

base-generated in T, whereas *-guo* is base-generated in Asp. As to the explanation of the example shown in (55c), she also uses the “blocking effect” of the Neg head on the lowering of *-le* onto V. Assuming that *-le* is in the Tense node, the ill-formedness in (55c) is accounted for naturally.

This analysis, as observed by Li (1999, 2007), though appeals at the outset, involves many problems. First, it is obvious that *-le*, which is widely accepted as a perfect aspect marker, should be treated as past tense marker. This is especially true when we take (74) into consideration.

(74) *mingtian wo jiu kaichu le ta.*
tomorrow I then expel PAST him

“I will expel him tomorrow.” (Li, 2007: 11)

Furthermore, in her analysis, Chiu claims that *bu* is used when a non-past event or state is negated, while *mei(you)* is used to negate a past event. This is obviously problematic, as illustrated in (75a) and (75b) respectively:

(75) a. *qunian wo bu hui jiang yingyu.*
last year I not can speak English

“I could not speak English last year.”

b. *mingtian zhe shihou wo hai mei xiaban.*
tomorrow this time I yet not finish working

“I will not have finished work this time tomorrow.”

According to Chiu, the temporal adjunct *qunian* “last year” in (75a) indicates past time and it should exclude the appearance of *bu*. While future time *mingtian* “tomorrow” in (75b) is semantically incompatible with *mei*. The two sentences are grammatical.

Some other important works account for the syntactic distribution of *bu* in terms of its aspectual selection, such as Lin (2003), Su (2007) and Li (1999, 2007). It is a pity that due to the limitation of space, we have to stop at this point to present our own explanation.

4.2 Our Analysis

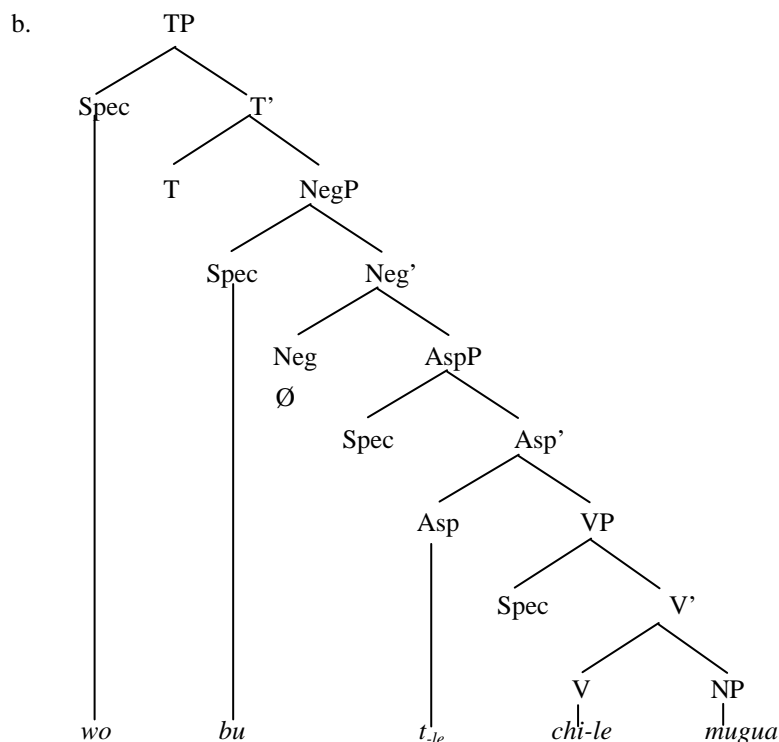
In §4.1, we reviewed various explanations of the incompatibility of *bu* and *-le*. Although a number of principles have been put forward to account for this incompatibility, but none of them seem very satisfactory. In this subsection, we will argue that the TG framework also provides an explanation, which can better explain this incompatibility.

As discussed in §3, Chinese is a language allowing Asp-lowering. The trace left behind in the Asp node by the moved head is properly head governed by T when there is no NegP intervening. However, when there is a NegP intervening, an ECP violation will arise.

Because the Chinese negative marker *bu* serves as the specifier of NegP (Spec,NegP), leaving the head Neg position of NegP null, nothing therefore head-governs the trace left behind in the Asp node. Assuming this analysis to be on the right lines, how can we account for the ill-formedness shown in (55c)? To make our explanation more explicit, we will represent (55c) in a tree diagram, as in (76):

(76) a. **Wo bu chi le mugua.*

I not eat PERF papaya



As the tree diagram shows, the perfect aspect marker *-le* is base-generated in the head position of AspP, which is higher than the VP containing *chi*, onto which *-le* is lowered. The lowering process leaves a trace behind in the Asp node. This trace must be licensed, i.e., must satisfy ECP. In affirmative sentences, it can satisfy ECP via proper head government by T, which is essential¹⁴. However, in negative sentences, there is a NegP intervening between TP and AspP. Because the Chinese negative marker *bu* serves as the specifier of NegP, as is shown in §2.2, its head Neg is left empty¹⁵. Nothing head-governs the trace left

¹⁴ According to Chomsky (2000), the core functional categories are C, T and v, and in note 6 of Chomsky (1999) he indicates that for expository purposes he use T and C as cover terms for a richer array of functional categories, as in MI. Zanuttini (2001) also considers T to be nucleus of the clause.

