DO asymmetry of several constructions in Chinese, Tsai has argued that there is no genuine “ditransitive” verb/double object construction in Chinese. The IO in (23) is in fact appears under the disguise of a dative construction (cf. Miyagawa and Tsujioka 2004 for Japanese). Hence, Example (23a) has the structure in (25), rather than the one in (24). The IO *Sara* is introduced by a null preposition head, forming a preposition phrase. The verb raises from V to *v*, and the PP moves from Spec, VP to Spec, TrP to satisfy the EPP feature of Tr.<sup>8</sup>

- (25) [<sub>VP</sub> Grissom give<sub>i</sub> [<sub>TRP</sub> [<sub>PP</sub> ∅ [<sub>NP</sub> Sara ]]<sub>j</sub> Tr [<sub>VP</sub> t<sub>j</sub> [<sub>V'</sub> t<sub>i</sub> [<sub>NP</sub> this book ]]]]]]

Hence, for the BA counterpart in (23a), the EPP feature of Tr also needs to be satisfied. The first possible candidate will be the IO NP at Spec, VP. However, the IO cannot be the candidate for Spec, TrP. Following the contrasts in (26), we may assume that a stranded preposition is not allowed in Chinese.

- (26) a. Geruisen yong quaizi chi paomian.  
 Grissom with chopsticks eat instant-noodles  
 ‘Grissom ate instant noodles with chopsticks.’

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<sup>8</sup> The structure in (25) shows that the EPP feature of Tr can be satisfied by categories other than NP. Here a PP is allowed because the subcategorization requirement of the complex verb *song-gei* (‘give’) itself subcategorizes a PP and NP lexically.

- b. Paomian,            Geruisen yong quaizi        chi.  
    instant-noodles Grissom with chopsticks eat
- c. \*Quaizi,            Geruisen yong chi paomian.  
    chopsticks    Grissom with eat instant-noodles
- d. Yong quaizi,        Geruisen chi paomian.  
    with chopsticks Grissom eat instant-noodles

The EPP feature may attract the IO *Sara* to the position of the BA NP in Spec, TrP, but in this way the null preposition will be stranded. Hence this rules out the possibility of the IO being a BA NP in the double object construction. Attracting the whole PP is also not allowed because of the subcategorization requirement of BA. This leaves us the only option of the DO *this book* being the BA NP.

One thing to note is that Li (2006) has argued that the following “double object construction” in (27) shows that in addition to the DO as the BA NP in a regular BA construction, it is also possible to have the IO *Sara* as the BA NP as in (28a). One hence may conclude that the BA NP can be either a DO or an IO in Chinese.

- (27) Geruisen fa-le        Sala henduo qian.  
       Grissom fine-ASP Sara a-lot-of money  
       ‘Grissom fined Sara a lot of money.’

However, it is in fact impossible for the DO *a lot of money* to become the BA NP, as shown in (28b). Compared with (23), the opposite patterns in (28) cast doubt on the identification of (27) as a genuine double object construction.

- (28) a. Geruisen ba Sala fa-le        henduo qian.  
       Grissom BA Sara ask-ASP a-lot-of money  
       ‘Grissom fined Sara a lot of money.’
- b. \*Geruisen ba henduo qian    fa-le        Sala.  
       Grissom BA a-lot-of money fine-ASP Sara

Following Li and Thompson (1981) and Huang (2007, 2008), I argue that an example like (27) should be categorized as a pseudo-double object construction. The IO *Sara* can be viewed as a  $V^2$ -object or an Outer Object. Hence under the current analysis, the structure for (27)



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should be the one like in (29) (see also the discussion for (32) and (33) below).

(29) [<sub>VP</sub> fine<sub>i</sub> [<sub>TrP</sub> Sara [<sub>Tr'</sub> Tr [<sub>VP</sub> t<sub>i</sub> [<sub>NP</sub> a lot of money]]]]]

In its BA counterpart, the verb raising will be replaced by the BA insertion, as shown in (30). That the IO *Sara* becomes the BA NP is therefore a natural consequence in this structure.

(30) [<sub>VP</sub> BA [<sub>TrP</sub> Sara [<sub>Tr'</sub> Tr [<sub>VP</sub> fine [<sub>NP</sub> a lot of money]]]]]

This structure (29) also predicts that the DO cannot be the BA NP in the pseudo-double object construction.

(31) \*[[<sub>VP</sub> BA [<sub>VP</sub> [<sub>NP</sub> a lot of money]<sub>j</sub> fine<sub>i</sub> [<sub>TrP</sub> Sara [<sub>Tr'</sub> Tr [<sub>VP</sub> t<sub>i</sub> t<sub>j</sub> ]]]]]]

Assuming that the recursive *vP* is available, the DO may move to the specifier of the lower *vP*, and BA is inserted in the higher *v* head, as in (31). However, this A-movement of DO crosses the IO at Spec, TrP, which is assumed to be an A-position. Since this movement violates the Relativized Minimality (Rizzi 1990), this derivation is ruled out.

Second, Bowers (2002) proposes that in addition to the object, Transitivity allows another syntactic element to be brought into a relation with a predicate. But this is simply an additional relation, which does not always emerge in the syntactic structure. This proposal also reminds us of the V'-object or the Outer Object discussed in Section 2. Recall that the V'-object/Outer Object is considered to be the logical object related to the whole predicate, repeated here as (32a) and (33a). Hence it is predicted that their absence (with BA) will not affect the grammaticality of the sentence. This prediction is borne out in (32b) and (33b).

(32) Locative BA NP

- a. Geruisen ba bilu sheng-le huo.  
Grissom BA fireplace start-ASP fire  
'Grissom started the fire in the fireplace.'

- b. Geruisen sheng-le huo.  
 Grissom start-ASP fire  
 ‘Grissom started the fire.’

