國立交通大學

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碩 士 論 文

台語 ka 字句的二元分析

A Non-unified Analysis of Taiwanese *ka* Construction

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摘要

本篇論文主要探討台語的 *ka* 在句中所扮演之功能。普遍認爲台語 *ka* 爲漢語 *ba* 之對應詞，兩者在句法上以及語意上所具有的特質都十分類似，唯 *ka* 有能力指派論旨角色(thematic role)予其後之論元(argument)及光桿動詞(bare verb)在 *ka* 句中不會造成句子的不合法。而 *ba* 則不能指派論旨角色予其論元亦不允許光桿動詞出現於句中，此爲兩者明顯之不同點。相較於前人將 ka 單純視爲 ba 的對應詞，我們提出台語的 ka 具備兩種功能，其一是作爲漢語 ba 句的對應詞。其二是作爲施用結構(applicative construction)之標記。當作爲施用結構標記時，*ka* 可以引介一個額外的論元(additional argument)進入論元滿足(argument-saturated)的句中。在 Pylkkanen(2005)的分析架構下，我們相信台語的 *ka* 可歸類爲高級施用結構(high applicative construction)。針對光桿動詞可在 *ka* 句中出現卻不能在 *ba* 句中出現之現象，本文採用 Feng(2005)所提出的 Government-Nucleus Stress Rule (G-NSR)來解釋何以漢語的 *ba* 句不允許光桿動詞在句中出現。我們相信由於台語本身具備了複雜的連調變化系統同時來決定重音，故台語的重音分布並不受該規則所限，而是與連調變化彼此相互牽引。至於 *ka* 句允許光桿動詞在句中出現之現象，我們相信追根究底仍舊與動詞本身的 boundness 有一定之關聯。

關鍵字：台灣閩南語，*ka*，施用結構，Government-Nucleus Stress Rule (G-NSR)

A Non-unified Analysis of Taiwanese *ka* Construction

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Abstract

The purpose of this thesis is to study the function of the Taiwanese *ka* in the sentence. It is widely believed that Taiwanese *ka* is the counter part of Mandarin *ba*. They share many similar syntactic and semantic features. Although ka is treated as the counter part of Mandarin ba, there still remain differences between them. For instance, *ka* is able to assign thematic role to its argument, but *ba* is incapable to assign thematic role to the argument. Also, in the *ka* construction, bare verb is tolerated under some circumstance. This never happens in the *ba* construction. Unlike the previous researches simply treat ka as the counter part of *ba*, we propose that ka has two functions. One is to be the counter part of *ba* and the other is to be the applicative marker. When *ka* is treated as an applicative marker, *ka* is able to introduce an additional argument into an argument-saturated sentence. Based on the analysis proposed by Pylkkanen (2005), we believe that Taiwanese *ka* construction belongs to the high applicative construction. As for the reason that the bare verb is not tolerated in the Mandarin *ba* construction, Government-Nucleus Stress Rule (G-NSR) raised by Feng (2005) will be applied to explain the phenomenon. In Taiwanese, we believe that because Taiwanese has a very complicated tone-sandhi system to help speakers to deicide the stress, it need not follow the G-NSR. Therefore, we believe that what really affects the existence of the bare verb in Taiwanese may still be the boundness of a verb.

Keywords： Taiwanese Southern Min，ka，applicative construction，
          Government-Nucleus Stress Rule (G-NSR)

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CHAPTER 1

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INTRODUCTION

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In the previous researches of Taiwanese, most of the linguists have agreed that

Taiwanese *ka* is the counterpart of the Mandarin *ba*. *Ba* and *ka* share most semantic

and syntactic constraints. For example, both *ka* and *ba* may present the disposal

meaning with the following form:

(1) a. NP1 *ba/ka* NP2 X V.

    b. NP1 *ba/ka* NP2 V X.   (Li 2006)

In (1), NP1 is the subject of the sentence and NP2 is the object of the sentence. In

order to get the *ba/ka* construction, *ka* and *ba* allow the syntactical freedom to

transpose an object to an adjacent position.

Although *ba* and *ka* share many similar features with each other, there still

remain differences. For instance, the request of the X-factor is different between them.

A bare verb is tolerated in Taiwanese *ka* construction but not in Mandarin *ba*

construction. In Mandarin *ba* construction, the X-factor is obligatory in the sentence.

The X-factor can either occur before or after the verb if only it appears in the sentence.

A *ba* sentence without the X-factor is always ungrammatical:

(2) a. *ta* *ba* *wo* *ma.*

He *ba* me scold

He scolds me.

b. *wo* *ba* *Wang* *xiao.*

I *ba* *Wang* *laugh*

I laughed at Wang.

As shown in (2a) and (2b), both sentences are ungrammatical because there are no X-factors in the *ba* sentences. A *ba* sentence with a bare verb form is always ungrammatical. It must have an X-factor.