¹⁵ We must emphasize that the emptiness of Neg here should be of a different nature from that of T. T is not empty in fact; it is covert; while Neg is empty overtly and covertly, otherwise, it can be crossed

behind in the Asp node, and ECP violation thus arises. Therefore (55c) is excluded.

It seems that the ill-formedness arises only when the trace left behind in the Asp node is not properly head governed. Assuming this assumption to be on the right line, the question we still need to answer is: Can we avoid the problems involved in the previous analyses? To answer this, we will examine all the other relevant facts mentioned above, namely, example (49) from §3, examples (62), (71), (72b) in the present section. They are reproduced in (77-80).

(77) *Wangli bu zai kan dianshi*

Wangli not PRO watch TV

“Wangli is not watching TV.” (Li 2007: 67)

(78) **Ta bu tui zhe yi liang jiaotache.*

he not push Asp one CL bicycle

Intended reading: “He is not pushing a bicycle.” (Lin 2003:431)

(79) *ni bu yinggai chi le pingguo.*

you not should eat PERF apple

“You shouldn’t have had apple.”

(80) **wo bu chi guo mugua.*

I not eat EXP papaya

Intended reading: “I have not eaten papaya.” (Ernst 1995:688)

Since the Chinese negative marker *bu* is in Spec,NegP, the explanations for (77), (78) and (80) are very simple now. (77) does not involve Asp-lowering (*zai* is a particle, §3.2.2.1), and there is no ECP violation involved at all. (78) and (80) are excluded on the same grounds as (76): lack of proper head government leads to ECP violation. (79), however, seems different. It involves an AUXP which we have not discussed until now. We need to consider AUXP first before we can give an explanation. First look at two sentences: (81) a. She may not be enjoying syntax.

b. She is not enjoying syntax. (Radford 2004:167)

In (81a), *not* occupies the head position of NegP, and the modal auxiliary *may*, which is higher than *not*, should occupy the head position of TP. We assumed that in English the verb raises from V to the higher Asp node to derive a complex [V+ing] (§3.2.1). That is to say, *enjoying* occupies the head position of AspP; *be* therefore must occupy some intermediate position between the NegP and AspP. Since *be* is an auxiliary verb, we suppose that *be* in (81a) occupies the head position of an AUXP. Then (81b) can be analyzed as follows: *be* originates as the head of AUXP, but moves from AUX to T. This is

by the *suo* (Ting 2006; see also the discussion in §2.2). However, the T cannot be crossed like that although it is covert.

shown in (82-83) below:

(82) [CP [C Ø] [TP She [T may] not [AUXP [AUX be] [AspP [Asp enjoying [VP [V t_{enjoy}] syntax]]]]]]

(83) [CP [C Ø] [TP She [T be] not [AUXP [AUX t_{be}] [AspP [Asp enjoying [VP [V t_{enjoy}] syntax]]]]]]

The different between (81a) and (81b) can be mirrored by the perfect auxiliary *have* in (84):

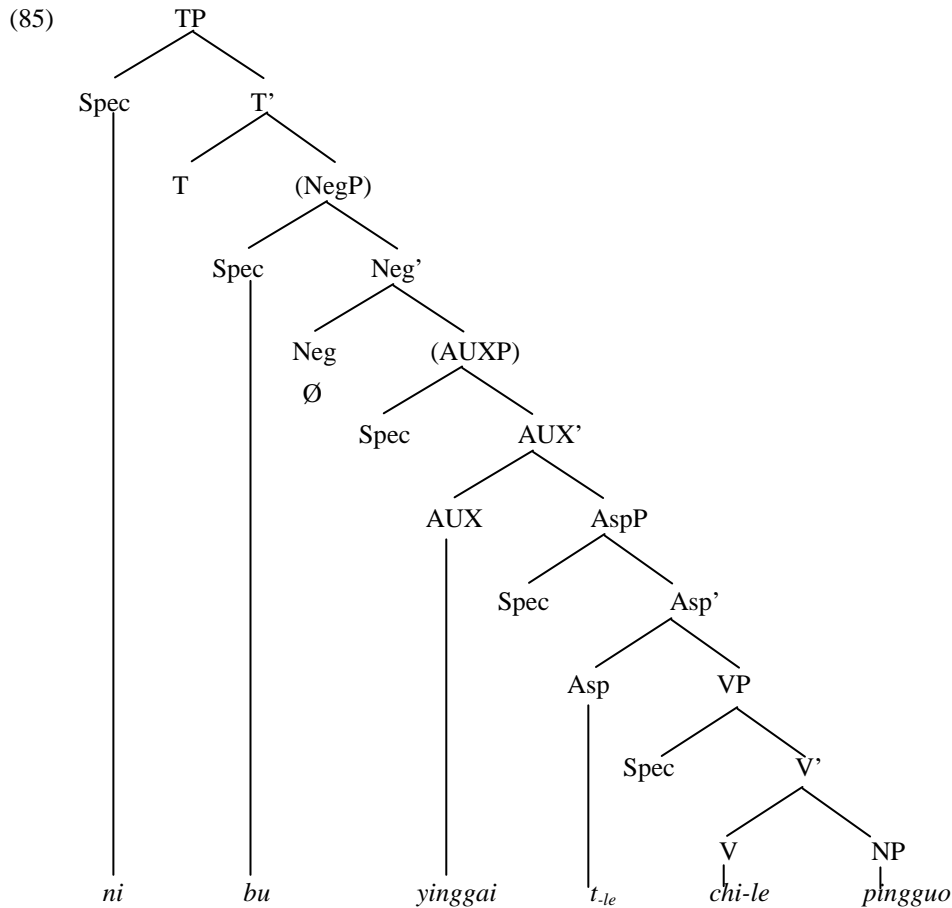
(84) a. He may not have done it.

b. He has done it.