(33) Relational BA NP

- a. Geruisen ba na-jian shi xie-le yi-fen baogao.  
 Grissom BA that-CL matter write-ASP one-CL report  
 ‘Grissom wrote a report about that matter.’  
 b. Geruisen xie-le yi-fen baogao.  
 Grissom write-ASP one-CL report

Under the current proposal, the relevant structures for (32a) and (33a) are shown in (34) and (35).

(34) [<sub>VP</sub> Grissom BA [<sub>TRP</sub> fireplace Tr [<sub>VP</sub> start fire ]]]

(35) [<sub>VP</sub> Grissom BA [<sub>TRP</sub> that matter Tr [<sub>VP</sub> write a report ]]]

The head Tr agrees with the phi-features of the direct object and specifies its accusative Case. Apart from the typical BA construction, its EPP feature now is satisfied by the V'-object/Outer Object. I assume that the V'-object/Outer Object receives an affected theta-role from the whole VP (Huang, Li and Li 2009), and it comes with an inherent Case which contains interpretable Case-features.

Third, this present analysis also makes predictions about inalienable postverbal NPs. Inalienable nominals have been reported to have certain special properties (Cheng and Ritter 1988 and Yoon 1990). For example, they mostly appear in a pair that denotes a superset-subset relation, like a *whole-part* or *body-part* relation (Zhang 2009). The following pairs such as “Sara-hand” and “orange-skin” fit into this description. Moreover, as shown in (36) and (37), while the subset “hand” or “skin” can be omitted, the superset “Sara” or “orange” cannot.

- (36) a. Geruisen da-shang-le Sala.  
 Grissom hit-hurt-ASP Sara  
 ‘Grissom hurt Sara.’  
 b. ?\*Geruisen da-shang-le shou.  
 Grissom hit-hurt-ASP hand  
 ‘Grissom hurt (someone’s) hand.’

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- (37) a. Geruisen bo juzi.  
 Grissom peel orange  
 ‘Grissom peeled the orange.’  
 b. ?\*Geruisen bo pi.  
 Grissom peel skin  
 ‘Grissom peeled (something’s) skin.’

Under Tsao’s (1986) categorization, *Sara-hand* and *orange-skin* are in a body-part/part-whole relationship and are, therefore, considered arguments of the verb. Hence let us assume that the inalienable nominals are merged into the structure as a pair, as shown in (38) and (39). The superset NP is in Spec, NP, with the subset NP being the head of the whole NP.

(38) [<sub>VP</sub> BA [<sub>TrP</sub> Spec [<sub>Tr</sub> Tr [<sub>VP</sub> hurt [<sub>NP</sub> Sara [<sub>N</sub> hand ]]]]]]

(39) [<sub>VP</sub> BA [<sub>TrP</sub> Spec [<sub>Tr</sub> Tr [<sub>VP</sub> peel [<sub>NP</sub> orange [<sub>N</sub> skin ]]]]]]

Note that in (38) and (39), the head Tr specifies the accusative Case of the NP head, which means that the Case of the superset NP has to be specified in some other way or that it has to come with an inherent Case, as in the V’-object/Outer Object cases. In addition, the EPP feature of Tr head needs to be satisfied. There may be two possibilities to satisfy the above two requirements. I take the structure in (38) as an illustration. First, as shown in (40a), the superset *Sara* moves to Spec, TrP to satisfy the EPP feature, and its Case is an inherent Case. Second, if the superset NP *Sara* does not come with an inherent Case, one can insert a genitive Case marker *-de* to specify the Case of the superset NP *Sara*, as shown in (40b). Then the whole NP moves to Spec, TrP to satisfy the EPP feature. On the other hand, the whole NP “*Sara-hand*” may move to Spec, TrP first, and the genitive Case marker is inserted later. Either way we can derive the order in (40b).<sup>9</sup>

- (40) a. [<sub>VP</sub> BA [<sub>TrP</sub> Sara<sub>i</sub> [<sub>Tr</sub> Tr [<sub>VP</sub> hurt [<sub>NP</sub> t<sub>i</sub> [<sub>N</sub> hand]] ]]]]  
 b. [<sub>VP</sub> BA [<sub>TrP</sub> [<sub>NP</sub> Sara de [<sub>N</sub> hand]]]<sub>i</sub> [<sub>Tr</sub> Tr [<sub>VP</sub> hurt t<sub>i</sub> ]]]]

<sup>9</sup> To make the whole proposal more consistent, one may assume that the superset NP always comes with an inherent Case. The marker *-de* then can be viewed as a contextual marker for the nominal domain, similar to the *-no* maker in Japanese (cf. Saito et al. 2008). I leave the option open here.

The predictions in (40) are borne out in (41) and (42), respectively.

- (41) a. Geruisen ba **Sala** da-shang-le **shou**.  
 Grissom BA Sara hit-hurt-ASP hand  
 ‘Grissom hit Sara on her hand.’  
 b. Geruisen ba **Sala-de shou** da-shang-le.  
 Grissom BA Sara’s hand hit-hurt-ASP
- (42) a. Geruisen ba **juzi** po-le **pi**.  
 Grissom BA orange peel-ASP skin  
 ‘Grissom peeled the skin of the orange.’  
 b. Geruisen ba **juzi-de pi** po-la.  
 Grissom BA orange’s skin peel-ASP

Theoretically this proposal also predicts that the subset NP cannot become the BA NP. This is because the EPP attracts only the closest NP. Either the whole NP “Sara-hand” is attracted, or the structurally higher NP is attracted. The subset NP *hand* c-commanded by the superset NP *Sara* therefore cannot become the BA NP.<sup>10</sup>

- (43) a. \*<sub>[<sub>VP</sub> BA [<sub>TRP</sub> hand<sub>i</sub> [<sub>Tr</sub> Tr [<sub>VP</sub> hurt [<sub>NP</sub> Sara [<sub>N</sub> t<sub>i</sub> ]]]]]]</sub>  
 b. \*Geruisen ba shou da-shang-le Sala.  
 Grissom BA hand hit-hurt-ASP Sara

To summarize, in this section I propose that the object-related properties of the BA NP point to the direction of the proposition that there must be a TrP in the BA construction. The presence of TrP enables us to relate the several variants of the BA construction to a single structure, which is also the structure of a typical transitive sentence.

