This paper deals with the status of the Mandarin Chinese *ba*-construction, which has some interesting properties. We suggest that is should be treated as a second topic (as Tsao (1990) proposes) and present a reasonable analysis of its syntactic structure.

Introduction

The *ba*-construction of Mandarin Chinese[1] has a number of interesting properties. Here are some examples to illustrate this construction:

(1) Ta ba   Zhangsan tiu-dal-le.
    he BA Zhangsan push-fall-ASP
    'He pushed Zhangsan and Zhangsan fell.'

(2) Wo ba   zhe-ben   shu   wang-le.
    I   BA this-CLS book   forget-ASP
    'I forgot this book.'

(3) Lisi ba   baogao xie-hao-le.
    Lisi BA report   write-good-ASP
    'Lisi has finished writing his report.'

At first glance, it seems that the NPs after *ba* are direct objects of the main verb since all the sentences above have the following near-synonymous counterparts without *ba*.

(4) Ta tui-dao-le   Zhangsan.
    He push-fall-ASP Zhangsan.
    'He pushed Zhangsan and Zhangsan fell.'

(5) Wo wang-le   zhe-ben   shu.
    I   forget-ASP this-CLS book
    'I forgot this book.'

(6) Lisi xie-hao-le   baogao.
    Lisi write-good-ASP report
    'Lisi has finished writing his report.'

However, the claim that the NP after *ba* is the direct object of the main verb cannot be maintained. In this paper, we will show that the *ba*-NP need not always be an argument of the adjacent verb. Moreover, not all verbs can occur with a *ba*-NP. Such a complicated phenomenon raises interesting questions about the status of the *ba*-construction and how thematic role and Case are assigned. A closer look at this structure will reveal that the NPs after *ba* do not need thematic roles or Case. Then what kind of construction is this, if it requires neither thematic role nor Case?

Through examining the properties of the *ba*-construction, it will become clear that the *ba*-NP has all the characteristics of a topic. In fact, Tsao (1986, 1990) has proposed that the *ba*-NP is a second topic. However, because Tsao employs a functional approach to the *ba* pattern, he provides little discussion of its syntactic structure. In this paper, we will try to explain the syntactic phenomena related to the *ba*-construction and propose the appropriate syntactic structure for this construction by appealing to independent principles and constraints of the theory of Government and Binding (GB) (Chomsky

1981).

This paper is organized as follow. In the next section, we will describe various mysterious characteristics of the *ba*-construction. Then, we will focus on the hypothesis that the *ba*-construction is a second topic, as proposed by Tsao (1986, 1990). An appropriate structure for the second topic will be proposed, and the assignment of thematic role and Case will be considered in the fourth section. In section five, we will compare our system with some other theories and point out advantages of our current proposal. In the final section, we will present our conclusions.

The *ba*-construction

The *ba*-construction is presumed by Wang (1957) to be a type of Prepositional Phrase (PP) headed by the preposition *ba* and known as the 'disposal' form, which conveys 'how a person is handled, manipulated, or dealt with; how something is disposed of; or how an affair is conducted' (Wang Li 1957: 160-61; Li's translation 1974: 200-201). This construction has several mysterious characteristics which intrigue researchers. I adapt the studies of Cheng (1986), Goodall (1988, 1990), Mei (1978), Tsao (1986, 1990), and Li (1990) to integrate and reinterpret these properties in the following discussion.

The constraint on the cooccurrence of verbs with the *ba*-NP

Not every verb can cooccur with the *ba*-construction. We will discuss two types of verbs: simple and compound.

Simple verbs and the *ba*-construction.

Some simple verbs cannot cooccur with a *ba*-NP unless the verbs are followed by modifiers.
Without a following modifier
(7) *Ta ba wo hen-le.
    he BA I   hate-ASP
With a following modifier
(8) Ta ba wo hen-ji-le.
    he BA I hate-extreme-ASP
    'He hated me extremely.'
Without a following modifier
(9)*Ta ba   shoupa   shi.
    he BA handkerchief pick
With a following modifier
(10) Ta ba shoupa shi-qilai
     he BA handkerchief   pick-up

'He picked up the handkerchief.'

In sentence (7), the verb *hen* 'hate' cannot occur with a *ba*-NP unless there is a degree adverb, as shown in (8). Verbs like *shi* 'pick' in sentence (9) need resultative modifiers in order to cooccur with the *ba*-construction.

The only modifiers needed by some simple transitive verbs are aspect markers, indicating termination or completion. But tense-aspect markers implying duration or past experience, such as *zai* or *guo*, can not cooccur with the *ba*-construction. Here are some examples.

Completion/termination tense-aspect marker

(11) Ta ba   zidian   mai-le.
     he BA dictionary   sell-ASP
     'He sold his dictionary.'

(12) Ta ba   dangao chi-le.
     he BA cake   eat-ASP
     'He ate the cake.'

Past experience tense-aspect marker

(13) *Ta ba   Zhangsan   da-guo.
       he BA   Zhangsan   beat-ASP
        'He hit Zhangsan before.'

Duration tense-aspect marker

(14) *Ta zai   ba   Zhangsan da.
        he ASP   BA   Zhangsan beat
         'He is hitting Zhangsan.'

In sentence (11), the dictionary has been sold, i.e., the action has been completed. This is also true for sentence (12), where the action of eating the cake is terminated. Sentence (13) shows that the tense marker *guo*, which implies past experience with no indication of completion, cannot cooccur with the *ba*-construction, and neither can the progressive aspect marker zai in sentence (14).

Compound verbs and the *ba*-construction.

The situation becomes more complicate when there is a compound verb. Only action verbs followed by verbs indicating completion, direction, or result can cooccur with the *ba*-construction.

Action Verb＋Result Verb

(15) Ta ba Lisi   tui-dao-le.
     he BA Lisi   push-fall-ASP
     'He pushed Lisi and Lisi fell.'

Action Verb＋Direction Verb

(16) Ta ba   zidian   dai-lai-le
     he BA   dictionary   bring-come-ASP
     'He brought the dictionary.'
     Action Verb＋Completion Verb

(17) Ta ba   baogao   xie-hao-le.
  he BA   report   write-finish-ASP
  'He finished writing the report.'

  Compound verbs consisting of two action verbs cannot cooccur with a *ba*-construction unless they are followed by manner modifiers or modifying phrases.

Action Verb＋Action Verb(no modifier)

(18) *Zhangsan ba   wenti   fenxi-le.
  Zhangsan BA question analyze-ASP
  'Zhangsan analyzed the question.'

Action Verb＋Action Verb＋Modifier

(19) Zhangsan ba   wenti   fenxi-le   yici.
  Zhangsan BA question analyze-ASP   once
  'Zhangsan analyzed the question once.'

  Sentence (18) is ungrammatical since the verbal compound does not have modifiers, whereas sentence (19) is grammatical, since *yici* 'once' modifies the verbal compound.

  Scanning through these examples, we see that they also imply the meaning of completion or termination. Those compound verbs, *tui-dao* 'push-fall', *dai-lai* 'bring-come', *xie-hao* 'write-finish', in sentences (15), (16), and (17) all indicate the completion of action. In sentence (19), though the verb itself does not carry an implication of completion, the whole VP *fen-le yici* 'analyze once' does indicate that the action has been completed for the moment.

The *ba*-NP as nonargument of the adjacent verb

  At the beginning of this paper, we mentioned that the NP after *ba* need not always be a direct object of the adjacent verb. Several researchers provide evidence for this claim, which we will discuss in this section.