(Radford 2004:167)

The head T position of TP in (84a), according to Radford (2004), is occupied by *may* and the head V position of VP by *done*. Hence the infinitive form *have* must occupy some position intermediate between the two, namely, the head of AUXP.

Suppose that an AUXP also exists in Chinese, as in (85) (We put AUXP in parentheses to accommodate constructions which do not contain auxiliaries):



With this assumption, the phenomena illustrated by (77-84) can be explained naturally. As a

modal auxiliary verb¹⁶, *yinggai* “should” must occupy the AUX position which heads AUXP. Since the affix hoping (Asp-lowering) must be local, the AUXP can only be positioned higher than AspP. Then the perfect aspect marker *-le* is lowered onto *chi* in VP, leaving a trace behind in the Asp node, which is properly head governed by *yinggai* in AUX, therefore it satisfies ECP.

This analysis also enables us to predict that if there is a modal auxiliary verb in AUX properly head governing the trace left behind in the Asp node, the sentence should be well-formed. The following examples demonstrate that our prediction is right.

(86) *ta bu yinggai tui zhe yi liang jiaotache.*
 he not should push Asp one CL bicycle
 “He should not be pushing a bicycle.”

(87) *wo bu yinggai chi guo mugua.*
 I not should eat EXP papaya
 “I have not eaten papaya.”

(88) *Wangli bu yinggai zai kan dianshi*
 Wangli not should PRO watch TV
 “Wangli should not be watching TV.”

Some readers may argue that to place AUXP lower than NegP will run into difficulty in explaining sentences such as the following (from Li 2007:280):

(89) *ta yinggai bu qu faguo*
 he should NEG go France
 “It should be obligatory for him not to go to France.”

(90) *ta hui bu qu faguo*
 he will NEG go France
 “It is possible that he will not go to France.”

(91) *ta keyi bu qu faguo*
 he may NEG go France
 “It is permissible for him not to go to France.”

(92) *ta neng bu qu faguo*
 he can NEG go France
 “It is permissible for him not to go to France.”

(93) *ta bixu bu qu faguo.*
 he must not go France

¹⁶ There has been no standard list of modal auxiliary verbs in Chinese. According to Yuen-Ren Chao (1968), Li & Thompson (1981), Tsang (1981), etc., there are at least five. They are *yinggai* “should”, *hui* “will”, *keyi* “may”, *neng* “can”, *bixu* “must”.

“He must not go to France.”

The modals in (89-93) obviously have wide scope with respect to negation whereas *yinggai* in (85-88) has narrow scope with respect to negation. How can we account for that? According to Roberts (1998), wide-scope modals (like *must* in English) are directly generated in T, whereas narrow-scoped modals (like *need* in English) are initially generated in some position below T (perhaps the head position of AUXP). In accordance with his proposal, we argue that *yinggai*, *hui*, *keyi*, *neng* and *bixu* in (89-93) should be base-generated in T, while *yinggai* in (85) is base-generated in AUX. With this assumption, we can easily explain the properties of (89-93), both syntactic and semantic. For lack of evidence, we will not go on to pursue this question here.¹⁷

5 Understanding *meiyou*

As is mentioned previously, Chinese Grammarians have identified quite a number of negative markers. Primarily, only two are in common use, *bu* and *mei*. *Bu*, as is shown, may precede all predicates with the exception of the item *you*, which, as a lexical and an aspectual auxiliary, is exclusively negated by the negative marker *mei*. In contemporary Chinese, *mei* and *meiyou* have hardly any difference in meaning. From §2 to §5, we focus mainly on *bu*. This section deals with *meiyou* exclusively. We will first review the previous analysis, and then we present our own analysis.