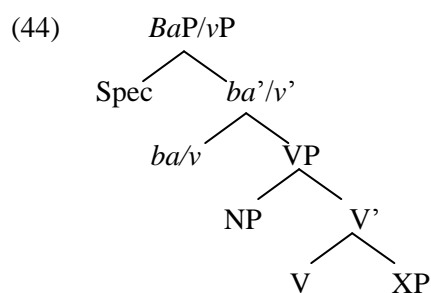
#### 4. HUANG, LI AND LI (2009)

In this section I compare the current analysis for the BA construction to the one proposed by Huang, Li and Li (2009) (also Li 2006). I first review the major arguments of their proposal. The initial version of the

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<sup>10</sup> This movement also violates the relativized minimality if Spec, NP is considered an A-position.

BA structure by Huang et al. is shown in (44). According to their discussions, BA is neither a verb nor a preposition. It assigns Case but does not assign any theta-roles. Therefore, following Huang (1997) and Lin (2001), BA is considered to be a light verb and inserted in the *v* position. The projection BaP can be replaced by *v*P under Chomsky's (1995) *v*P structure (or replaced by VP under Larson's (1988) VP shell structure).



The above structure can capture the following two alternations. Assuming that the *v* head must be overtly realized in Chinese, V-to-*v* movement applies in (45a) (Huang 1993 and Tang 1998). On the other hand, BA may be inserted (or realized as the spell-out of *v*), as shown in (45b).

- (45) a. Geruisen na shu gei-Sala.  
 Grissom take book to-Sara  
 'Grissom took the book and gave it to Sara.'  
 b. Geruisen ba shu na gei-Sala  
 Grissom BA book take to-Sara

However, Huang, Li and Li (2009) argue that the structure in (44) is not adequate to capture the distributions of the manner adverbials in (46) and (47). In (46), the manner adverbial may precede BA (46a) or the verb (46b). But in (47), the only possible position for the manner adverbial is to precede the verb.

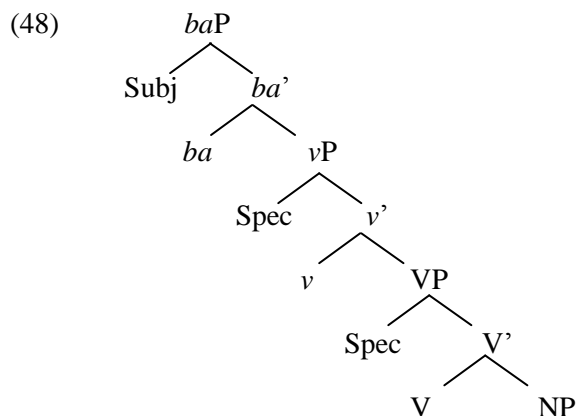
- (46) a. Geruisen buqingyuan-de ba shu na gei-Sala  
 Grissom reluctantly BA book take to-Sara  
 'Gressom took the book and gave it to Sara reluctantly.'

- b. Geruisen ba shu buqingyuan-de na gei-Sala  
 Grissom BA book reluctantly take to-Sara

- (47) a. Geruisen buqingyuan-de na shu gei-Sala.  
 Grissom reluctantly take book to-Sara  
 ‘Grissom took the book and gave it to Sara reluctantly.’  
 b. \*Geruisen na shu buqingyuan-de gei-Sala.  
 Grissom take book reluctantly to-Sara

If one adopts the structure in (44), the manner adverbial has to adjoin to BaP/ $\nu$ P in (46a) and V' in (46b). However, the latter possibility makes a wrong prediction about (47b). If the manner adverbial can adjoin to V', (47b) should be grammatical after the verb raises to the  $\nu$  head.

Because of the above contrast, Huang, Li and Li (2009) propose that BA cannot be the spell-out of the  $\nu$  head, and it must be higher than the landing site of the raised verb. A revised structure is proposed in (48).



In this structure, the manner adverbial can adjoin to either BaP (or at least  $ba'$ ) or  $v'$ . Hence, in a BA construction, the manner adverbial may precede BA or follow BA. In a regular SVO sentence, the manner adverbial may only precede the raised verb. Note that the BA NP is placed at Spec,  $\nu$ P because BA has been argued to assign Case to the BA NP. The adjacency condition (Stowell 1981) has to be obeyed. Huang et al. also argue that the subject is in Spec, BaP position, based on the distribution of the distributive marker *dou* ('all') in Chinese.

However, the proposal of the structure in (48) raises some difficulties in explaining the following theoretical and empirical questions. First of all, an independent BaP forces the subject to be generated in its specifier, rather than the generally assumed position of Spec,  $\nu$ P. One then may wonder how the subject in the BA construction obtains its Agent theta-role. Recall that Huang, Li and Li have argued that BA does not assign any theta-role, and they also argue that the subject has to be generated in Spec, BaP. However, they have indicated that the subject of the BA sentence must be thematically related to the theta-assigning verbs in the sentence, which seems to be impossible under a structure like (48) if the subject is placed in Spec, BaP. Note that the subject in the BA construction cannot be argued to have moved from Spec,  $\nu$ P to Spec, BaP because Spec,  $\nu$ P is reserved for the BA NP.