Nevertheless, a bare verb form is tolerated in Taiwanese *ka* construction. Unlike *ba* construction, a *ka* construction can still be grammatical without the X-factor under some circumstances. For instance:

(3) a. *li* *ka* *goa2* *ma7.*

you *ka* me scold

You scold me.

b. *goa2   ka   Ong-e   chhio3.*

me   *ka*   Ong-e   laugh

I laughed at Ong-e.

(3a) and (3b) demonstrated that bare verbs are tolerated in the sentence. This is

impossible in Mandarin *ba* construction. The different request of the X-factor is one

of the distinct features between *ba* and *ka* construction.

Besides, *ka* is able to assign thematic role to the NP following *ka*. Mandarin *ba*

does not have the ability to assign thematic role to any NP:

(4) a. *li   keng3-jian5   ka   goa2   chau2   khui   a.*

you unexpectedly   *ka*   me   run   leave   PRT

You run away on me unexpectedly.

b. *i   ka   goa2   thau   chau2   khi3   a.*

he   *ka*   me   secretly   run   leave   PRT

Her run away on me secretly.

c. *i   keng3-jian5   ka   goa2   the5-cha2   ha7-ban.*

he unexpectedly   *ka*   me   earlier   duty-off

3

He get off work on me unexpectedly.

It is impossible for the post-*ka* NPs in (4) to get thematic roles from the main verbs in these sentences because there is no obvious semantic relation between the main verb and the post-*ka* NP. The post-*ka* NP must obtain its theta role from *ka* in (4).

Unlike Taiwanese *ka*, Mandarin *ba* has no ability to assign a thematic role for the argument. The argument always obtains its theta role from the main verb in the *ba* construction. This is the other difference between *ba* and *ka*.

In sum, although Taiwanese *ka* is the counterpart of Mandarin *ba*, there seem still a lot of differences between these two constructions. As mentioned above, *ka* can assign thematic role to the post-*ka* NP and it is permitted to take a bare verb in *ka* sentence. The X-factor is optional in the *ka* construction. However, a bare verb form is not tolerated in the *ba* construction. The X-factor is obligatory in the *ba* construction and *ba* has no ability to assign thematic role to any argument. If *ka* is the counterpart of Mandarin *ba*, what is the feature that makes these two constructions become so different when dealing with the post-NP and the X-factor question?

In this paper, I would like to discuss questions we have mentioned above and try to bring up some possibilities for the questions. I believe that *ka* itself has two

functions, one is functioning as an applicative marker and the other is to be the counterpart of *ba*. The first function would be operated when an additional argument is introduced into the sentence. The second function triggers the object move to the post-*ka* position. As for the reason that Mandarin *ba* construction always need the X-factor in the sentence, I would like to use Feng's (2005) theory called Government-Nucleus Stress Rule (G-NSR). The boundness of the event would be used to explain why the X-factor is optional in the *ka* construction.

CHAPTER 2

In this chapter, previous works discussing the Mandarin *ba* and the Taiwanese *ka* constructions will be reviewed. Both the Mandarin *ba* and the Taiwanese *ka* constructions have been extensively studied. The Taiwanese *ka* construction is widely considered as the counterpart to the Mandarin *ba* construction. Both constructions take the similar form [NP1+*ba/ka*+NP2+V+X] to present the disposal meaning. In a sentence, *ka* and *ba* allow the syntactical freedom to transpose an object to an adjacent position; *ba/ka* and share most semantic and syntactic constraints. A Mandarin *ba* sentence can always be translated into a Taiwanese *ka* sentence.

We review some previous research regarding the *ba* construction in this section. In section 2.1, we briefly discuss Audrey Li's analysis of *ba/ka* constructions, and in section 2.2, Barry Yang's analysis is discussed. In section 2.3, Rint Sybesmas's viewpoint is introduced. We also investigate the various deficiencies of these analyses.

2.1 Audrey Y.-H. Li (2006): The Light Verb Approach

2.1.1 The *ba* construction

Audrey Li (2006) has noted that *ba* was initially a lexical verb meaning 'hold, take, and handle' in Mandarin. However, these lexical meanings of *ba* have turned much weakened. In other words, *ba* has been grammaticalized and has lost the ability of giving thematic role to its argument in Mandarin--that is to say, *ba* has no longer worked as a lexical verb today.

When disposal meaning is expressed, the *ba* construction is exhibited in forms of (a) NP*+*ba*+NP+V+X or (b) NP*+*ba*+NP+X+V. The X factor is obligatory in the *ba* construction. X may be placed either anterior or posterior to the verb. Without the X factor the *ba* construction will become ungrammatical, as (5) presents:
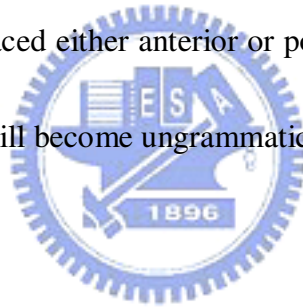
(5) a. ta   *ba*   ni   hai*(-le)

    he   *ba*   you   hurt-le

    'He hurts you.'

  a'. wo   *ba*   ta   ma*(-le)

     I   *ba*   he   scold-le

    'I scolded him.'

  a''. ta   *ba*   cai   *(xian)   qie

     he   *ba*   vegetable   *(first)   chop

'He chops the vegetable first.'