  Goodall (1988, 1990) presented the most substantive evidence, which involves a particular type of complement known as the 'extent' or 'resultative' clause in Chinese. Here is one example taken from Goodall (1988: 671):

Resultative/Extent Clause

(20) Wo ku-de   Zhangsan hen   shangxin.
  I   cry-DE Zhangsan very sad
  I cried so much that Zhangsan was very sad.'

  In this sentence *de* licenses the extent clause, since the verb *ku* 'cry' is an intransitive verb and does not take any complement.

There is a similar phenomenon in English:

(21) *It is dark that I cannot see the road.

(22) It is so dark that I cannot see the road.

  Here it is the word *so* that licenses the extent clause; otherwise the sentence is ungrammatical.

  That the extent phrases licensed by *de* in Chinese is really a clause can be shown by the appearance of sentential idioms in the following sentence (Goodall 1988: 671):

Sentential idiom

(23) Ta ku-de [tie-shu kai-le hua].

    he cry-DE iron-tree open flower

    'He cried so much that something very unusual happened.'

    One interesting phenomenon mentioned by Goodall (1988) (noted by L. Wang (1957) and P. Wang (1970)) is that the subject of the embedded clause in sentences (20) and (23) can appear after *ba* and immediately to the left of the matrix verb.

Intransitive verb and the *ba*-construction

(24) Wo ba Zhangsan ku-de hen shangxin.

    I BA Zhangsan cry-DE very sad

    'I cried so much that Zhangsan was very sad.'

(25) Ta ba tie-shu ku-de kai-le hua.

    he BA iron-tree cry-DE open flower

    'He cried so much that something very unusual happened.'

    Sentences like these show that NPs after *ba* need not be objects of the adjacent verbs. It seems that either objects of the matrix verb or subjects of an embedded verb can appear in this position. What other types of NPs can appear in this position?

    Mei (1978, 1980) also supported the claim that the NP after *ba* is not necessarily the object of the main verb. Below are two examples taken from Mei (1980):

Nonobject NP of matrix V in *the ba*-construction

(26) Wo chadianer ba yaoshi wang-le dai

    I almost BA key forget-ASP bring

    'I almost forgot to bring the key.'

(27) Ta ba bilu sheng-le huo.

    he BA fireplace build-ASP fire

    'He made a fire in the fireplace.'

    Instead of being the object of the first verb (*wang-le* 'forgot'), *yaoshi* 'key' in sentence (35) is the object of the second verb *dai* 'bring' in that the verb *wang-le* 'forgot' subcategorizes an S complement here and not an NP. Thus, the NP after *ba* is not the complement of the adjacent verb. Likewise, *bile* 'fireplace' in (36) is a locative NP indicating the place where the fire is built rather than the object of the verb. We know the *bilu* 'fireplace' has a locative meaning, because it is possible to express the same thing without a *ba*-construction, as pointed out by Tsao (1990):

Locative Preposition replacing *ba*

(28) Ta zai bilu sheng-le huo.

    he in fireplace build-ASP fire

    'He built a fire in the fireplace.'

    The locative phrase *zai bilu* 'in the fireplace' shows that the NP after *ba* can correspond to the Complement of the Preposition and have a locative meaning.

***Ba*-NP without thematic role**

From the discussion above, we know that the NPs corresponding to a subject, an object, or a complement of a preposition can appear after *ba* under certain circumstances. Since they are all arguments, each of them should have one thematic role (or theta-role) according to the Theta Criterion (Chomsky 1981), defined as following:

(29) Every argument bears one and only one theta role and each theta-role is assigned to one and only one argument.

We list some of the commonly assumed theta roles in the following (Radford 1988: 373):

(30) AGENT: Instigator of some action

EXPERIENCER: Entity experiencing some psychological state

THEME: Entity undergoing the effect of some action

LOCATIVE: Place where something is situated or takes place

SOURCE: Entity from which something moves

GOAL: Entity toward which something moves

Agent, Experiencer, and Theme roles are assumed to be assigned by verbs, whereas Locative, Source, and Goal roles are assigned by Prepositions. This information is preserved in the lexicon, since theta-roles are idiosyncratic to individual lexical items. One example is given below.

(31) John killed Mary.

   <Agent, Theme>
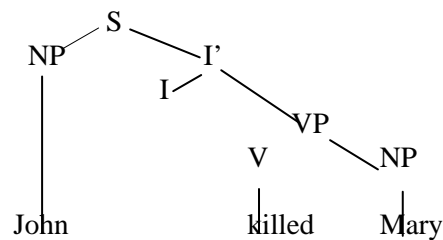
The verb *kill* needs an AGENT role, which is THE SUBJECT (*John*), and a THEME role, which is THE DIRECT OBJECT (*Mary*) in sentence (31). The Agent role is regarded as an external theta-role, since it is assigned outside the maximal projection of the verb *kill*, the theta-role assigner. In contrast, the Theme role is an internal theta-role, since it is assigned inside the maximal projection of the verb *kill*.

Now, let us turn to the question of the theta-role assignment for the *ba*-NP.

(24) Wo   ba   Zhangsan   ku-de   hen   shangxin.

      I   BA   Zhangsan   cry-DE   very   sad

      'I cried so much that   Zhangsan was very sad.'

In sentence (24), the NP after *ba* is the Experiencer since Zhangsan is the person who is very sad. *Yaoshi* 'key' is the Theme role in sentence (26), while *bilu* 'fireplace' is the Locative role in sentence (27).

(26) Wo chadianer   ba   yaoshi   wang-le   dai.

I   almost   BA   key   forget-ASP   bring
'I almost forgot to bring the key.'
(27) Ta   ba   bilu   sheng-le   hou.
     he   BA   fireplace   build-ASP   fire
     'He made a fire in the fireplace.'

It looks as though every argument has a theta-role in a *ba*-construction, which would comply with the Theta Criterion.

However, there are sentences which illustrate that no specific thematic roles can be related to the NP in a *ba*-construction. Here is one example:
Nonspecific thematic role
(32) Ta   ba   je-jian   shi   xie-le   yi-fen   *ba*ugau.
     he   BA   this-CLS   matter   write-ASP   one-CLS   report
     'With regard to this matter, he wrote a report.'

As the translation helps to show, we know that *je-jian shi* 'this matter' is neither the subject nor the direct object of the main verb, so it cannot receive a theta-role from *xie* 'write'. There seems to be no specific thematic role to characterize the *ba*-NP, and it seems quite appropriate to treat is as some type of topic. According to Chomsky (1986: 80), the topic does not need a theta role, which would explain why the *ba* NP can lack a thematic role.

To sum up, there are constraints on the cooccurrence of the *ba*-construction with certain types of verbs, and the NP following *ba* need not be the object of the adjacent verb. Moreover, it has been shown that the position after *ba* need not even have a theta role [see (32)]. In order to account for these mysterious characteristics, we suggest that the *ba*-NP is a type of topic. However, according to Li and Thompson (1976), the topic must occur in the initial position of a sentence, and the *ba*-NP is obviously not in this position. What are the similarities and differences between the *ba*-NP and the primary topic? Could the NP after *ba* be a second topic, as Tsao (1986) has proposed?

The second topic hypothesis

As noted earlier, Tsao has proposed that the *ba*-construction is a second topic. In addition, several other scholars have also suggested that it is some sort of topic (Mei 1978; Chu 1979; Li and Thopmpson 1984). Now, we have to ask what characteristics a topic has in Mandarin Chinese and whether the *ba*-construction can indeed be treated as a second topic. The criteria for topichood are our next concern.