5.1 Previous Analyses of *mei(you)*

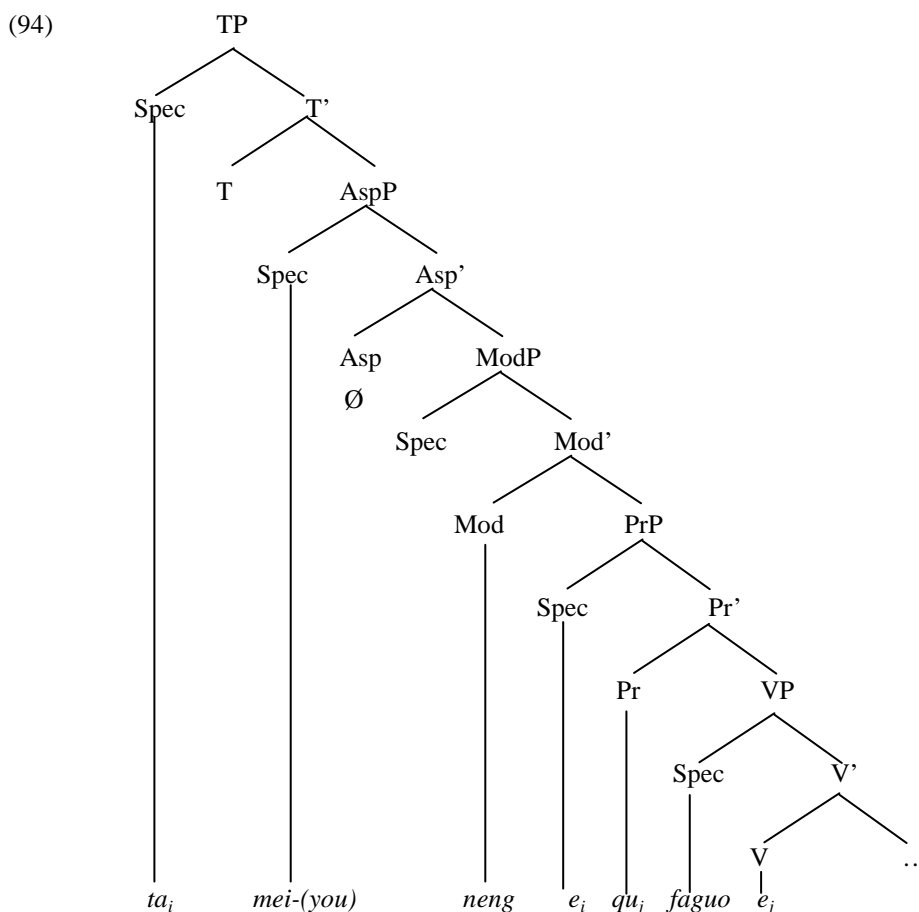
In the literature, *mei(you)*¹⁸ has been discussed by many scholars. The most well-known discussion is Wang (1965)'s *you/-le* alternation transformational analysis, which we discussed in §4.1.1.1.

Some other proposals have been put forward by other scholars. For example, Cheng and Li (1991) suggest that *mei(you)* heads NegP, and *mei* is an alternant of *bu*; Chiu (1993) argues that NegP is headed by *bu* and *mei*; Ernst (1995) treats *mei* as a prefix realizing [+NEG] on *you*; Li (1999, 2007) proposes that *mei* is a prefix to *you*, which is base-generated under Asp⁰. Since Cheng and Li (1991) and Chiu (1993)'s analyses are much the same as Wang's, which we discussed in §4.1.1.1, here we will discuss only Li's.

¹⁷ Actually, an anonymous expert has pointed that the claim that modals are located in T position will be considered a stipulation and this inconsistency weakens the argument of this paper. He/She suggests that the authors take into account the cartographic approach (Rizzi1997, 2004, Cinque 1999, Bulter 2003, etc.).

¹⁸ Following tradition, we put *you* in brackets to indicate that *you* can be either overt or covert. In this thesis, we assume that the covert *you* is only covert phonetically, but not syntactically.

Li (1999, 2007) treats *you* as an aspectual marker, and *mei* as a prefix base-generated on *you* under Asp. This is shown in (94) from Li (2007:281) (PrP stands for Predicate Phrase):



However, she proposes that *zai* is also under Asp (Li 2007:18). If her assumption is right, (95) must be problematic.

(95) *wo mei(you) zai kan dianshi.*

I not (have) PRO watch TV

“I was not watching TV.”

A even worse problem may also arise from her proposal that modals occur below AspP (Li 2007:281). This gives rise to the wrong prediction illustrated by (96):

(96) **ta zai keneng kan dianshi.*

He PRO may watch TV

Intended reading: “He may be watching TV.”

In order to avoid the problem (95) illustrates, we should not treat *you* as an aspect marker;

and to avoid problem in (96), modals should be higher than AspP.

5.2 Our Analysis of *mei*(*you*)

We follow Wang (1965), treating *mei* as the alternant of *bu* before *you*.¹⁹ This view has been accepted widely (e.g. Huang (1988), Cheng and Li (1991), Chiu (1993), Liu (2005)).

In order to thoroughly understand *mei*(*you*), we have to discuss *you*. Two types of *you* can be distinguished. First *you* can act as a lexical verb conveying both possessive and existential meanings. This is shown in the following examples (cited from Li (2007:48)):

(97) *Weifang you qian.*

Weifang has money.

“Weifang has money.”

(98) *zhuozi shang you yi ben shu.*

table surface have one CL book.

“There is a book on the table.”

Second, *you* acts as an auxiliary verb. The occurrence of *you* as an auxiliary is restricted to negative clauses in standard modern Chinese where it is obligatorily negated by the negative item *mei*.

A further distinction should be made between two kinds of *you* as auxiliary verb: The first type is *you* as an aspectual auxiliary verb, with aspectual meaning, as in (99), where there are no aspectual markers such as *-le*, *-guo*, *-zhe* and *zai*; the second type is *you* as a pure auxiliary verb (or structural auxiliary verb), without aspectual meaning, as in (100), (101) and (102), where there are aspectual markers such as *-guo*, *-zhe* and *zai*, but not *-le*.²⁰

(99) *wo mei(you) kan dianshi.*

I not (have) watch TV

“I did not watch TV.”

(100) *wo mei(you) kan guo dianshi.*

I not (have) watch PERF TV

“I have not watched TV.”