The semantic meaning of (5a) and (5a') exhibits that the *ba* construction is used to exhibit the disposal meaning. The NPs following *ba* (*ba* NP henceforth) in (5) are either an affected object or a victim; in either case conveying disposal. Obviously the thematic role of the *ba* NPs in (5) stems from the verb because the grammaticized *ba* has lost its ability to assign thematic roles to the *ba* NP. As can be seen in (5a), (5a') and (5a''), X can exist in either the preverbal or the postverbal position. The only requirement for X is that it must occur in the *ba* sentence. Without X, the sentence is ungrammatical.

Since *ba* is no longer a lexical verb and loses its ability to assign thematic roles, it is reasonable to assume that *ba* has lost most of the characteristics unique to lexical verbs:

(6) b. *ta   *ba*-le   ni   hai(-le)

    he   *ba*-le   you hurt(-le)

   c. *ta   *ba*-mei/bu-*ba*   ni   hai(-le)

    he   *ba*-not-*ba*   you hurt

   d. *(mei/bu-)*ba*

    (not-)*ba*

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Both (6b) and (6c) show that unlike a lexical verb, *ba* can neither take an aspect

marker nor form a V-not-V question. Also, *ba* cannot be a simple answer to a question

such (6d). This strong evidence provides a clue that *ba* is grammaticized and no

longer a lexical verb in modern Mandarin.

Next, we discuss the source of the *ba* NP. Li (2002) pointed out that the

occurrence of the *ba* NP is the result of movement. To obtain a *ba* construction, the

object of the main verb is moved to the position following *ba*.

If the *ba* NP is the object of the main verb in the *ba* sentence, the post verbal

position should be unoccupied. This applies to pronouns or reflexive co-references

with the *ba* NP. The *ba* sentence becomes ungrammatical if anything is inserted at the

object position of the main verb under this hypothesis. This is because if the *ba* NP is

the result of movement, it will leave a trace at the object position. To prove this

hypothesis, we direct your attention to (7):

(7) a. *ta   *ba*   Zhangsan$_i$ hai-le   ta$_i$

    he   *ba*   Zhangsan   hurt-le   him

    'He hurts Zhangsan'

b. *ta   *ba*   Zhangsan$_i$ hai-le   ziji/taziji$_i$

he *ba* Zhangsan hurt-le self/himself

'He hurts Zhangsan'

In (7a) and (7b), the *ba* sentence is ungrammatical because the object positions are

occupied by a pronoun and a reflexive pronoun, respectively. This is not allowed

because the object position has already been occupied by an invisible trace. The trace

stems from the movement of the *ba* NP. This proves that the *ba* NP is the result of

movement.

Compare the *ba* construction (8a) and (8b) with the lexical verb *shi*

construction (8c):
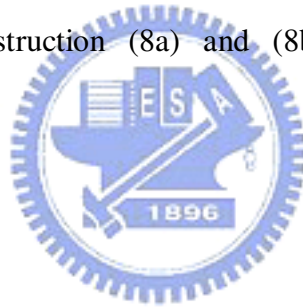
(8) a. *ta *ba* Zhangsan$_i$ hai-le ta$_i$

he *ba* Zhangsan hurt-le him

'He hurts Zhangsan'

b. *ta *ba* Zhangsan$_i$ hai-le ziji/taziji$_i$

he *ba* Zhangsan hurt-le self/himself

'He hurts Zhangsan'

c. ta shi Zhangsan$_i$ hai-le ziji/taziji$_i$

he make Zhangsan hurt-le self/himself

' He makes Zhangsan hurt himself'

Unlike (8a) and (8b), the similar sentence is grammatical in (8c). What makes

the difference is because *shi* is a lexical verb that has the ability to assign thematic

role and Case to the noun following *shi* (*shi*-NP henceforth). The *shi*-NP is not the

result of the movement but of the base generated process. *Shi*-NP gets its own

thematic role and Case from the lexical verb *shi*. Therefore, unlike *ba*-NP, the *shi*-NP

has no relationship with the main verb in this example.

Examples (5) to (8) demonstrate that *ba* does not have the ability to carry an

argument itself because it is not a lexical verb. *Ba* has no ability to assign thematic

roles to the *ba* NP. The *ba* NP must be the result of movement.
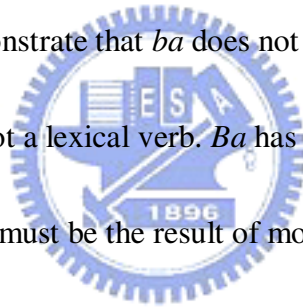
Although *ba* is incapable of assigning thematic role to the *ba*-NP, *ba* still has

the ability to give the exceptional Case to the *ba*-NP. Case is also what triggers *ba*-NP

moving to the following *ba* position.