The criteria for topichood in mandarin chinese

To identify the topic of a sentence, Li and Thompson (1976) propose several criteria. We list those relevant to Chinese, as modified by Tsao (1979):
(33) a. The topic is definite or generic.
     b. The topic need not have a selectional relation with any verb in a sentence; that is,
        it need not be an argument of a predicative constituent.

c. The topic always occupies the clause-initial position unless it is deleted or pronominalized by the topic that appears at the first clause in the same chain (the topic chain will be defined later).

d. The topic is in control of the pronominalization or deletion of all the coreferential NPs in a topic chain.

e. The topic, except in sentences in which it is also the subject, does not play a prominent role in processes such as reflexivization.

If the NP after *ba* is some sort of topic, it should have the properties just listed. Therefore, let us compare the characteristics of the *ba*-construction with those above.

The *ba*-NP as definite or generic

According to Li and Thompson (1981), a noun phrase with no classifier phrase is generic if it denotes a class of entities rather than any specific members in that class. Consider:

(34) Gou,　　xihuan　　ken　　gutou.
　　　dog　　 like　　　 gnaw　 bone
　　　'Dog like to gnaw bones.'

　　Here, *gou* 'dog' is generic, since it does not point to a specific member of the set of dogs.

　　Li and Thompson (1981) also stated that if a noun phrase occurs with a classifier phrase and a demonstrative, it is definite, since the demonstrative serves to point out known entities. Thus, the topic in the following sentence is definite:

(35) Zhei-xie　ren,　　　ta　　　 bu xihuan.
　　　this-PL　people,　　he　　　 not like
　　　'As for these people, he does not like (them).'

　　Zhexie ren 'these people' is a definite NP, since it contains a classifier phrase *zhexie* 'these' with a demonstrative *zhe* 'this'. If the primary topic is indefinite, the sentence is unacceptable, as in sentence (45):

(36) *Yi-xie ren,　　ta　　　 bu xihuan.
　　　some people　　he　　　 not like
　　　'As for some people, he does not like (them).'

It seems contradictory that both generic and definite NPs can be topics. Nevertheless, they have one common characteristic: in a discourse context they constitute shared (old) information in that the speaker thinks that the hearer already knows and can identify the particular referent the speaker has in mind (Chafe 1976). This illustrates a very important principle in Chinese. According to Givon (1986), more indefinite/new information follows more definite/old information in this language. Thus, it follows automatically that the topic should be definite and old information, since it always occupies the sentence initial position.

The fact that NPs after *ba* are definite or generic has been confirmed by many researchers (Tsao 1979; Li and Thompson 1981; Cheng 1986).

Definite or generic NP after *ba*

(37) Qing   ni   ba zhe-ben   shu   na-kai.
     please you   BA this-CLS   book   take-away
     'Please take away this book.'

(38) Ta ba dongwu   dang   ren   yiyang   kandai.
     he BA animal   as   human   same   treat
     'He treats animals as human beings.'

In (37) the NP after *ba* is definite, since *shu* 'book' is modified by a classifier phrase with a demonstrative *zhe* 'this', and in (38) *dongwu* 'animal' is generic.

If an NP is neither generic or definite, it cannot occur after *ba*, although it can occur in postverbal position as a regular direct object.

Ba-construction with nondefinite NP

(39) *Ta ba yixie   tanggou   che-le.
      he BA some   candy   eat-ASP
     'He ate some candy.'

(40) Ta chi-le   yixie   tanggou.
     he eat-ASP   some   candy
     'He ate some candy.'

Sentence (39) is unacceptable, since the *ba*-NP is indefinite, thereby violating the requirement of being definite or generic associate with the topic.

The *ba*-NP not selected by the verb

Not all NPs after *ba* need to be selected by the matrix verb. Sentence (30), repeated here, can illustrate this phenomenon.

(30) Ta ba zhe-jian   shi   xie-le   yi-feng   *ba*ogao
     he BA this-CLS   mater write-ASP   one-CLS   report
     'With regard to this matter, he wrote a report.'

The verb *xie* 'write' subcategorized only one internal argument (the Theme *yi-feng baogao* 'one report'), and its external thematic role is assigned to the subject *ta* 'he'. There is no thematic role left for *zhe-jian shi* 'this matter', so it is not selected by the verb. Furthermore, the realization of *zhe-jian shi* 'this matter' as the primary topic results in a perfectly grammatical sentence.

(41) Zhe-jian shi,   ta   xie-le   yi-feng baogao
     this-CLS matter   he   write-ASP   one-CLS report
     'With regard to this matter, he wrote a report.'

Given these facts, I conclude that criterion (b) is satisfied. That is, like true topics, the *ba*-NP need not have any selectional relation with the matrix verb in a sentence.

The *ba*-NP in first position of the *ba*-topic chain

How can we account for the position of the *ba*-construction, since according to Li and Thompson (1976), the topic should always occupy the initial position of a sentence?

Whit respect to the position of the hypothesized second topic, namely the NP after *ba*, we can say that it occupies the initial position of a *ba*-topic chain in the first clause, which is similar to that of topic, as described in criterion (c).

To understand what a *ba*-topic chain is, we have to know what a topic chain is. According to Tsao (1979), Chinese is a discourse-oriented language, so it has a rule of Topic NP deletion. This rule operates across utterances to delete the topic of a sentence if it is identical with a topic in a preceding sentence. Along with the Topic NP deletion, Huang (1984a) has proposed that there is a rule of coindexation which coindexes an empty topic node with an appropriate preceding topic. Such a process results in the underlined topic chain illustrated in (42) (Huang 1984a).

(42) [Zhongguo$_i$, difang hen da.] [e$_i$, renkou hen dou.] [e$_i$, tudi
     China place very big population very many land
     [e$_i$, hen feiwo.] [e, qihou ye hen hao.] [e$_i$, women dou
       very fertile climate too very good we all
    xihuan.]
    like

    '(As for) China, (its) land area is very large. (Its) population is very big. (Its) land is very fertile. (Its) climate is also very good. We al like (it).'

Zhongguo 'China' is the topic controller and the empty category (e$_i$) in each following sentence is the controllee, indicating the deletion of the topic in a topic chain.

The *ba*-construction also has a similar property. An example is given in (43).

Ba-construction as second topic

(43) Ta ba fagnjian zhengxiu-le yixia, ranhou e$_i$ e$_j$ zui gei women.
     ---$_i$ -------------$_j$
     he *BA* room repair-ASP a little then rent to us
     'He had the room repaired and then he rented it to us.'

Here, the *ba*-topic chain consists of the overt topic and the coindexed null element, both of which are about the same topic, *fanjian* 'room'. In this chain, the *ba*-construction occurs at the head of the chain, which is similar to an ordinary topic chain.

There is one minor difference regarding limitation of scope between a primary topic chain and a *ba*-topic chain. Both topic chains can extend their domain to more than one clause, as can be seen in sentences (42) and (43), but only a primary topic can head a chain by itself. A *ba*-topic chain cannot head a chain without a primary topic also heading the same chain. The second topics, *zhao-xiang* 'take picture' in (44) and *huatu* 'drawing' in (45), have the same limitations as *ba*-topic chains.

(44) Ni zhao-xiang zhao de hen kuai, e$_i$ e$_j$ ye zhao de hen
     ---$_i$ ------------$_j$
     you take-picture take DE very quick also take DE very
     hao.
     good
     'You take pictures very fast and very well.'

(45) Ni huatu hua de hen kuai, danshi e$_i$ e$_j$ hua de bu hao-

---i ------j

you drawing   draw   DE   very   quick but   draw   DE   not   good-

kan.

look

'You draw very fast but your painting doesn't good.'

Whenever a second topic heads a topic chain the primary topic must also head a chain, since the scope of the primary topic includes that of the secondary topic.

(46) *Ni   zhao-xiang   ei   zhao-de   hen   kuai,   ej   ye   zhao-de   hen

  ---i ------------j

 you   take-picture   take-DE   very   quick   also   take-DE   very

hao.

good

* 'You take pictures very fast and very well.'