(101) *wo mei(you) kan zhe dianshi.*

I not (have) watch PRO TV

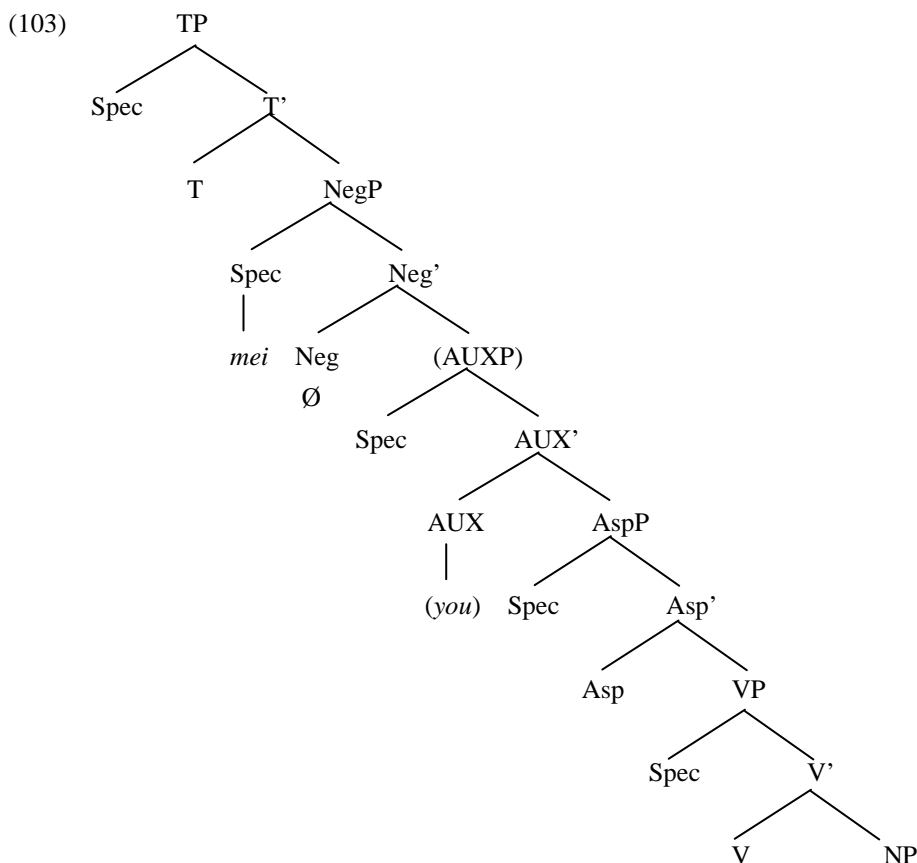
“I was not watching TV.”

¹⁹ Attention should be paid that *mei* and *bu* have different origins, according to Shi (2001).

²⁰ Almost all the previous studies distinguish only the lexical verb *you* and the aspectual auxiliary verb *you*. This will mislead the reader to take *you* in (7), (8) and (9) as an aspectual marker. Actually, the aspects of (7), (8) and (9) are not determined by *you* (which is a perfective aspect marker), but by *guo*, *zhe* and *zai* respectively. This is especially true in (8) and (9), where the aspectual markers *zhe* and *zai* do not co-occur with perfective aspectual marker *le*.

- (102) *wo mei(you) zai kan dianshi.*
 I not (have) PRO watch TV
 ‘‘I was not watching TV.’’

Obviously, the first type of *you* is simple, because here *you* is just a common verb, occupying the head of VP in the tree diagram. However, the second type of *you* is complex, because *you* here is an auxiliary verb, occupying the head of AUXP. A structural analysis of *mei(you)* (when *you* is an auxiliary verb) is shown as in (103):



This structure can explain (99-102) naturally. In (99) and (102), no Asp-lowering is involved, and no ECP violation arises. (100) and (101) involve Asp-lowering, but the traces left behind in the Asp node are properly head governed by *you* in AUX.

We may notice that the perfective aspect marker *-le* is not only incompatible with *bu*, but also with *mei(you)*. This is shown in (104).

- (104) **ta mei(you) kan le dianshi.*
 he not (have) watch PERF TV
 Intended reading: ‘‘He did not watch TV.’’

How can we account for this? According to Cinque (1999)'s UBH²¹, the functional head can be realized in several possible ways, at least two. For example, tense can be realized as the bound affix on the verb, or as the independent tense element (like the auxiliary). Then we can assume, in accordance with the usual practice of traditional linguists, that *-le* is the bound affix form expressing perfective aspect and *you* is the auxiliary form expressing perfective aspect. In one sentence we cannot have two candidates to be the potential realization for one functional head.²²

5.3 *mei*(*you*) and Modals

It seems that *mei*(*you*) is incompatible with modals.²³ Consider the following examples (Cited from Li (2007:278-9)):

- (105) **ta mei yinggai qu faguo*
 he not should go France
 Intended reading: "He shouldn't go to France."
- (106) **ta mei hui qu faguo*
 he not will go France
 Intended reading: "He will not go to France."
- (107) **ta mei keyi qu faguo*
 he not may go France
 Intended reading: "He may not go to France."
- (108) **ta mei bixu qu faguo*
 he not must go France
 Intended reading: "He must not go to France."

With our structural analysis of *mei*(*you*) in (103), *mei* is placed at Spec, NegP, and the auxiliary verb *you* heads AUXP. The ungrammaticality of these examples is easy to explain. Since the head of AUXP is occupied by *you*, it is impossible for other auxiliaries to appear in the AUX. However, if we consider more sentences, we find some counterexamples. One

²¹ Universal Base Hypothesis, that is, all languages have the same fundamental hierarchical structure at the clausal level, and that every clausal projection in this hierarchy is necessarily associated with a semantic interpretation. This proposal is consistent with the view that the syntactic level of LF is itself universal in nature, since it provides systematic input to a universal interpretive component. In its weakest formulation, this view is based on the plausible assumption that the formal aspects of grammatically-encoded semantic interpretation are universal in nature.