In summary, since *ba* is not a lexical verb and is unable to provide a thematic

role to the *ba* NP, the *ba* NP cannot be base generated. Li (2006) has stated that the *ba*

NP is the result of movement and originates from the verbal phrase. She proposed that

the *ba* NP is the V object or the V' object of the verb and is thus moved to the position

posterior to *ba*. The fact that a trace is occupying the object position of the verb also

provides an explanation as to why one cannot put a pronoun or a reflexive pronoun there in a *ba* construction.

Another issue that has been widely discussed regarding the *ba* construction concerns the necessity of the X factor. It is known that in the Mandarin *ba* construction, the existence of a bare verb is disallowed. There must be an X factor preceding or following the verb in the sentence. Without the X factor, the sentence becomes ungrammatical:

(9) a. *wo   zuotian   zhe-ge   zhuozi   ca

     I   yesterday   this-Cl   table   wipe

    ' I, this table, wiped yesterday.'

  b. wo   zuotian   zhe-ge   zhuozi   ca-le

     I   yesterday   this-Cl   table   wipe-le

    ' I, this table, wiped yesterday.'

  c. * zhe-ge   zhuozi,   wo   zuotian   ca

     this-Cl   table,   I   yesterday wipe

    'This table, I wiped yesterday.'

  d. zhe-ge   zhuozi,   wo   zuotian   ca-le

     this-Cl   table,   I   yesterday wipe

'This table, I wiped yesterday.'

Both (9a) and (9c) are ungrammatical because they contain a bare verb without any X factor. Li claimed that this due to a widely observed phenomenon in Mandarin that if the object of a sentence has been preposed, a bare verb is not tolerated.

Furthermore, Li stated that X is necessary because the *ba* construction requires it to intensify the disposal meaning. Li believed that a longer X can strengthen disposal meaning. If a verb has a very weak disposal meaning, a long X is necessary in a *ba* construction. On the contrary, if the verb itself has a very strong disposal interpretation, then the X does not need to be too long. Li and Thompson also mentioned that the more elements added to elaborate the nature of disposal, the more likely the sentences are to appear in the *ba* form.

The following tree diagram represents the structure of *ba* sentences:

(10)

vP*
├ NP1
└ v'
  ├ v*
  └ baP
    ├ NP2
    └ ba'
      ├ ba
      └ vP1
        ├ v1
        └ VP2
          ├ NP3
          └ V'
            ├ V3
            └ XP   (Li 2006)
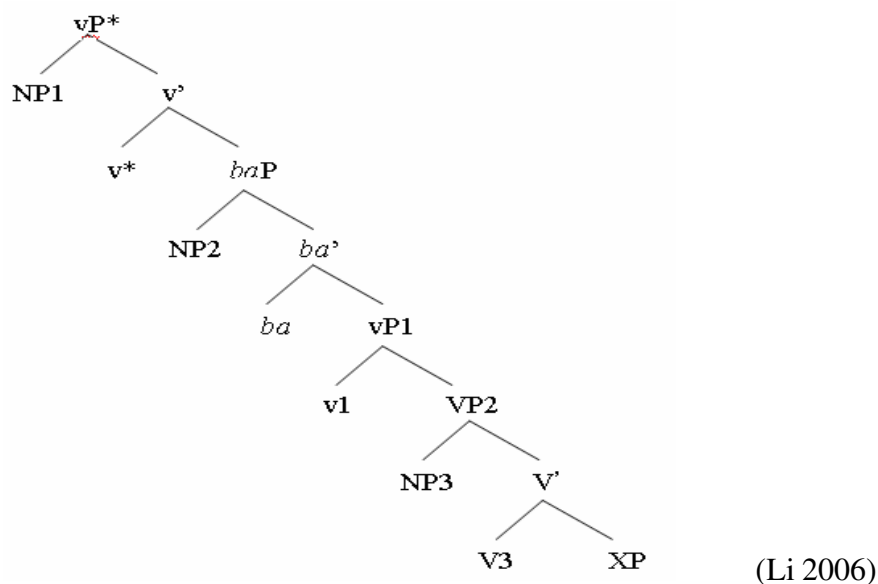
In (10), vP1 is the verb phrase that follows the *ba* NP (which is NP2 here). NP1

is the external argument. To obtain the surface structure of the *ba* sentence, *ba* should

be moved from the specifier of *ba*' to v*, and V3 should be moved to v1. *ba* is no

longer a lexical verb, and thus unable to assign thematic role here because of the

grammaticization process. Hence, the *ba* NP derives its thematic role from V3. v*

disappears and the external argument NP1 occupies the specifier position of the *ba*P

and the *ba* NP occupies the specifier of vP1. Subsequently, *ba*P loses its light verb

projection because *ba* is not a lexical verb and is unable to assign a thematic role to

the *ba* NP. *Ba* still has the ability to assign an exceptional case to the *ba* NP. This is

also why when we add *ba* to the sentence, to trigger the object movement.