Second, Huang, Li and Li's (2009) structure also makes wrong predictions about optional GEI-insertion and the interaction between GEI and manner adverbial. Recall that under Huang, Li and Li (2009)'s proposal, Example (49a) has the structure as in (49b). Their structure requires that even in a BA construction, there is still verb raising because the  $\nu$  must be overtly filled.

- (49) a. Geruisen ba Sala da-shang-le.  
 Grissom BA Sara hit-hurt-ASP  
 'Grissom hurt Sara.'  
 b. [<sub>BaP</sub> Grissom ba [ <sub>$\nu$ P</sub> Sara<sub>j</sub> [ <sub>$\nu$ '</sub> hit-hurt-ASP<sub>j</sub> [ <sub>$\nu$ P</sub> t<sub>j</sub> t<sub>j</sub> ]]]]

The structure (49b) cannot accommodate the optional GEI in the BA construction, repeated here as (50). There is no extra head position for the optional GEI in (49b).

- (50) Geruisen ba Sala (gei) da-le yi-duan. = ((6))  
 Grissom BA Sara (GEI) hit-ASP once  
 'Grissom hurt Sara.'

The collocation of GEI and the manner adverbial cannot be captured under their analysis, either. The relevant examples are repeated in (51).

- (51) a. Geruisen ba Sala gei henhen-de da-shang-le.  
 Grissom BA Sara GEI cruelly hit-hurt-ASP  
 'Grissom hurt Sara cruelly'

- b. Geruisen ba Sala henhen-de gei da-shang-le.  
 Grissom BA Sara cruelly GEI hit-hurt-ASP

The structure in (49b) may explain the placement of adverbial, but it cannot explain the optional GEI insertion. Moreover, when the optional GEI and the manner adverbial emerge together in the BA construction, it is also hard to see how these two elements can be accommodated in the structure in (49b) simultaneously.

To explain (50) and (51), Huang et al. may assume that the verb raising from V to *v* is not necessary in the BA construction. So the verb stays in the V position. In this structure, GEI can be inserted in the *v* head position, and the manner adverbial adjoins to *v*P/VP (or *v*'/V'). Both orders “adverb-GEI” and “GEI-adverb” can then be derived, but the optionality of verb raising in the BA construction becomes a stipulation. Furthermore, if the manner adverbial can adjoin to VP (or V'), and verb raising is optional, we predict that the position of the manner adverbial should be possible following the verb. However, this prediction is not borne out. As shown in (52), the manner adverbial can only precede the verb (52b), not follow the verb (52c).

- (52) a. Geruisen buqingyuan-de ba zhe-fen baogao chongxie-le.  
 Grissom reluctantly BA this-CL report rewrite-ASP  
 ‘Grissom rewrote this report reluctantly.’  
 b. Geruisen ba zhe-fen baogao buqingyuan-de chong-xie-le.  
 Grissom BA this-CL report reluctantly rewrite-ASP  
 c. \*Geruisen ba zhe-fen baogao chongxie-le buqingyuan-de.  
 Grissom BA this-CL report rewrite-ASP reluctantly

Last, as far as I can see, the major argument for separating BA apart from *v*P comes from the distribution of the manner adverbial. Recall that Example (47b) is ruled out because the manner adverbial can only adjoin to *v*P or higher projection (i.e. BaP). But, there is in fact another possibility to rule out Example (47b). That is, the manner adverbial must be licensed by a lexically filled head (i.e., Huang, Li and Li 2009, Footnote 29). Under this approach, the manner adverbial therefore cannot adjoin to VP or V' in (47b) because the V head is not lexically



licensed after the verb raises.<sup>11</sup> If one adopts this assumption, the motivation to place BA higher than *v*P is weakened.

To summarize, the proposal of having an independent *ba*P right above *v*P to capture the distributions of manner adverbs in the BA constructions and in the non-BA counterparts can be easily substituted by other assumptions as well. Furthermore, the proposed structure makes wrong predictions about other relevant properties of the BA construction. It also cannot explain the source of the Agent theta-role for the subject NP as discussed above.

In comparing Huang, Li and Li (2009)'s proposal to the current proposal (schematized here as in (53) and 0), one can see that they share some similarities with each other. First, in both analyses there are *v*P and VP constituents. Second, both proposals require an additional projection between BA and the VP. Third, the subject is generated in the specifier of the projection hosting BA.

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<sup>11</sup> Huang et al. reject this possibility stating that this assumption requires cross-linguistic parameterization. In Chinese, this approach predicts that the manner adverbial always precedes the raised verb. But this may not be the case in other languages. For example, in English or French, verb raising does not always prevent an adverb from occurring in the lower position (cf. the V-modifying adverb in English, Example (17) here, and Pollock 1989 for French), which indicates that adverbs are not licensed by a lexically filled head in these languages. In addition, in Chinese an empty verb can license Duration/Frequency phrases, as shown in (i).

- (i) a. Geruisen chongxie-le liang-ci zhe-fen baogao.  
 Grissom rewrite-ASP two-time this-CL report  
 'Grissom rewrote this report twice.'  
 b. Geruisen chongxie-le zhe-fen baogaoliang-ci.  
 Grissom rewrite-ASP this-CL report twice

They have argued that Duration/Frequency phrases adjoin to V' in Chinese. The verb raises from V to *v* position. And the object "this report" may or may not raise to Spec, VP, deriving two different word orders in (ia) and (ib), respectively. However, since languages do differ in several aspects, one may wonder why a cross-linguistic parameterization for adverb distributions versus verb raising should be completely rejected. A thorough comparison with other languages seems to be necessary. In addition, although Duration/Frequency phrases and manner adverbs are both categorized as adverbs, it is not necessary that these two adverbs have to behave in the same way. For example, some verbs in Chinese cannot take aspect markers but they are still considered verbs. We need more evidence to show that the syntactic account of Duration/Frequency adverbial indeed can be applied to the manner adverbial as well.