(47) * Ni   huatu   ei   hua-DE   hen   kuai,   danshi   ej   hua-de   bu   hao-

  ----i ------j

 you   drawing   draw-DE   very   quick   but   draw-DE not   good-

kan.

look

'You draw very fast but the painting doesn't look good.'

If the primary topic *ni* 'you' is missing, the sentence will be ungrammatical. Thus, both (46) and (47), which have no empty category in the second clause corresponding to the primary topic, are ruled out.

Moreover, a *ba*-NP occupies a position similar to that of a second topic, since that *ba*-NP is next to the subject, which is often a topic, too. Thus, we conclude that the *ba*-NP both fulfills the requirement of criterion (c) and has the characteristics of a second topic.

The *ba*-NP in control of the pronominalization or delection of coreferential NP in the *ba* topic chain

Participating in a topic chain is closely related to the control of pronominalization and deletion by the *ba*-NP. This can be illustrated as follows:

Topic chain: pronominalization

(48) Ta   ba   fangjian   xiu-le   yixia,   ei   ba   taj   qi-le-qi

  ---i ---------j

he   Ba   room   repair-ASP   a little   BA   it   paint-ASP-paint

ranhou   ei   ba   taj   zui   gei women.

then   BA   it   rent   to   us

'He had the room repaired, painted, and then rented to us.'

Topic chain: deletion

(49) Ta ba fangjian xiu-le   yixia,   e_i e_j qi-le-qi

---_i ------------_j

he Ba room repair-ASP a little   paint-ASP-paint
ranhou ei ej zu gei women
then   rent to us

'He had the room repaired, painted, and then rented to us.'

In both (48) and (49) the first *ba*-NP is the controller. In (48) subsequent recurrences of the NP after *ba* undergo pronominalization, while in (49) they are deleted. Therefore, criterion (d) is satisfied, since the *ba*-construction controls the pronominalization or deletion of all the coreferential NPs in the *ba*-topic chain.

The *ba*-NP not in control of grammatical processes

Criterion (e) for topichood states that the topic usually does not play a role in grammatical processes such as reflexivization. Consider sentence (50).
Reflexivization
(50) Xiaoying,   mama   zhi   gu   taziji.
     Xiaoying   mother   only   take-care herself
     'Xiaoying, her mother only takes care of herself.'
Ziji 'self' is anaphor whose interpretation must comply with Binding Principle A. According to Chomsky (1981), an anaphor must be bound in its governing category, i.e. coindexed with a c-commanding antecedent in argument (A) position. A-position is a position to which a theta-role can be assigned.

To understand Principle A, the notions of c-command and governing category need to be defined. According to Chomsky (1981), X c-commands Y iff (if and only if) the first branching node above X dominates Y and neither X nor Y dominates the other. As to governing category, it has been characterized as follows (Radford 1981: 367):
(51) Governing Category; The governing category for X is the smallest NP or S which contains X and a governor of X.
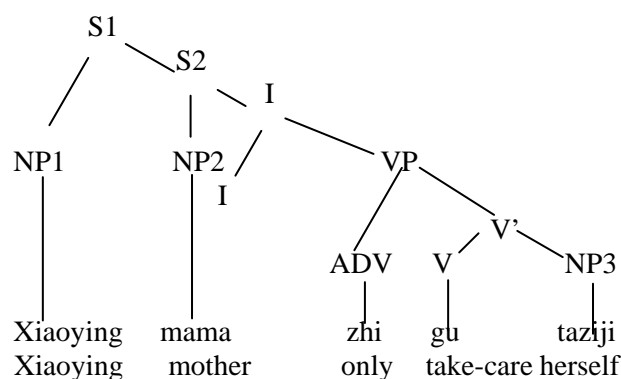
Chomsky (1981) proposed that X governs Y if X is a governing node (tense or a lexical category) c-commanding Y and every maximal projection containing Y also contains X.

In order to understand why *ziji* 'self' cannot refer to the topic (*Xiaoying*), we have to know what the governing category of *ziji* 'self' is. Sentence (50) has the following structure:
(52) Structure of reflexivization
We have to identify the governing category of NP3, whose governor is the main verb *gu* 'take-care' since it is a lexical category, c-commands NP3, and there is no intervening governing node c-commanding NP3but not V. S2, which contains NP3 and the main verb, is the governing category for *taziji* 'herself'. Withing S2, *taziji* 'herself' must be bound, i. e., it must coindex with a c-commanding antecedent. NP2 is the only

possible candidate which c-commands *taziji*' herself, since the first branching node above NP2 is S2, which dominates NP3, The topic (NP1) can not be the antecedent, since it is not in A-position.

```
                    S1
                 /      \
                /        S2
               /        /  \
              /        /     I
             /        /    /    \
           NP1       NP2  /      VP
            |         |  I      /  \
            |         |       ADV   V'
            |         |        |   /  \
            |         |        |  V    NP3
            |         |        |  |     |
        Xiaoying    mama      zhi gu   taziji
        Xiaoying    mother    only take-care herself
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If a *ba*-NP is a second topic, it should also comply with this criterion. Consider sentence (53):

Ba-NP and reflexivization
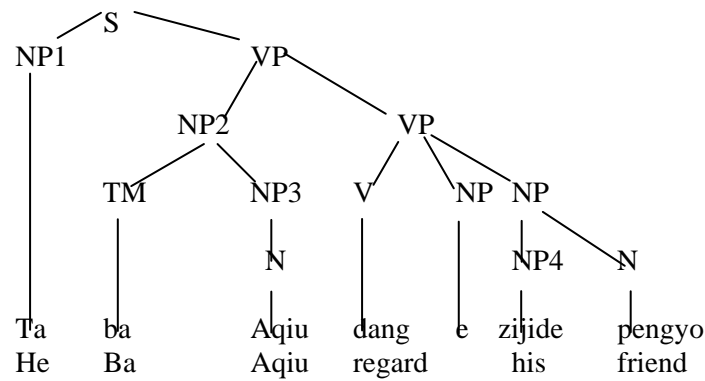
(53) ta   ba   Aqiu dand   ziji$_{i/*j}$-de   pengyou.
     he   BA   Aqiu regard self-DE   friend
     'He   regards Aqiu as his friend.'

Ziji 'self' is an anaphor whose interpretation must comply with Binding Principle A, i.e., an anaphor must be coindexed with an antecedent in A-position in its governing category.

We have to identify the governing category of *ziji* 'self' in order to determine its antecedent. Sentence (53) has the following structure:

(54) Structure of reflexivization

S is the governing category of *zijide* 'has', since it contains both NP4 and its governor dang 'regard' which is a lexical category, c-commands NPR, and there is no intervening governing node c-commanding NP4 but not V. Within S, *zijide* 'his' must be bound; that is, it must be coindexed with a c-commanding antecedent in A-position. There is only one possible candidate, viz. NP1. NP2 can not be the antecedent because it is not in A-position. NP1 c-commands NP4 since the first branching node above NP1 is S, which dominates NP4. Besides, the person, number, and gender of NP1 and NP4 match. Therefore, NP4 is bound with NP1.