Henceforth, the structure of the *ba* sentence becomes as (11):

14

(11)
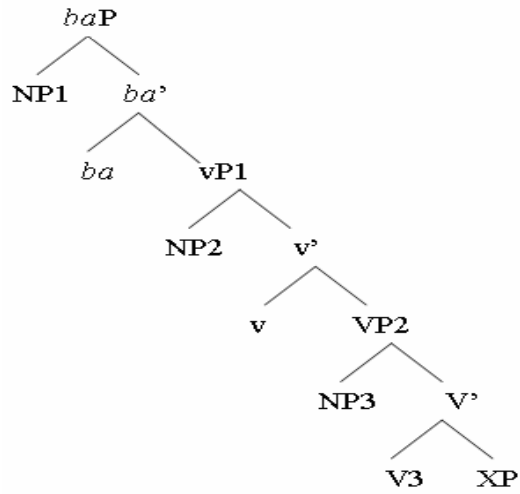
The structure of a non-*ba* counterpart is given as (12):

(12)
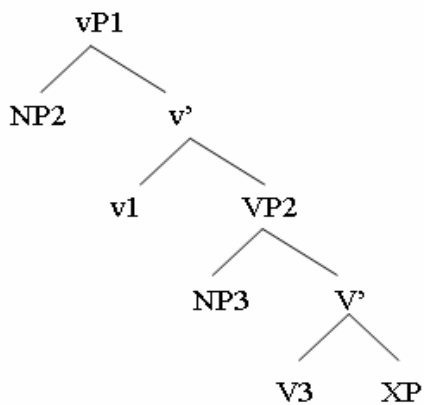
It has been proven that a Mandarin *ba* sentence always has a non-*ba*

counterpart. The non-*ba* counterpart has a structure similar to the *ba* construction. The only difference is that the non-ba counterpart has no *ba*P.

2.1.2 Application of the analysis of *ba* construction to the Taiwanese *ka* construction

Ka, which is the Taiwanese counterpart of the Mandarin *ba*, shares many similar features with the *ba* construction. They both use similar forms [Subject+*ba*/*ka*+NP+V+X] to represent the disposal meaning. *Ka* has the ability to assign case to the NP following *ka* (*ka* NP henceforth). This feature is exactly the same as the Mandarin *ba*. Since they share so many similar features, this is also the reason that linguists believe that *ka* is the Taiwanese counterpart of Mandarin *ba*. Nevertheless, close observation of *ka* and *ba* constructions reveals differences.

A Mandarin *ba* sentence always has a Taiwanese *ka* counterpart:

(13) a. ta *ba* wo ma san-ci le.

　　He *ba* me scold three-times PRT

　　' He scolded me three times.'

b. *i* *ka* *goa2* *ma7* *saN-pai2* *a*.

　　he *ka* me scold three-times PRT

'He scolded me three times'

However, a *ka* construction cannot always find its counterpart in *ba* construction. Moreover, though a bare verb cannot exit in a *ba* construction, its existence in certain conditions does not turn the *ka* construction ungrammatical:

(14) a. *i   cin su-iau   lang   ka i thiann*

　　　He very need   people *ka* he care

　　　He needs other people's care　　　　　　　　　　(Lin 2007)

　　b. **ta hen   xuyao   ren   ba ta teng*

　　　He very need   people *ba* he care

　　　He needs other people's care　　　　　　　　　　(Lin 2007)

　　c. *i   ka   goa2   phah/pian2/ma7*

　　　He *ka*   me   hit/cheat/scold

　　　He hit/cheat/scold me

　　d. *ta *ba* wo da/pian/ma

　　　he *ba* me hit/cheat/scold

　　　He hit/cheat/scold me

In the previous discussion we have mentioned that a bare verb in *ba* construction is not tolerated in Mandarin. Nevertheless, the bare verb in Taiwanese *ka* construction is undoubtedly acceptable, as shown in (14a) and (14c). In the Taiwanese *ka* construction, the bare verb is obviously accepted when the verb takes an affectee as its object. Here comes the question. *Ba*-NP in the *ba* construction is also an affectee. Now that *ka* in Taiwanese is the counterpart of the *ba* in Mandarin, why does *ka* allow a bare verb when *ka*-NP is an affectee, while *ba* does not?

While Li has not offered an explanation, she emphasized that the Taiwanese *ka* is more lexical than the Mandarin *ba*. She claimed that *ka* is not only able to assign case, but also has the ability to assign thematic role to the *ka* NP. Since *ka* can assign both thematic role and case to the *ka* NP, it is reasonable to assume that *ka* NP is base generated, not the result of movement.