(53) [<sub>BaP</sub> Subject [<sub>Ba'</sub> BA [<sub>vP</sub> BA NP<sub>i</sub> [<sub>v'</sub> VERB<sub>j</sub> [<sub>vP</sub> t<sub>j</sub> t<sub>i</sub> ]]]]]

(54) [<sub>vP</sub> Subject [<sub>v'</sub> BA [<sub>TrP</sub> BA NP<sub>i</sub> Tr [<sub>vP</sub> VERB t<sub>i</sub> ]]]]]

But there are also major differences between these two structures. Huang et al. employ a BaP higher than vP. BA is placed at the head position of BaP and there is obligatory verb movement from V to v. The subject is at Spec, BaP and the BA NP is at Spec, vP. The current analysis employs a TrP between vP and VP. BA is at the v head position, and no verb movement is involved. The subject is located at Spec, vP as in a typical transitive construction, and the BA NP is located at Spec, TrP. These differences are summarized in Table 1.

**Table 1. Comparison between Huang et al. (2009) and the Present Analysis**

	Huang et al.	The current analysis
Projections involved	BaP, vP and VP	vP, TrP and VP
Location of BA	BaP	vP
Subject location	Spec, BaP	Spec, vP
Location of BA NP	Spec, vP	Spec, TrP
Verb Movement	YES	NO

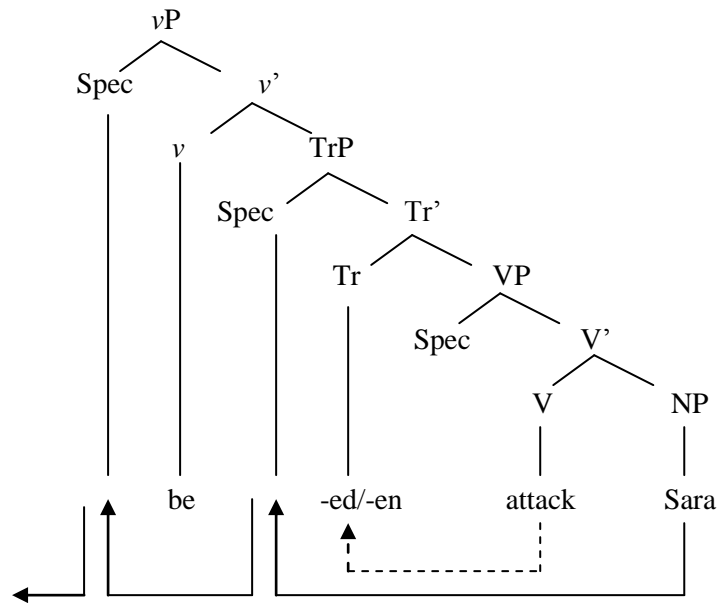
The advantages of the present analysis can be viewed from the following two aspects: Theoretically the BA construction employs the same syntactic structure as a transitive sentence, which explains why the BA construction is always transitivity related. Empirically the current analysis also captures all of the relevant properties of the BA construction that I have presented so far, which can only be partially captured by Huang et al.'s analysis.

## 5. THE TRP IN THE BEI CONSTRUCTION

In this section I discuss the presence of a TrP in the BEI construction (Chinese passive). Bowers (2002) points out that in English, only transitive verbs can be passivized. Under his proposal, a passive sentence should contain a TrP as well as its active counterpart. An English passive example is shown in (55). And the structure is shown in (56).

(55) Sara was attacked (by someone).

(56)



Different from its active counterpart, the phi-features of *TrP* in a passive sentence are replaced by an overt passive suffix. Since there is no phi-feature, the uninterpretable Case-feature of the NP *Sara* cannot be valued and deleted. The NP object *Sara* hence moves to seek for another available position for Case-feature evaluation and deletion, such as *Spec*, *vP* (Bošković 2007). In this position the uninterpretable Case feature of the object NP is evaluated, deleted and specified as Nominative Case as a reflex under the phi-features agreement between the probe in *T* (with uninterpretable phi-features) and the Object NP (with interpretable phi-features).

As Bowers points out, Transitivity should be viewed as a universal phenomenon, presenting in all transitive sentences. It does not matter whether the transitive sentence in question is active or passive. Following this proposal, we may expect that a *TrP* should present in the BEI construction as well. Like the English example in (57), the Chinese BEI construction does not tolerate intransitive or unaccusative verbs, as shown in (58).

(57) \*Sala bei pao-le.  
 Sra BEI run-ASP  
 ‘\*Sara was ran.’

(58) \*Sala bei daoda-le.  
 Sara BEI arrive-ASP  
 ‘\*Sara was arrived.’

Hence, we may hypothesize that a TrP is present in the structure of the BEI construction. Following the well-known proposal on the structure of the BEI construction by Ting (1998) and Huang (1999), I assume that there is Operator movement, starting from the object position. The Operator lands at the IP-adjoined position.

(59) [IP Geruisen<sub>1</sub> bei [IP OP<sub>1</sub> [IP Sala [VP v [TrP Tr  
 Grissom BEI Sara  
 [VP da-shang-le t<sub>1</sub> ]]]].  
 hit-hurt-ASP  
 ‘Grissom was hurt by Sara.’

One piece of evidence to support the legitimacy of the structure in (59) is the presence of the optional GEI in the BEI construction, (cf. Xu 1994 and Tang 2001), as in the BA construction. This is shown in (60). I assume that *gei* (‘give’) can be optionally inserted at the TrP head position, as shown in (61).<sup>12</sup>

(60) Geruisen bei Sala (gei) da-shang-le.  
 Grissom BEI Sara GEI hit-hurt-ASP  
 ‘Grissom was hurt by Sara.’