```
                    S
         NP1  ╱          ╲ VP
          │       NP2            VP
          │    ╱    ╲         ╱    ╲
          │   TM    NP3      V   NP  NP
          │    │     │       │   │    ╲
          │    │     N       │   │   NP4   N
          │    │     │       │   │    │    │
         Ta    ba   Aqiu    dang  e  zijide  pengyo
         He    Ba   Aqiu   regard    his    friend
```

Thus, criterion (e), which states that the topic, except in sentences in which it is also the subject, does not play a prominent role in grammatical processes, is respected. The secondary topic does not play a prominent role in processes such as reflexivization.

To sum up, we know that the *ba*-NP has all the characteristics posited for a topic: it occupies the initial position of a topic chain similar to the S-initial position of the first topic, it is definite or generic, it need not have a selectional relation with the verb, it is in control of pronominalization and coreferential NP deletion in a *ba*-topic chain, and it need not participate in grammatical processes such as reflexivization if it is not also the subject.

Moreover, a *ba*-construction, similar to a second topic, can not occur alone without the first topic also heading a topic chain. I therefore conclude that it is second topic.

Nonapplicability of the topic criteria to non-topic NPs

If our hypothesis is right, then primary and secondary topics (including the *ba*-NP) exhibit properties that nontopic NPs do not. Is this in fact true?

Topic as definite or generic.

Let us begin with criterion (a), which states that a topic must be definite or generic. Nondefinite or nongeneric nontopic NP

(55) Zhangsan   xihuan   bai   mao.
     Zhangsan   like   white   cat
     'Zhangsan likes white cats.'

(56) Ta   yao   mai   lanse-de   changku.
     he   want   buy   blue-DE   trousers
     'He wants to buy blue trousers.'

Bai mao 'white cat', the object of *xihuan* 'like', in sentence 955) is not definite. Similarly, *lanse de changku* 'blue trousers' is a nontopic NP and neither definite nor

generic. If these NPs are positioned after *ba*, the resulting sentences are ungrammatical.
Nodefinite or nongeneric NP after *ba*

(57) *Zhangsan   ba   bai   mao   xihuan.
    Zhangsan   BA white   cat   like
    'Zhangsan likes white cats.'

(58) *Zhangsan   ba   lanse-de   changku   yao   mai.
    Zhangsan   BA blue-DE   trousers   want   buy
    'Zhangsan wants to buy blue trousers.'

    As these sentences show, nontopic NPs can be nondefinite or nongeneric. Thus, we know that criterion (a) is not applicable to nontopic NPs.

Topic as nonargument.

    Any nontopic NP in a sentence must be assigned Case; therefore, it must be an argument. The notion of Case in GB is based on the traditional notion of case manifested in many European languages. English has personal pronouns retaining case distinctions, such as *they* (nominative), *them* (accusative or objective), and *their* (genitive). Case is generally assumed to be assigned in the following way (Sells 1985: 53):

(59) Case assignment[2]

    a. If INFL contains TNS, Nominative Case is assigned to the [NP, S] position.
    b. A verb assigns Accusative Case to [NP, VP]
    c. A preposition assigns Accusative or Oblique Case to [NP, PP].
    d. Genitive Case is assigned in the structure [NP_X].

    If a nontopic NP does not have a Case, it will be filtered out, since it violates the Case Filter (Chomsky 1986), which states that any sentence containing an overt NP without Case is ill-formed. If a nontopic NP is in a non-Case position, then the sentence must be ruled out, as the following sentence illustrates:

Nontopic NP in non-Case position

(60) *Ta   tiao   zhuozi.
    he   jump   table

    Sentence (60) is ungrammatical, since the sentence-final NP *zhuozi* 'table' is a nontopic NP without Case. The verb *tiao* 'jump' is an intransitive verb, so it can not assign Case to *zhuozi* 'table'. Therefore, nontopic NPs must be arguments and receive Case, so criterion (b) does not apply.

Topic in control of coreference in the topic chain.

    If several clauses are in a topic chain, the nontopic NPs can not participate in the deletion process within the topic chain.

(61) Zhangsan$_i$,   baba   daying   you   xin-che   de   Xiaohua$_j$ e$_j$
    Zhangsan   father   promise own   new-car   DE   Xiaohua   e$_j$
    qu   luxing. e$_{i/*j}$,   mama   ye   daying.
    Go   travel e   mother   also   promise

'Zhangsan, his father made a promise that Xiaohua, who owns a new car, can go
 travelling. His mother also made a promise.'

The nontopic NP *Xiaohua* cannot participate in the coreferential NP deletion within
the topic chain, since *Zhangsan* is in control of all the coreferential NPs in the topic chain.
However, *Xiaohua* can be in control of the coreferential NP deletion in the same clause
but not in the topic chain, as the coindexing between the empty subject of *qu luxing* 'go
travelling' and *Xiaohua* shows. This fact supports our hypothesis that criterion (d) is not
applicable to nontopic NPs, because they are not in the topic chain and can control
coreferential NP deletion in the same sentence but not within the topic chain.

Topic not in control of grammatical processes.

According to criterion (e), the topic does not play a prominent role in grammatical
processes such as reflexivization unless it is also the subject. Thus, only nontopic NPs
play major roles in Chinese sentences. Consider the following sentence:
Nontopic NP and reflexivization

(62) Zhangsan$_i$, baba kanjian Xiaoming shang-le ziji$_{*i/j}$
    Zhangsan father see Xiaoming hurt-ASP self
    'Zhangsan, his father saw Xiaoming hurt himself.'
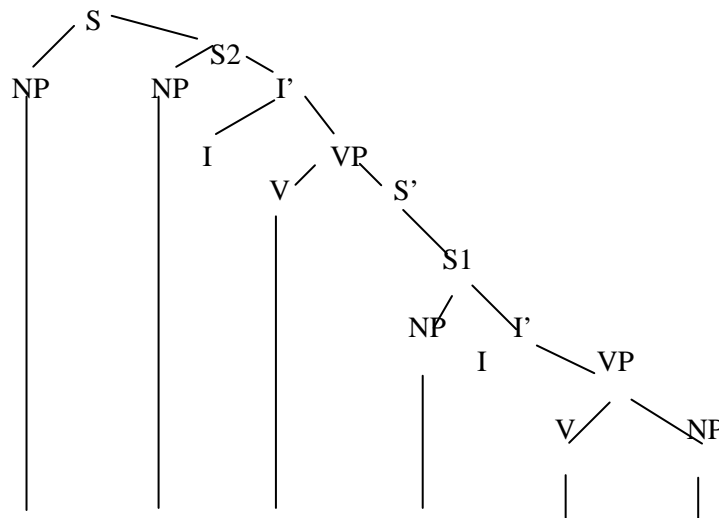
Zhangsan	baba	kanjian	Xiaoming	shang-le	ziji
Zhangsan	father	see	Xiaoming	hurt-ASP	self

According to the Binding Principle A, *ziji* 'self', being an anaphor, must be coindexed with a c-commanding antecedent in A (rgument) position in its governing category. Here, the governor of *ziji* 'self' is *shang-le* 'hurt', since there is no maxinal projection that dominates *ziji* 'self' but does not dominate *shang-le* 'hurt'. The minimal NP or S that contains *ziji* 'self' and its governor is the embedded S. Within the embedded S, the subject *Xiaoming* is the only NP which c-commands *ziji* 'self'. Hence, *ziji* 'self' is coindxed with *Xiaoming*, so it is bound in its governing category. This confirms our conjecture that criterion (e) cannot apply to nontopic NPs.