Li has proposed that although *ka* is the counterpart of *ba*, *ka* has some abilities that ba has not. *Ka* can assign thematic role to the *ka* NP and is assumed to be a light verb carrying the affect meaning. Therefore, according to Li, the *ka*-NP is not necessary to have any thematic relation with its following V or V'. For example:

(15) a. *li   mai   ka   goa2   the5-cha2   ha7-ban*

      you   don't   *ka*   me   earlier   off work

'Don't get off work earlier (than you should) on me.'

b. *li   na   kaN2   ka   goa2   chau2, goa2   chiu7   ho   li   ho2-khoaN3*

you if   dare   *ka*   me   leave, I   then   let you   good-look

'If you dare to leave on me, I will show you the consequence.'

In (15), both thematic roles of the *ka*-NPs in (15a) and (15b) are given by *ka*, but not the verb. The *ka*-NP in (15a) and (15b) obviously has no thematic relation with the main verb. This is convincing evidence suggesting that a *ka* NP can be base generated.

Being the counterpart of the *ba* construction, the structure of the *ka* construction is quite similar to it, as shown in the following example:

(16)

(Li 2006)
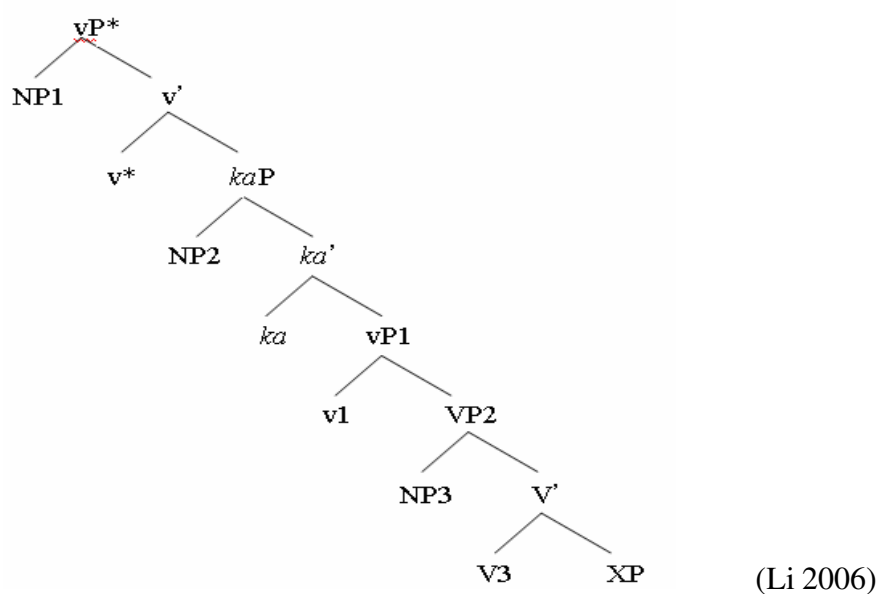
The biggest difference between (16) and (11) is that in (16) we keep the light verb construction for *ka*. Li pointed out that *ka* is able to assign the thematic role to the *ka* NP; therefore, to keep a light verb projection for *ka* is reasonable. The Mandarin *ba* is unable to assign thematic role. For the reason, it lacks a light verb projection in the structure.

Since *ka* has the ability to assign thematic role and case to the following NP, we could assume that the *ka*-NP is base generated, but not the result of the movement. Unlike the Mandarin *ba*, Taiwanese *ka* has more independent status.

(16) also explains why not all of the *ka* sentences have non-*ka* counterparts. It is because that *ka* can assign thematic role and Case to the *ka*-NP. We cannot simply delete *ka* in the sentence to return to the non-*ka* form. Instead, we have to delete both *ka*-NP and *ka*. If we simply delete *ka*, the existence of *ka*-NP will result in an ungrammatical sentence. *Ba* in Mandarin, however, will not lead to the same outcome because *ba*-NP is always related to the following V or V' thematically. Consequently, a non-*ba* sentence can be derived by deleting *ba* and moving *ba*-NP back to the postverbal position. The difference between *ba* and *ka* strongly prove that *ka*-NP does not result from the movement, but the base generated process.

2.1.3 Unsolvable problems

There are several problems germane to Li's analysis which we have been unable

to solve. First, is the problem of X. Li mentioned that in Mandarin, a bare verb is not

tolerated in a sentence having a moved NP. Thus a *ba* sentence must have an X

following the verb. However, she did not explain why in a sentence with a moved NP,

a bare verb is disallowed. Even if we accepted Sybesma's[1] point of view, we still

could not understand why an X is necessary to strengthen the disposal meaning. As

the counterpart to the Mandarin *ba*, why the Taiwanese *ka* construction allows a bare

verb form following the *ka* NP remains unsolved. In Li's essay she, noted that such a

phenomenon exists, but she did not attempt to provide a reasonable explanation.

Li further believed the *ka* NP in the *ka* construction to be base generated. However,

if *ka* NP were base generated, it would be difficult to determine the location of the

argument of verbs such as 'hit, cheat, and scold' in a sentence such as (14). Obviously,

the *ka* NP in (14) must be transferred from the object position to the position

following *ka*. The moved object has a thematic relation with the main verb. If we

accepted Li's proposal that *ka* is able to assign thematic role and case, then the moved

object would assume two thematic roles and cases; one being from the original verb

and the other from *ka*. Nevertheless, it has been widely proven that one NP can only

assume one thematic role and one case. Thus, we are left with a dilemma as Li's

---

[1] Sybesma accepted Li and Tompson's point of view. He believed that the existence of X is to
strengthen the disposal meaning. The longer X is, the stronger is the disposal meaning the X factor can
provide. (this is still unclear to me)

analysis yields no convincing explanation for the sentences like (14).