(61) [IP Geruisen<sub>1</sub> bei [IP OP<sub>1</sub> [IP Sala<sub>2</sub> [VP t<sub>2</sub> v  
 Grissmo BEI Sara  
 [TrP (GEI) [VP da-shang-le t<sub>1</sub> ]]]].  
 hit-hurt-ASP

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<sup>12</sup> The presence of the optional GEI means there is no V-to-*v* raising in the lower IP. I assume that for a complex sentence like the BEI construction, the verb raising in the higher IP is sufficient to satisfy the requirement that the *v* head must be overtly realized in Chinese.

With the TrP, we predict that the V'-object/Outer Object paradigm can also be observed in the BEI construction. This prediction is borne out in (62). The V'-object/Outer Object is base-generated at Spec, TrP, and undergoes Operator movement to IP-adjoined position, coindexing with the NP at Spec, higher IP, as in (63).

- (62) Bilu bei Sala sheng-le huo.  
 fireplace BEI Sara start-ASP fire  
 'The fire was started in the fireplace by Sara.'

- (63) [IP Bulu<sub>1</sub> bei [IP OP<sub>1</sub> [IP Sala [vP v [TrP t<sub>1</sub> Tr  
 fireplace BEI Sara  
 [vP sheng-le huo ]]]]].  
 start-ASP fire

The inalienable nominal pattern is also predicted to be available in the BEI construction, as in (64). As in the BA construction, the superset NP is first generated at Spec, NP, and it moves to Spec, TrP to satisfy the EPP feature. The NP at Spec, TrP then undergoes further Operator movement to IP-adjoined position and is coindexed with the NP at Spec, higher IP, as in (65).

- (64) Geruisen bei Sala da-duan-le yi-tiao tui.  
 Grissom BEI Sara hit-break-ASP one-CL leg  
 'One of Grissom's legs was broken by Sara.'

- (65) [IP Geruisen<sub>1</sub> bei [IP OP<sub>1</sub> [IP Sala [vP v [TrP t<sub>1</sub> Tr  
 Grissom BEI Sara  
 [vP da-duan-le [NP t<sub>1</sub> yi-tiao tui ]]]]].  
 hit-break-ASP one-CL leg

The current proposal also predicts that the following adversative passive (66) is not available for a BA counterpart in (67). In the adversative passive, the subject NP *Grissom* has an event-dependency relationship with the rest of the sentence. That is, although, at first glance, *Grissom* has nothing to do with the event of *Sara's* hitting a homerun, in this example *Grissom* is, in fact, interpreted as being affected negatively by this event (hence the term "adversative passive").

(66) Geruisen bei Sala jizhu-le yi-zhi quanleida.  
 Grissom BEI Sara hit-ASP one-CL homerun  
 ‘Grissom had Sara hit a homerun on him.’

(67) ?\*Sala ba Geruisen jizhu-le yi-zhi quanleida.  
 Sara BA Grissom hit-ASP one-CL homerun

The relevant structure for (66) is shown in (68). Following the standard assumption, I assume that there is no (Operator) movement involved. There is no TrP in the higher clause since the verb BEI selects an IP Complement. The subject *Grissom* receives an Experiencer theta-role from BEI (Huang, Li and Li 2009).

(68) [IP Grissom BEI<sub>1</sub> [VP t<sub>1</sub> [IP Sara<sub>2</sub> [vP t<sub>2</sub> v  
 [TrP (GEI) [VP hit [NP a homerun] ]]]]]]

Unlike the V'-object/Outer Object case and inalienable case, the structure in (68) cannot be structurally related to a BA construction. No matter if BA is inserted in the high or low *v* head, the NP *Grissom* cannot be the BA NP. The structure of the BA counterpart of (66) hence cannot be derived.<sup>13</sup>

<sup>13</sup> Huang, Li and Li (2009) employ an Operator movement analysis for the adversative passive in (66). The “outmost” object at Spec, VP undergoes Operator movement and is coindexed with the NP at higher Spec, IP. The “outmost” NP receives an indirect Affectee theta-role from the whole VP. Following the VP Internal Subject Hypothesis, the subject *Sara* also moves from the lower Spec, VP to Spec, IP.

(i) [IP Grissom<sub>3</sub> BEI [IP OP<sub>3</sub> [IP Sara<sub>2</sub> [VP t<sub>3</sub> [VP t<sub>2</sub> [VP hit [NP a homerun] ]]]]]]

However, a problem of Structure (i) is that it leads to a theta-role assigning puzzle between (66) and (67). As Huang et al. have pointed out, the structure in (i) can be translated into a more fine-grained structure: the “outmost” object is located at Spec of a light verb. So the structure in (i) is equal to the one in (ii).

(ii) [IP Grissom<sub>3</sub> BEI [IP OP<sub>3</sub> [IP Sara<sub>2</sub> [vP t<sub>3</sub> v [vP t<sub>2</sub> v [VP hit [NP a homerun] ]]]]]]

The reasoning for Huang, Li and Li to rule out the BA counterpart of the adversative passive is in fact not compatible with their proposal for the BEI construction. They argue that BA does not assign any theta-roles, hence the BA NP *Grissom* (= the “outmost” NP in the adversative passive) does not receive a theta-role, which makes Example (67) impossible. However, in the discussion of the proposal for the adversative passive such as in Structure(s) (i)/(ii), they, on the other hand, propose that the “outmost” NP *Grissom*

## 6. CONCLUSION

From the range of analyses of the BA construction (cf. L. Wang 1947, Chao 1968, Mei 1978, Li and Thompson 1981, Zou 1995, Liu 1997, Sybesma 1999, Li 2005 and Huang, Li and Li 2009, among many others), this paper employs one of the most well-known properties - Transitivity - to explore the possibility of positing a TrP in the BA construction. I have shown that there must be an additional functional projection between VP and  $\nu$ P, and that the best candidate is TrP, which can not only host raised object NPs, also but base-generated V'-object/Outer Object NPs as well. Compared to the analysis of Huang, Li and Li (2009), the current proposal also exhibits better coherence empirically and theoretically. Finally, I compare the structure of the BA construction to that of the BEI construction. The presence of a TrP in the BEI construction explains some of the similarities and differences between these two constructions. The examination of a TrP in the BA and BEI construction also supports the proposal by Bowers (2002) that the TrP is indeed a more general phenomenon in transitive constructions.