To Summarize, the criteria of topichood are not satisfied: Nontopic NPs can be nondefinite and nongeneric, they are arguments, they do not control coreference in the topic chain, and they participate in grammatical processes. We summarize the discussion up to now in the table 1 to show the differences and similarities among the primary topic, the *ba*-NP, and nontopic NPs. Obviously, the *ba*-NP shares all the properties of the primary topic. Thus, it can reasonable be considered a second topic.

The structure of the second topic

If the *ba*-NP is a second topic, the next question is: What is the structure of this second topic?[3] The structure we will propose can account for the properties of a second topic, as discussed in previous sections. Among these properties, the selection relation between the *ba*-NP and the main verb is the most crucial one for explaining the structure. We know that the *ba* NP does not have a selectional relation with the verb, so it does not have a thematic role. Therefore, the *ba*-NP must occupy a position where it can not be theta-marked.

In addition, Chinese allows null topics which are empty categories and must obey the Empty Category Principle (ECP) (Chomsky 1981). The *ba*-NP can also be null, as sentence (49) shows:

	primary topicthe	*ba*-NP	nontopic NP
difinite or generic	+	+	−
not an ar*gu*ment	+	+	−
coreference control	+	+	−
in control of grammatical	−	−	+

processes
heading a   +   +   −
topic chain

TABLE 1. Differences and similarities among the primary topic, the *ba*-NP, and

      nontopic NPs

(49) Ta   *ba* fangjian xiu-le   yixia, $e_i e_j$ qi-le-qi
    ranhou ei

    ---ᵢ --------ⱼ
    he   Baroom   repair-ASP a little   paint-ASP-paint
    then

    e_j zu   gei   women.
          rent   to   us

   'He had the room repaired, painted, and then rented to us.'

Since empty categories must be properly governed, Huang (1984b) proposed that the topic in Chinese is properly governed by INFL (Inflection) (which is assumed to be lexical in Chinese (Huang 1982)) to fulfill the requirement of ECP.

Moreover, though the topic is properly governed it need not be assigned Case, following the assumptions that the topic does not in general need a theta-role and that an element is visible for theta-marking only if it is assigned Case 9known as the Visibility Condition (Chomsky 1986)). Since the topic is not in a position to which a theta-role is assigned, there is no need for Case assignment.

Given these facts, we propose that the *ba*-construction is in a nontheta position, properly governed by INFL, since it is a second topic. Then what is the possible position of the second topic?

VP adjunction as the position of second topic

One possible position that a second topic can occupy is Chomsky-adjoined to a VP, as is NP2 below:

(63)

              S
            /   \ I'
        /   /   \
      NP1   INFL   VP2
             NP2/ \ VP1
           ba/ \NP2 V/ \NP3
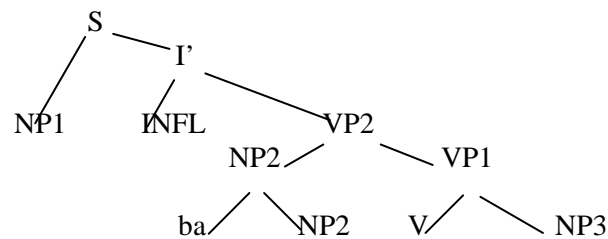
If the second topic, viz. NP2, occupies such a position, it will not be theta-marked, since a verb can only discharge an internal theta-role to a sister NP. Obviously, NP2 and

V are not sisters. Is it possible for NP2 to receive the external theta-role? The external theta-role is assigned compositionally by the verb and its complement to the subject (Travis 1984). NP2 is not the subject, since it is not immediately dominated by S and does not have any selectional relation with the verb. Since NP2 is not the subject, it will not be assigned the external theta-role.

INFL government

If the *ba*-NP is a second topic, it should be properly governed, since Chinese allows the occurrence of null topics. Does INFL properly govern the second topics as Huang predicts? Based on the definition of government given by Baker, NP2 will be governed by INFL. Baker (1988) porposes that X governs Y iff X c-commands Y and there is no category Z such that Z is a barrier between X and Y. Z is a barrier between X and Y iff Z is a maximal projection that dominates Y but not X, and either Z is not selected or there is a nearer governor for Z.

How is NP2 governed by INFL? INFL does not dominate NP2, and it c-commands NP2, since the first branching node above INFL is I', which also dominates NP2. There is no *ba*rrier between NP2 and INFL: since INFL selects VP as its complement, VP2 is not a *ba*rrier. Moreover, there is no nearer governor, since INFL is also the closest governor, Hence, INFL properly governs NP2.

Internal theta-role and variable object

Our proposal here can also account for the internal theta-role discharge of the verb. Theta-role assignment regulates D-structure representation, and it is preserved through every syntactic level of representation required by the Projection Principle to ascertain that the selectional properties of individual lexical items are observed. (Recall that according to the Theta Criterion each argument bears one and only one theta-role and that each theta-role is assigned to one and only one argument.)

According to Travis (1987), internal theta roles are uniformly assigned to the right in Chinese. Under this condition, these must be an empty category to the right of the verb in the *ba*-construction, either a trace as a result of move or a base-generated pronominal, so the internal theta-role of the verb can be discharged. The present paper will resolve this problem by appealing to the Generalized Control Rule (GCR, which will be defined later) proposed by Huang (1984a), which reflects a more complete picture of the framework.

Based on the present analysis, we assume that there is an empty category after the verb. In order to facilitate our reasoning, we first give an example:

(64) Ta   ba   Zhangsan$_i$ sha-le t_i
     he BA Zhangsan   kill-ASP
     'He killed Zhangsan.'
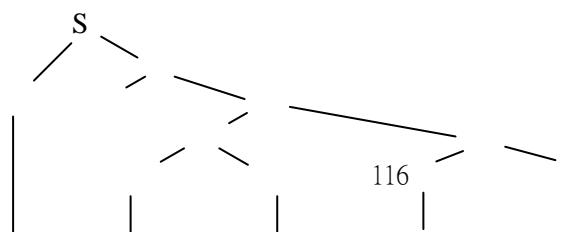
```
                    I'
        NP      I           VP
                    NP                  VP
                    TM      NP      V       NP