We discovered another type of Taiwanese *ka* construction in which the which the thematic role of the *ka* NP is not affected. The thematic role of this type of *ka* NP could be a theme marker, a goal marker, or a source marker. For example:

(16) a. *Abing   ka   Asan   ka3   Eng-bun5*

    Abing   *ka*   Asan   teach   English

    'Abing teaches Asan English.'

  b. *Abing   ka   Asan   phian3   lak8-pah   kho*

    Abing   *ka*   Asan   cheat   six-hundred   dollar

    Abing cheated Asan of six hundred dollars
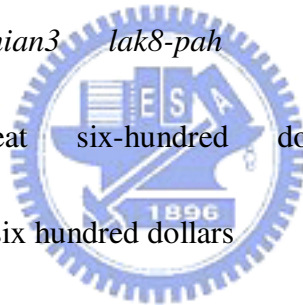
The thematic role of the *ka* NP Asan in (16a) is goal; while in (16b) it is source. Although according to Li's analysis there can be thematic roles such as affectee or beneficative (broadly speaking, a beneficative is also a type of affectee), seen in (14) and (15). However, in (16a) and (16b) the *ka* NPs are neither affectees nor beneficatives. Can *ka* construction only produce thematic roles such as affectee and beneficative? This is another unsolved problem regarding *ka* construction.

Li mentioned that in *ba* construction, *ba* assigns an exceptional case to the *ba* NP.

However, she did not explain why the *ba* NP takes the exceptional Case but not the

verbal case. Since the case of the *ba* NP can be satisfied when the NP is at the post

verbal position, there is no need for a NP movement here.

To sum up, Li's analysis tried to explain why bare verbs are disallowed in *ba*

construction and whence the thematic role of the *ba* NP derives. She also explained *ba*

NP as being the result of NP movement, and the reason why *ka* construction does not

always have a non-*ka* counterpart. However, she did not explain the location of the

case that the original verb has given to the *ba* NP. She has provided unclear

explanations as to why the *ka* construction can bear a bare verb form and the origin of

different thematic roles such as in (16) if the *ka* NP is base generated and *ka* is able to

assign thematic roles. Another question that may arise is that if *ka* NP is base

generated, how can sentences such as (15) be explained? The *ka* NP in (15) should not

be treated as the result of movement since the *ka* NP and the main verb are obviously

thematically related.

Next we are going to discuss Barry Yang's analysis, and consider the problem

that may happen under his analysis.

2.2 Barry C.-Y. Yang (2006): The NOP Approach

2.2.1 The questions regarding the *ka* NP

Yang's point of view is basically similar to Audrey Li's. He has treated *ka* as a

light verb carrying affect meaning. He also considered that total acceptance of Li's

argument will lead to a dilemma. According to Li, *ka* is more a lexical verb than *ba,*

and capable of assigning the thematic role. *Ka* can carry its own argument and the *ka*

NP will be licensed by *ka.* In other words, *ka*-NP is base generated.

(17) a. *Abu   ka   Asan   se2   saN*

    Mother   *ka*   Asan   wash   clothes

    Abing   washes clothes for Asan

   b. *Asan   ka   goa2   chau2-khui*

    Asan   *ka*   me   run-away

  Asan run away on me / I was affected by Asan's running away

Adding an additional pronoun to the sentence can easily prove that *ka*-NP is the

result of movement:

(18) a. **Abing   ka   Asan_i   phah-si2   i_i   a*

    Abing   *ka*   Asan   beat-dead him Perf.

    Abing   beat Asan to death.

b. *Abing ka Asan$_i$ ka3 i_i Eng-bun5

Abing *ka* Asan   teach   him   English

Abing teaches Asan English.

(18a) and (18b) are ungrammatical because in each example, an invisible trace

following the *ka* NP is left right after the main verb after the movement of the *ka* NP.

If another pronoun is added, the sentence will be ungrammatical. This proves that the

ka NP is the result of the movement.

The above-mentioned phenomena bring a paradox when exploring the origin of

the *ka* NP, because a NP cannot be base generated as well as from the result of the

movement. Therefore, Yang has offered a NOP approach, by which Yang has

considered workable to deal with the paradox. The NOP approach is presented as

follows:

If we are to explore the gapped *ka* construction[2], we will treat the lower

embedded IP as the secondary predicate induced by the null operator as (19):

---

[2] The gapped ka construction here means the ka-NP has a gap for it to resconstructed back. This kind of ka-NP is the result of movement, for example:

a. Goa2   ka   Abing   phah
    Me   ka   Abing   hit
     I   hit   Abing

b. goa2   ka   Abing   ma7
    Me   ka   Abing   scold
     I   scolded   Abing

Abing in sentence (a) and (b) can be reconstructed back to the object position and the sentence is still grammatical.