## REFERENCES

- Abels, Klaus. 2003. *Successive Cyclicity, Anti-Locality, and Adposition Stranding*. Doctoral dissertation, University of Connecticut, Storrs.
- Bender, Emily. 2000. The syntax of Mandarin ba: Reconsidering the verbal analysis. *Journal of East Asian Linguistics* 9: 105-145.
- Bennett, Paul. 1981. The evolution of passive and disposal sentences. *Journal of Chinese Linguistics* 9: 63-90.
- Bošković, Željko. 1994. D-structure, theta-criterion, and movement into theta-positions. *Linguistic Analysis* 24: 247-286.
- Bošković, Željko. 2007. On the locality and motivation of move and agree: An even more minimal theory. *Linguistic Inquiry* 38: 589-644.
- Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24: 591-656.
- Bowers, John. 1997. A binary analysis of resultatives. *Texas Linguistic Forum* 38: *The Syntax and Semantics of Predication*, ed. by Ralph C. Blight and Michelle J. Moosally, 43-58. Austin: University of Texas, Department of Linguistics.
- Bowers, John. 2001. Predication. *The Handbook of Contemporary Syntactic Theory*, ed. by Mark Baltin and Chris Collins, 299-333. Oxford: Blackwell.

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receives an indirect Affectee theta-role. Whether the NP *Grissom* receives a theta-role becomes a puzzle here.

- Bowers, John. 2002. Transitivity. *Linguistic Inquiry* 33.2: 183-224.
- Cheng, Lisa. 1986. *Clause Structures in Mandarin Chinese*. Master's thesis, University of Toronto.
- Cheng, Lisa and Elizabeth Ritter. 1988. A small clause analysis of inalienable possession in Mandarin and French. *NELS* 18: 65-78.
- Chao, Yuen-ren. 1968. *A Grammar of Spoken Chinese*. Berkeley: University of California Press.
- Chiu, Bonnie Hui-Chun. 1993. *The Inflectional Structure of Mandarin Chinese*. Doctoral dissertation. University of California, Los Angeles.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework, *Step by Step: Essays on Minimalism in Honor of Howard Lasnik*, ed. by R. Martin, D. Michaels & J. Uriagereka, 89-155. Cambridge: MIT Press.
- Goodall, Grant. 1987. On the argument structure and L-marking with Mandarin Chinese ba. *Proceedings of the North Eastern Linguistic Society 17*, ed. by Joyce McDonough and Bernadette Plunkett, 232-242. Amherst: Graduate Linguistics Student Association.
- Grohmann, Kleanthes K. 2003. Successive cyclicity under (anti-)local considerations. *Syntax* 6.3: 260-312.
- Hashimoto, Anne Yue. 1971. Mandarin syntactic structures. *Unicorn 8: Chinese Linguistics Project and Seminar*. Princeton University.
- Huang, C.-T. J. 1982. *Logical Relations in Chinese and the Theory of Grammar*. MIT Doctoral dissertation.
- Huang, C.-T. J. 1993. Reconstruction and the structure of VP: Some theoretical consequences. *Linguistic Inquiry* 24: 103-138.
- Huang, C.-T. J. 1997. On lexical structure and syntactic projection. *Chinese Languages and Linguistics* 3: 45-89.
- Huang, C.-T. J. 1999. Chinese passives in comparative perspective. *Tsing Hua Journal of Chinese Studies* 29: 423-509.
- Huang, C.-T. J. 2007. Hanyu dongci de tiyuan jiegou yu qi jufa biaoqian [The thematic structures of verbs in Chinese and their syntactic projection], *Linguistic Sciences* 6.4: 3-21.
- Huang, C.-T. James. 2008. Unaccusativity, ditransitives and extra-grammaticality. Talk given in colloquium in linguistics at University of Connecticut, Storrs.
- Huang, C.-T. James, Audrey Li and Yafei Li. 2009. *The Syntax of Chinese*. Cambridge University Press.
- Huang, Li-Yi Pamela. 1990. *The Deep Word Order and Some Prepositional Constructions of Chinese*. Doctoral dissertation. University of Washington.
- Koopman, Hilda. 1984. *The Syntax of Verbs*. Dordrecht: Foris.
- Lee, Ju-Eun. 2005. A-movement locality in applicative constructions. *U. Penn Working Papers in Linguistics* 11.1: 129-141.
- Li, Charles N. and Sandra A. Thompson. 1981. *Mandarin Chinese: A Functional Reference Grammar*, Berkeley and Los Angeles: University of California Press.