²² This fact is accounted for by Wang (1965) in terms of "affix-hopping", which obligatorily shifts a base-generated *you* to a postverbal position in affirmative contexts (followed by a morphophonemic rule of *you* → *-le*) but is blocked otherwise.

²³ Here we limit our discussion to the modals that follow negation. There are still occasions where the modals precede negation. We do not discuss this here. See some explanation in §4.2.

example from Li (2007:279) is reproduced in (109):

(109) *ta mei neng qu faguo*

he not can go France

“He was not able to go to France.”

As illustrated in (109), *mei(you)* is found to be compatible with the modal *neng*. The problem presented in (109) seems to have aroused little attention in the research field of Chinese linguistics. There is a mention without discussion of the compatibility of *mei(you)* with *neng* as an exceptional case in Cheng, Huang and Tang (1996:46, (iii) of Footnote. 3), as well as in Li (2007:279). We do not pursue this question here, either.

6 The Negative Marker *bu* and Postverbal Adjuncts

Concerning the negative marker *bu*, two facts are in focus. They are:

(i) inability of the negative marker *bu* to occur with the perfective aspect marker *-le*.

(ii) incompatibility of *bu* and the manner phrase in the V-*de* construction.

As is explained, the first one can be explained simply by proper-head government in the framework of GB. In this section, we will go on to discuss the second fact.

6.1 Previous Analyses

Consider two sentences from Huang (1988:274):

(110) *wo pao de hen kuai.*

I run DE very fast

“I run very fast.”

(111) *tamen tiao de hen lei.*

they jump DE very tired

“They jumped till they got very tired.”

According to Huang, sentences like (110) are traditionally referred to as Descriptive Complement Constructions, and those like (111) are Resultative Complement Constructions. Negative forms of these kinds of sentences are shown in (112) (Huang 1988:278):

(112) a. *tamen pao de bu kuai.*

they run DE not fast

“They don’t run fast.”

b. **tamen bu pao de kuai.*

they not run DE fast

As is shown, *bu* is incompatible with the manner phrase in the V-*de* construction. Therefore,

the negative form of these kinds of sentences must be constituent negation²⁴, as shown in (112a), in contrast with sentential negation. Why do these kinds of sentences permit (112a), but not (112b)? In other words, why is the negative marker *bu* incompatible with the manner phrase? Previous studies have put forward many hypotheses. In this subsection, we will review some of these studies.

Huang (1988) proposed Principle P (§4.1.1.2) to account for the incompatibility of the negative marker *bu* and postverbal adjuncts. When Principle P is applied to (112b) above, it would be analyzed as having the structure in (113):

(113) **ta* [[*bu pao*] *de hen kuai*]

The structure in (113) shows that *bu* is adjoined to the verb, but at the same time the descriptive expression has wide scope over the negative verb. However, this structure results in a semantic anomaly: someone is slow with respect to some event, but, at the same time, the sentence presupposes the non-existence of the relevant event. Therefore, the sentence is ruled out for semantic reasons (Huang 1988, p284).

In Huang's analysis, *bu* is assumed to be base-generated in an INFL node. When *bu* is adjoined to an element in INFL before the verb, the negated element in INFL may have wide scope over the entire VP, shown as follows (cited from Huang (1988:285)):

(114) a. *ta mei-you pao de hen kuai.*

he not-have run DE very fast.

“He did not run fast.”

b. *ta bu-shi pao de hen kuai.*

he not-be run DE very fast

“It is not the case that he runs fast.”

c. *ta bu-hui pao de hen kuai.*

he not-will run DE very fast

“He will not run fast.”

As observed by Ernst (1995) and Li (1999, 2007), Huang's account appears to be attractive as a possible solution for the question under discussion, but it runs into several problems, both empirically and conceptually.

First, in Huang's theory, *bu* is a negative morpheme in INFL, which must be attached to an element in INFL or V⁰. However, (115) provides a counterexample:

(115) *wo bu zongshi pao de kuai.*

I not always run DE fast

²⁴ In accordance with Teng (1974), sentential negation is generated through phrase structure rules, whereas constituent negation is specified in the lexicon. Here, we made this judgment simply because *bu* in (3a) is not contained within NegP (if it is, *bu* should be placed before *pao* as in (3b)).

“I do not always run fast.”

Second, it is assumed that when *bu* is adjoined to V, it has narrow scope over V only. In the same vein, when *bu* is attached to an element in INFL, we would expect it also to have narrow scope over the element in INFL only; but it does not. Consider example (116):

(116) *wo conglai bu deng hen jiu.*

I ever not wait very long

“I never wait for long.”

In (116), clearly *bu* cannot just take narrow scope over V, because what is negated is not the verb itself, but the VP *deng hen jiu* “wait for long”.

Ernst (1995) proposes that “*bu* is a proclitic on the following word” to account for the second fact. Consider the following sentences from Ernst (1995:666)

(118) a. *ta jiang de (hen) qingchu.*

he speak DE very clear

“He speaks clearly.”

b. **ta bu jiang de (hen) qingchu.*

he not speak DE very clear

Intended reading: “He does not speak very clearly.”

c. *ta jiang de bu (hen) qingchu.*

he speak DE not very clear

“He doesn't speak clearly.”