        Ta      ba      Zhangsan    sha-le      e
        He      BA      Zhangsan    kill-ASP    e
```

According to Huang (1984b), the null object in Chinese is a variable bound by an operator (Topic or COMP). It is not created by movement but generated and identified as a pro(nominal) at D-structure. Later, it becomes a variable by coindexing with its local A'-binder. Furthermore, it is in compliance with the Empty Category Principle (Chomsky 1982: 35):

(65) a. An empty category is a variable if it is in an

A-position and is locally A'-bound [by an operator].

The empty category after the verb *sha-le* 'killed' is a pronominal at D-structure, since it is free and not locally A-bound by an antecedent with an independent theta-role. Theoretically, Binding can occur at any syntactic level, but currently it is assumed to happen as S-structure. Later, the pro must be bound under the GCR (Generalized Control Rule), defined as follows:

(66) An empty pronominal must coindex with the closest c-commanding nominal to

determines its semantic content.

Obviously, the closest nominal element in nonargument position is the second topic, which c-commands the empty category (since the branching node above it dominates the empty category). Thus, the empty category is bound with the closest c-commanding nominal in A'-position. Therefore, it is a variable in an ar*gu*ment position locally bound by an operator (the second topic), in an A'-position. Our proposal here naturally resolves this puzzling phenomenon, hence reinforcing our hypothesis without violating any principle.[4]

Comparison with other theories

In this section, we will compare our approach with other theories. First, we will discuss the claim that the *ba*-NP is a PP as proposed by Li (1990) since she provides supporting evidence instead of taking the fact for granted. Then, we will argue against the viewpoint put forward by Cheng (1986) that the NP after *ba* is always an affected theme role.

The *ba*-NP as PP?

As just mentioned, the *ba*-construction is assumed to be a type of PP by several scholars (Wang 1957; Li and Thompson 1974; Huang 1982). Li (1990) adopted this idea and ar*gu*ed that the *ba*-NP can be coordinated with another type of PP. If true, this would

be crucial evidence for the claim that the *ba*-construction is one type of PP, since it is generally assumed that only elements of the same category can be coordinated. Here is one example:

(67) Ni   you   weita   you   ba ta   qiang qiang, shi   shenme
     you and   for him   and   BA him   rob money   be   what
     yisi?
     Meaning?
     'You forced away money for him and from him, what do you mean?' (Li 1990: 190)
     Li stated that the *ba*-NP is a PP because it can coordinate with another PP *wei* ta 'for him'.

Argument against *ba*-NP.

There is one serious problem with sentence (67), namely its grammaticality. From the question mark, it is obvious that even the author herself is not sure that this sentence is grammatical. I have consulted as many native speaker of Chinese as possible about this sentence, and none of them has said that it is acceptable. Moreover, the second conjoined sentence by itself is not grammatical either.

(68) *Ni   ba   ta   qiang   qian.
     you   BA   he   rob   money.

There are no other examples given to support Li's viewpoint. This undermines her claim that the *ba*-NP is a PP.

Another fact challenging the claim that the *ba*-construction is a PP comes from the deletability of *ba*. It seems that *ba* can sometimes be deleted without influencing the meaning.

Ba-deletion

(69) Wo   ba   shu   wang-le.
(69') Wo   shu   wang-le
     I   book   forget-ASP
     'I forgot the book.'
(70) Wo   ba   zheben   shu   wang-le.
(70') Wo   zheben   shu   wang-le.
     I   this-CLS   book   forget-ASP
     'I forgot this book.'
(71) Wo   ba   zhouzi   shoushi gangjing-le.
(71') Wo   zhouzi   shoushi gangjing-le.
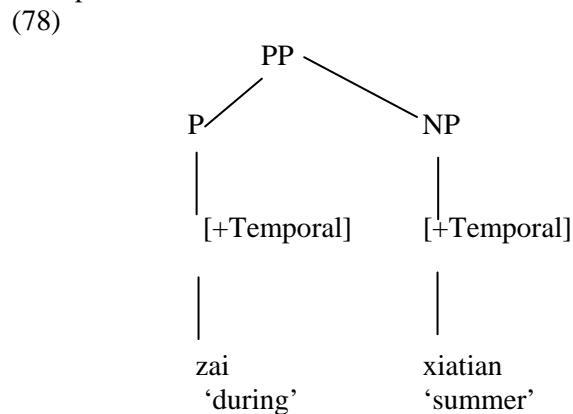   I   table   tidy-up   clean-ASP
     'I have tidied up the table.'
(72) Ta   ba   jingtian-de   gongke   zuo-wan-le.
(72') Ta   jingtian-de   gongke   zuo-wan-le.
     he   today-DE   homework   do-finish-ASP

'He has finished today's homework.'

(73) Ta   ba   zidian   mai-le.
(73') Ta   zidian   mai-le.
　　 he   dictionary   sell-ASP
　　 'He sold his dictionary.'

(74) Ta   ba   dangao   chi-le.
(74') Ta   dangao   chi-le.
　　 he   cake   eat-ASP
　　 'He ate the cake.'

(75) Ta   ba   zidian   dai-lai-le.
(75') Ta   zidian   dai-lai-le.
　　　 he   dictionary   bring-come-ASP
　　　 'He has brought the dictionary.'

(76)Ta   ba   baogao   xie-hao-le.
(76') Ta   baogao   xie-hao-le.
　　 he   report   write-finish-ASP
　　 'He finished writing the report.'

(77) Zhangsan   ba   wenti f   enxi-le   yici.
(77') Zhangsan   wenti   fenxi-le   yici.
　　 Zhangsan   question   analyze-ASP   once
　　 'Zhangsan analyzed the question once.'

Also previous evidence that the *ba*-construction is a PP can be disputed. If *ba* is a preposition and can be deleted, then any positively specified features such as [+Temporal], [+Direction], [+Location] should be alternatively realized in its phrasal sister, as Edmonds (1987) suggested.

In Chinese, bare-NP modifiers are argued by Ng (1989) to be PPs with null P heads whose positively specified features are alternatively realized on their sister NPs. One example is as follows:

(78)