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- Li, Yafei. 1995. The thematic hierarchy and causativity. *Natural Language and Linguistic Theory* 13: 255-282.
- Li, Yen-Hui Audrey. 1985. *Abstract Case in Mandarin Chinese*. Doctoral dissertation, University of Southern California, Los Angeles.
- Li, Yen-Hui Audrey. 1990. *Order and Constituency in Mandarin Chinese*. Dordrecht: Kluwer.
- Li, Yen-Hui Audrey. 2006. Chinese ba. *The Blackwell Companion to Syntax*, ed. by Martin Everaert and Henk van Riemsdijk, vol.1, 374-468. Malden, Mass.: Blackwell.
- Li, Ying-Che. 1974. What does disposal mean? Features of the verb and noun in Chinese. *Journal of Chinese Linguistics* 2: 200-218.
- Lin, T.-H. Jonah. 2001. *Light Verb Syntax and the Theory of Phrase Structure*. Doctoral dissertation. University of California, Irvine.
- Liu, Feng-Hsi. 1997. An aspectual analysis of ba. *Journal of East Asian Linguistics* 6: 51-99.
- Lü, Shuxiang. 1980. *Xiandai Hanyu Babai Ci [800 Words of Contemporary Chinese]*. Beijing: Shangwu Yinshuguan.
- McGinnis, Martha. 2001. Phases and the syntax of applicatives. *NELS 31*, ed. by Minjoo Kim and Uri Strauss, 333-349. Amherst: University of Massachusetts, GLSA.
- Mei, Kuang. 1978. Ba zi ju. [Ba sentences]. *Wenshizhe Xuebao* 27: 145-180.
- Miyagawa, Shigeru and Takae Tsujioka. 2004. Argument structure and ditransitive verbs in Japanese. *Journal of East Asian Linguistics* 13: 1-38.
- Pollock, Jean-Yve. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20: 365-425.
- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Saito, Mamoru and Keiko Murasugi. 1993. *Subject Predication within IP and DP*. Ms. University of Connecticut, Storrs, and Kinjo Gakuin University.
- Saito, Mamoru, T.-H. Jonah Lin and Keiko Murasugi. 2008. N<sup>7</sup>-ellipsis and the structure of noun phrases in Chinese and Japanese. *Journal of East Asian Linguistics* 17: 247-271.
- Shi, Yuzhi. 2004. Jian biao beidong he chuzhi de “gei” de yufahua. [The grammaticalization of gei that marks both passive voice and disposal structure]. *Chinese Teaching in the World* 69: 15-26.
- Stowell, Tim. *Origins of Phrase Structure*. Doctoral dissertation, MIT.
- Sun, Chaofen. 1996. Transitivity, the ba construction and its history. *Journal of Chinese Linguistics* 23.1: 159-195.
- Sybesma, Rint. 1999. *The Mandarin VP*. Dordrecht: Kluwer Academic Publishers.
- Tang, C.-C. Jane. 1990. *Chinese Phrase Structure and the Extended X' Theory*. Doctoral Dissertation. Cornell University.
- Tang, Sze-Wing. 1998. *Parametrization of Features in Syntax*. Doctoral dissertation. University of California, Irvine.
- Tang, Sze-Wing. 2001. A complementation approach to Chinese passives and its consequences. *Linguistics* 39.2: 319-354.

- Thompson, Sandra. 1973. Transitivity and some problems with the ba-construction in Mandarin Chinese. *Journal of Chinese Linguistics* 1: 208-221.
- Tiee, Henry H.-Y. 1990. *A Reference Grammar of Chinese Sentences*. Tucson: University of Arizona Press.
- Ting, Jen. 1998. Deriving the bei-construction in Mandarin Chinese. *Journal of East Asian Linguistics* 7: 319-354.
- Travis, Lisa. 1984. *Parameters and Effects of Word Order Variation*. Doctoral Dissertation, MIT.
- Tsai, Wei-tian Dylan. 2008. On middle applicatives. Ling Lunch Presentation. University of Connecticut.
- Tsao, Feng-fu. 1986. A topic-comment approach to the ba construction. *Journal of Chinese Linguistics* 15, 1-55.
- Xu, Dan, 1994. The status of marker *gei* in Mandarin Chinese. *Journal of Chinese Linguistics* 22.2: 363-393.
- Wang, Huang. 1957. *Ba Ji Ju he Bei Zi Ju*. [*Ba Sentences and Bei Sentences*]. Shanghai: Shanghai Xin Zhishi Chubanshe.
- Wang, Li. 1947. *Zhongguo Xiandai Yufa*. [*Modern Chinese Grammar*]. Shanghai: Commercial Press.
- Wang, Li 1954. *Zhongguo Yufa Lilun*. [*Theories of Chinese Syntax*]. Shanghai: Commercial Press .
- Wang, Mingquan. 1987. *Transitivity and the Ba-Construction in Mandarin*. Doctoral dissertation, Boston University.
- Yoon, James Hye-Suk. 1990. Theta theory and the grammar of inalienable possession constructions. *NELS* 20: 502-516.
- Zhang, Ning. 2009. The syntax of relational-nominal second constructions in Chinese. *Yuyanxue Luncong* 39. Peking University Pres.
- Zou, Ke. 1995. *The Syntax of the Chinese Ba-Constructions and Verb Compounds: A Morpho-Syntactic Analysis*. Doctoral dissertation, Los Angeles, University of Southern California.

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## 及物投射與把字句

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本文以 Bower (1993, 1997, 2001 and 2002) 所提出的及物投射 (Transitivity Projection) 理論來解析漢語中的把字句。在過去的分析如 Huang (1997) 和 Lin (2001), 「把」被分析為一個語義虛化的動詞, 並置於輕動詞的位置。相關證據例如樣貌狀語 (Huang, Li and Li 2009) 和 選擇性「給」的置入 (cf. Tang 2001) 都指出在輕動詞投射和動詞投射之間需要有一個功能投射來承接把名詞。本文提出此功能投射結構應為上述的及物投射。與 Huang, Li and Li (2009) 的把字句分析比較, 此分析對把字句的及物要求及相關特質呈現出更多的切合之處。此外本文亦將及物投射分析應用到漢語中也涉及到及物表現的被字句。其結果顯示及物投射在現今語言學理論中對及物結構的分析的確是該被視為廣泛存在的。

關鍵字：及物投射，把字句，被字句