Ernst assumes that “at DS while preverbal manner expressions are of the form [AP *de*], their postverbal variety is of the form [*de* AP]” (Ernst 1995:677). Since *de* in [AP *de*] is cliticized to the preceding AP, thus satisfying the morphological requirement, no movement is necessary. On the contrary, since *de* in [*de* AP] is not yet cliticized to a preceding element, it must postpose to meet its morphological requirement. Based on this assumption, Ernst (1995:667) explains the ill-formedness of (118b) by proposing that “the manner adverbial can only be generated between *bu* and the verb and must move to postverbal position, leaving a trace.” Therefore, this trace blocks cliticization, violating (118b).

Ernst’s morphological approach looks appealing. However, serious problems exist. The main problem with Ernst’s approach lies with the assumption of the base position of adjuncts. In Ernst’s proposal, preverbal manner expressions are of the form [AP *de*] and their postverbal counterparts are of the form [*de* AP], but both of them are generated to the left of the verb. In fact, they are fundamentally distinct. Consider (119):

(119) a. *ta pao de hen man. → ta hen man de pao.*

he run DE very slow he very slow De run

- “He runs very slowly.” “He runs very slowly.”
 b. *yifu xi de hen ganjing.* → **hen ganjing de xi yifu.*
 clothes wash DE very clean very clean De wash clothes
 “The clothes come clean after the wash”

Semantically, as reflected by the English glosses, in (119a), the preverbal manner expression states the manner in which the actor has performed the action, while the postverbal counterpart indicates the speed of the action. What's more, as is shown in (119b), all the structures with a preverbal manner expressions do not have postverbal counterparts.

Li (1999, 2007) argues that the incompatibility of *bu* and postverbal adjuncts arises in some cases from semantic anomaly. In order to explain this, she proposes *Bu-Requirement*:
 (120) *Bu-Requirement*: *bu* places a semantic requirement of non-completion upon its co-occurrence situation.

Now consider the following examples from Li (2007:167-8):

- (121) **ta bu lai san ci.*
 he not come three times
 Intended reading: “He did not come here three times.”
- (122) **ta bu ku liang xiaoshi.*
 she not cry two hour
 Intended reading: “She did not cry for two hours.”
- (123) **ta bu pao de hen man.*
 he not run DE very slow
 Intended reading: “He did not run very slowly.”
- (124) **ta bu zou de hen lei.*
 he not walk DE very tired
 Intended reading: “He did not feel tired from walking.”
- (125) **ta bu tiao zai chuang shang.*
 he not jump onto bed surface
 Intended reading: “He did not jump onto the bed.”

With the *Bu-Requirement*, it becomes easy to account for the ill-formedness of (121) to (125). They are not acceptable because the semantic requirement of the non-completion of the situations co-occurring with the negative marker *bu* is not satisfied: the VPs in these examples all denote events that are completed, which is in conflict with the semantics of *bu*. Therefore the sentences are ruled out on the grounds of semantic anomaly.

Her explanation is very interesting, but the data based on which she proposes her *Bu-Requirement* are more interesting. We will just discuss (121) (122) and (125), and leave

(123) and (124) to be discussed later. First let us reconsider (121) (122) and (125), and think about what their affirmative forms are. If we simply take out the negative marker *bu*, we will get (126-128):

(126) *?ta lai san ci.*
 he come three times
 “He comes here three times.”

(127) *?ta ku liang xiaoshi.*
 she cry two hour
 “She cries for two hours.”

(128) *?ta tiao zai chuang shang.*
 he jump onto bed surface.
 “He jumped on the bed.”

Obviously, (126-128) do not sound very natural. In the literature, these sentences are regarded as incomplete sentences, meaning sentences that cannot stand alone as independent utterances (Tang & Lee 2000). A serious question arises now: if the base on which a theory is built not solid enough, how can we say that the theory is sound? We will come back to discuss this question later.

6.2 Our Analysis

In §4.2, we assumed that ill-formedness arises when the trace left behind in the Asp node is not properly head governed. In this subsection, we will stick to this principle and try to account for the incompatibility between *bu* and the *V-de* construction in a formal and simple way. To make our analysis easy to follow, let us first analyze an example with the *V-de* structure. The negative form of (129) should be (130a), but not (130b).