```
                    PP
              /            \
          P                   NP
          |                   |
      [+Temporal]         [+Temporal]
          |                   |
         zai               xiatian
       'during'            'summer'
```

According to Emonds (1987: 620), nouns which can tolerate an empty P are assigned lexical representations such as the following:

(79) way, N, +Direction,...
    day, N, +Temporal
    place, N, +Location
    manner, N, +Manner

Then once a noun such as *xiatian* 'summer' is inserted into the deep structure, an empty Preposition is permitted if its appropriate feature [+Temporal] is alternatively realized within its sister, the NP.

If *ba* can be deleted, its positively specified features must be alternatively realized in its sister NPs. However, there seem to be no appropriate positively specified feature which can be realized in its sister NPs. If *ba* is a preposition and can be deleted without its positively specified features being realized in its sister phrasal categories, the deletion of *ba* would violate the Recoverability Condition, which states that only elements without semantic content can be deleted (Chomsky and Lasnik 1977). On the contrary, if *ba* is only a topic marker, then its deletion will not violate the Recoverability Condition, since it does not have semantic content.

NP after *ba* and affected theme role

Cheng (1986) proposed that only NPs bearing an Affected Theme role can follow *ba* (which she also assumed without supporting evidence to be a proposition). According to Miyagawa (1989), the term 'affected' includes a wide range of events, some of which are listed in the following (Miyagawa 1989: 57):

(80) A partial characterization of affectedness
    a. That which is exchanged: exchange.
    b. That which is created: make, write, build.
    c. That which is converted: correct, repair.
    d. That which is extin*gui*shed, consumed, destroyed, or gotten rid of: eat, drink,
        extin*gui*sh, erase, break, kill lose, get rid of, forget.

Intuitively, most of the actions in (80) naturally fall into a class of events that affect something, either by moving it or changing it. Thus, the referents of those NPs are affected by the action of following verbs.

Some of the NPs after *ba* in the sentences discussed above confirm this point according to the criteria in (80). In sentence (73), *zidian* 'dictionary' is affected since it is sold, so it is the Theme of exchange, *dangao* 'cake' in (74) is affected since it is the Theme of consumption, and *ba*ogao 'report' in (76) is also affected since it is the Theme of creation. For these reasons, Cheng concluded that *ba* assigns the theta role Affected Theme to the following NP.

In addition, verbs that can occur with *ba* all indicate a change of state, and they impose a change of state on referents of the object NPs, either physically or abstractly according to Cheng (1986). Some verbs of this type are *xie* 'write', chi 'eat', *sha* 'kill', and *wang* 'forget'. Thus, the internal theta-role of those verbs is called <Affected Theme>, since they can impose a change of state on the object NP.

Nevertheless, it seems that verbs occurring with *ba* can not discharge their internal

theta-role, since theta-role is assigned to the right in Chinese (Travis 1987), and there is no NP to the right of the verb. If the internal theta-role can not be discharged, this would violate the Saturation Principle, which states that every theta-role must be discharged (Fukui and Speas 1986). This phenomenon is explained by identifying the Affected Theme role with the Theme role assigned by *ba*. Here is one example from Cheng 91986: 44-45):

Affected Theme Role

(81) Ni   ba   Zhangsan   da-shang-le.
       you BA   Zhangsan   hit-wounded-ASP
    'You hit Zhangsan and he is wounded.'

    The argument structure of the verb *da-shang* 'hit-wounded' is *<Agent*, Affected Theme>.

    The structure of VP (*ba* Zhangsan da-shang *le*) is as follows (Cheng 1986: 45):

(82) Theta Identification

    The theta-role of the verb *da-shang* 'hit-wounded' is discharged and so is that of *ba*. Since both theta roles are Affected Theme according to Cheng (1986), they are identified with each other, indicated by a line connecting the two relevant theta-roles. According to Cheng, the notion of theta identification seems to solve the mysterious phenomenon, but how these two are identified with each other is also a mystery.
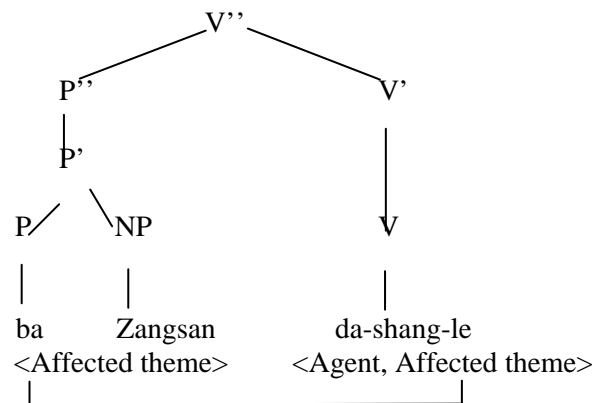
Argument against affected theme role in the *ba*-construction

There are two major problems with the treatment of the *ba*-construction proposed by Cheng. First, since theta roles are assigned to the right in Chineses, how is the theta-role assignment of the verb achieved? Second, is *ba* really a theta-role assigner, and is the NP after *ba* always an Affected Theme?

Assignment of thematic role.

Since in Chinese internal thematic roles are uniformly assigned to the right, there must be an empty category following the verb in the sentence with a *ba* NP so that the verb can discharge its internal theta role. This problem is not dealt with by Cheng, since there is no empty category following the verb according to her explanation. If there is not empty category after the verb, how is the theta-role discharged? What is the direction of the theta-role assignment?

The analysis proposed in section (4) gives a reasonable account of this phenomenon while preserving the directionality of theta-role assignment. The internal theta-role is discharged to the base-generated pronominal, so the direction of theta-role discharge is still to the right. Moreover, we have already mentioned in section (2) that the *ba*-NP is not necessarily the argument of the adjacent verb. We repeat the sentences here for ease of reference.

(24) Wo   ba   Zhangsan   ku-de   hen   shangxin.
     I   BA   Zhangsan   cry-DE   very   sad
   'I cried so much that Zhangsan was very sad.'

(26) Wo   chadianer   ba yaoshi   wang-le   dai.
     I   almost   BA key   forget-ASP   bring
   'I almost forgot to bring the key.'

If it is not the argument of the adjacent verb, the verb will not identify its internal theta role with that of the *ba*-NP. Thus, the existence of Affected Theme identification is in doubt.

The *ba* NP as non-affected theme role.

There are sentences in which the NPs after *ba* match a null ar*gu*ment position after the verb but they do not bear Affected Theme roles. Consider the occurrences of *ba*-NPs in the following sentences:

Non-Affected Theme role

(83) Ta   ba   chengji   kan-de   hen   zhongyau.
     he   BA   grade   see-DE   very   important
   'He considers grades very important.'

(84) Ta   ba   jege   shijie   xiang-de   tai   mei.
     he   BA   this   world   think-DE   too   beautiful
   'The way in which he views this world is too beautiful.'

Obviously, these two verbs *kan* 'see' and *xiang* 'think' are not on the list of verbs which carry the property of affectedness. Moreover, in (83) *chengi* 'grade' does not become higher or lower because of the verb *kan* 'see'. Similarly, in (84) the way the person views this world does not make *zhege shijie* 'this world' become better or worse. Thus, there is clearly no Affected Theme role here, which question the validity of Cheng's proposal.

Conclusion

In this paper, we have concentrated on the problem of the *ba*-construction. It has been shown that *ba* is not a preposition, since the deletability of *ba* will result in a violation of the Recoverability condition. That *ba* is best characterized as a topic marker can be confirmed from the fact that the be-NP has all the properties of a topic: the *ba*-NP can be definite or generic, it need not have a selectional relation with the verb, it occupies the initial position in a *ba*-topic chain, it is in control of the pronominalization or deletion of all the coreferential NPs in a *ba*-topic chain, and it does not play a prominent role in grammatical processes.

A reasonable analysis of the second topic structure has been proposed. We resort to the notions of Government and *Ba*rrier proposed by Baker (1988) to explain how the second topic is properly governed by INFL. This complies with Huang's prediction that if a lan*gu*age has null topics, then the topic must be properly governed. Moreover, we also resolve top problem concerning the internal theta-role discharge of the verb following the *ba*-construction. The empty category after the verb, constrained by ECP and GCR, is a variable since it is bound by the second topic in A'-position. Given all these facts, we confirm our hypothesis that the *ba*-construction is a second topic. Nevertheless, there are some constraints on the *ba*-construction are not accounted for, so we suggest further study of these idiosyncratic characteristics.

Abbreviations

A	argument
AGR	agreement
ASP	aspect marker
BA	*ba*-construction marker
CLS	classifier
DE	marker indicates the relationship of set-member, possessor-possessed, whole-part, and modifier-modified.
GCR	gneralized control rule
INFL	inflection
NP	noun phrase
P	preposition
PP	prepositional phrase
PRO	pronominal
V	verb
VP	verb phrase

Notes

[1] In this paper, the terms 'Chinese' and 'Mandarin Chinese' are used interchangeably.
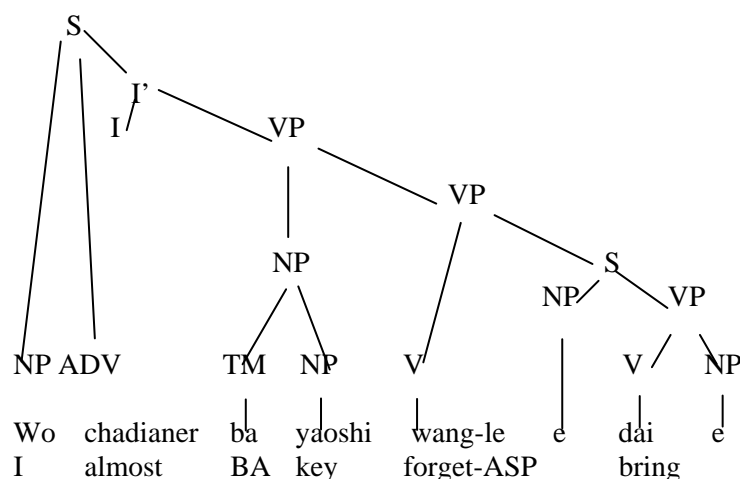
responsibility for any errors that this paper may contain, however. A special word of appreciation must go to Professor Albert J. Schutz, who has commented on the revision of this paper.

[2] Except for Genitive, Case is assigned under government.

[3] When this paper was about to be published, I found that Huang (1991) proposed that the *ba*-construction should be base-generated and occupy the specifier of VP.

[4] We did not look into details of the sentence structure in (26). Nevertheless, since in Chinese the empty object is presumed to be a variable and it must coindex with a NP in nonargument position, the only available antecedent in the nonargument position is the second topic. The embedded subject empty category can only be verb *wang* 'forget' can only take an animate noun as its subject.

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                    S
           ┌────────┼──────────────┐
           │        │   I'
           │        │  ┌──┴──────────VP
           │        │  I          ┌──┴──────────┐
           │        │             │            VP
           │        │             │         ┌───┴───────────┐
           │        │            NP         │              S
           │        │          ┌──┴──┐      │          ┌────┴────┐
           │        │          │     │      │         NP        VP
           │        │          │     │      │                ┌──┴──┐
          NP       ADV        TM    NP      V'               V     NP
           │        │          │     │      │                │     │
          Wo    chadianer      ba  yaoshi  wang-le           e    dai    e
          I      almost        BA   key    forget-ASP             bring
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