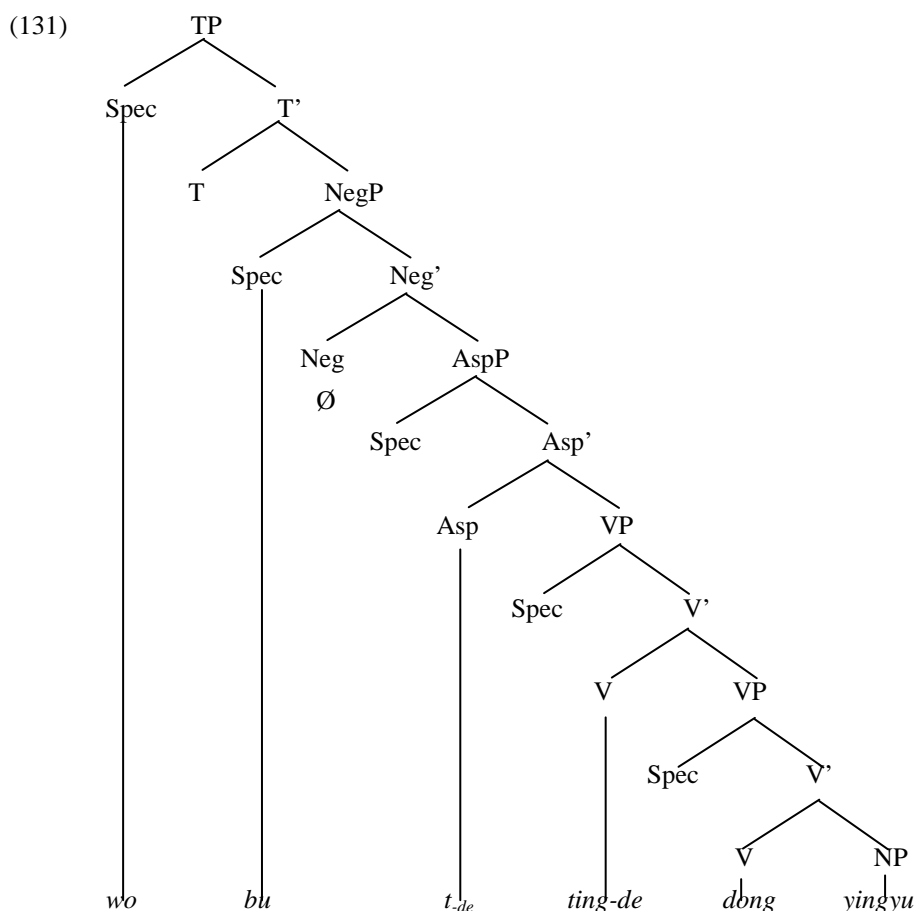
(129) *wo ting de dong yingyu.*
 I listen DE understand English
 “I can understand English.”

(130) a. *wo ting bu dong yingyu.*
 I listen not understand English
 “I cannot understand English.”

b. **wo bu ting de dong yingyu.*
 I not listen DE understand English
 Intended reading: “I cannot understand English.”

Why is (130b) ruled out? This can be explained via ECP. According to Lü (1999:16), *-de* in (129) is a potential aspect marker. As discussed in §3.2.2, an aspect marker is supposed to

originate in the Asp of AspP, and then be lowered onto V. This is shown in (131):



As (131) shows, the potential aspect marker *-de* is lowered from Asp onto V, leaving a trace behind in the Asp node, which must be properly head governed. However, the negative marker *bu* serves as the specifier of NegP, leaving the head Neg null (§2.2). Nothing properly head governs the trace left in the Asp. ECP violation therefore arises.²⁵

Now we come to the discussion of the incompatibility between *bu* and the V-*de* construction in (110) and (111). According to Huang (1988), “[*-de*] has been historically derived from the verb *de* “obtain”. Phonologically, *de* is attached to the preceding verb, either as a suffix or a clitic, depending on one’s theory...” Let us assume that *-de* is a suffix. In the framework of GB, suffixes are supposed to be generated under I, and lowered down onto V. *-de*, of course, is not an exception. However, recall that we have split the INFL into TP, NegP and AspP in §3.1 and AUXP in §4.2. Then, where exactly is *-de* generated?

²⁵ According to Wang (1989, p.214), in some dialects, the word order *bu ting de dong* is possible. This is beyond the scope of this paper.

It is obvious that *-de* is not generated in T. If it is, we cannot explain (132):

(132) *wo jiang pao de hen kuai.*

I will run DE very fast.

“I will run very fast.”

In (132), *jiang* “will” has already occupied the position T of TP. It is impossible for *-de* to be generated in the head position of TP. Then the only two options are Asp and AUX. Some scholars, for example, Chao (1968), Fan (1992) and Chen (2001), tend to treat *-de* as an auxiliary, but the auxiliary does not mean the AUX here. Since we treated the *-de* in (129) as a potential aspect marker originating in Asp of AspP, for the reasons of uniformity and consistency, we assume that *-de*'s in Descriptive Complement Constructions and Resultative Complement Constructions also originate in the Asp of AspP. We would argue for our assumption from three aspects.

First, it seems not possible for *-de* to be generated in the position AUX: for one thing, this involves lowering, but none of the auxiliaries we have discussed lower; for another thing, if they do originate from AUX, it is hard to handle the lowering process, because it must cross the Asp.

Second, in the literature, Gao (1986, pp.194-6) treats *-de* as a resultative aspect.²⁶ Yang (1998) also holds the idea that *-de* has many similarities with aspect markers.

Third, it is very possible that *-de* is an aspect marker. Whenever *-de* is attached to a verb, no aspectual markers will appear in the sentence, either before or after the *-de*. This is shown in the examples below:

(133) a. *wo pao de hen kuai.*

I run DE very fast

“I run very fast.”

b. **wo pao de le/guo/zhe hen kuai.*

I run DE PERF/EXP/PRO very fast

c. **wo zai pao de hen kuai.*

I PRO run DE very fast

Intended reading: “I am running fast”

d. **wo pao le/guo/zhe de hen kuai.*

I run PERF/EXP/PRO DE very fast

Our conclusion, therefore, is that *-de* should be treated as suffix that originates in Asp. Assuming this analysis to be on the right lines, The explanation to the incompatibility of *bu* and the V-*de* construction in (110) and (111) becomes simple: the aspect marker *-de* is

²⁶ The examples about *-de* Gao cited are all from ancient Chinese. His attitude to *-de* in modern Chinese should be the same.