(19) gau$_j$ *ka*   Abing$_i$ [$_{IP}$ OP$_i$ [$_{IP}$ PRO$_j$ phah t$_i$]].

  I   *ka*   Abing   beat

  I   beat Abing

When the non-gapped construction[3] such as (20) happened, we can use the null

'outermost object' construction to explain it:

(20) I$_j$ *ka*   goa2 [OP$_i$ [t$_i$ [PRO$_j$ *chau2-khui*]]]

  He   *ka*   I   run-away

  He ran away (on me) or I was affected by his running away

In (20), a null outermost object is adjoined to the complex IP position, and moved to

the IP adjoined position through the NOP movement. *ka* has two complement, one is

the *ka*-NP and the other is the embedded IP. By using the null outermost object

construction we can also explain why the *ka*-NP will become a benefactive or an

adversative when we deal with the non-gapped *ka* construction

  Treating *ka* as a light verb in the NOP approach, we can exert the affectedness

---

[3] The non-gapped ka construction means the ka-NP has no gap to reconstructed back. This kind of
ka-NP is base gerenated like (1)

on the object. Yang proposed that the different theta roles are nature consequences of

the secondary predication achieved by the NOP movement so we can solve the

problem of the different theta roles that happened in the *ka* construction. The null

operator movement results the IP complement in a lambda predicate. This lambda

predicate will strengthen the properties of the predicate through strong binding. Since

the *ka* NP and the IP predicate has such relationship, the thematic relationship is

established in a nature way.

2.2.2 The obligation of the X-factor

By solving the problem of whether *ka* NP is the result of movement or base

generated, another problem is raised: the Mandarin *ba* cannot take a bare verb as its

complement like (21a) presented, but in a *ka* construction, a bare verb complement is

allowed like (21b) presented. Since it is widely recognized that Taiwanese *ka* is the

counterpart of the Mandarin *ba*, the reasons behind this difference are of interest.

(21) a.*wo   ba   Zhangsan   da*

   I   *ba*   Zhangsan   beat

   I beat Zhangsan.

   b. *goa2   ka   Abing   phah*

   I   *ka*   Abing   beat

I beat Abing.

The other problem needs to be discussed is that *ba* always has its non-*ba* counterpart, as shown in (22) and (23). However, this does not always occur in the *ka* construction, as shown in (24) and (25):

(22) a. *wo ba   Zhangsan   ma-le   yi-dun*

    I   *ba*   Zhangsan   scold-Perf   one-CL

    I scolded Zhangsan severely.

  b. *wo ma-le   Zhangsan   yi-dun*

    I   scolded Zhangsan   one-CL

    I   scolded Zhangsan   severely.

(23) c. *wo ba   juzi   bo-le   pi*

    I   *ba*   tangerine   peel-Perf skin

    I peeled the tangerine.

  d. *juzi,   wo   bo-le   pi*

    tangerine, I   peel-Perf skin

    Tangerine, I peeled off the skin.

(24) a. *i   ka goa2   chau2-khui*

he *ka* me   run-away

He ran away (on me)

b. *i   *chau2-khui*   *goa2*

he   run-away   me

(25) c. *Abu*   *ka*   *Abing*   *se2*   *saN*

Mother   *ka*   Abing   wash clothes

Mother washes clothes for Abing

d. *Abu   *se2*   *saN*   *Abing*

Mother wash clothes Abing

Mother washes clothes for Abing

Yang has started that we can also use the NOP movement approach to solve these problems.

Regarding bare verbs, Yang has quoted Liu's analysis (1997), pointing out that *ba* sentence requires its predicate to denote a bounded event or situation. To get a bound event, the bare verb needs to be followed by some additional forms, as are usually observed in the *ba* construction.

(26) a. V+ complement

b. V+ de

c. V+ retained object

d. V+ perfective marker le

e. V+ PP

f. V+ quantified phrase

g. V+ yi+ V

h. V+ durative marker zhe

i. Adv+ V

Liu has argued that *ba* is unable to take a bare verb because the predicate of the *ba* sentence is required to be a bound event. To achieve this condition, an X element has to be occurred with the main verb, in the preverbal or the postverbal position. Through the addition of the X element the main verb thereby becomes a bound event. This is why an X element is always needed in Mandarin *ba* construction. However, this interpretation results in some problems. Firstly, why does Mandarin *ba* sentence require its predicate to be a bound event? In addition, since Taiwanese *ka* construction is the counterpart of Mandarin *ba* construction, why Taiwanese *ka* construction does not need an X element to have the verb become a bound event? Yang proposed these problems can also be coped with through the NOP approach:

We should initiate by comparing the syntactic structures between the *ba* and *ka* constructions:

(27)

a. Taiwanese *ka*-construction
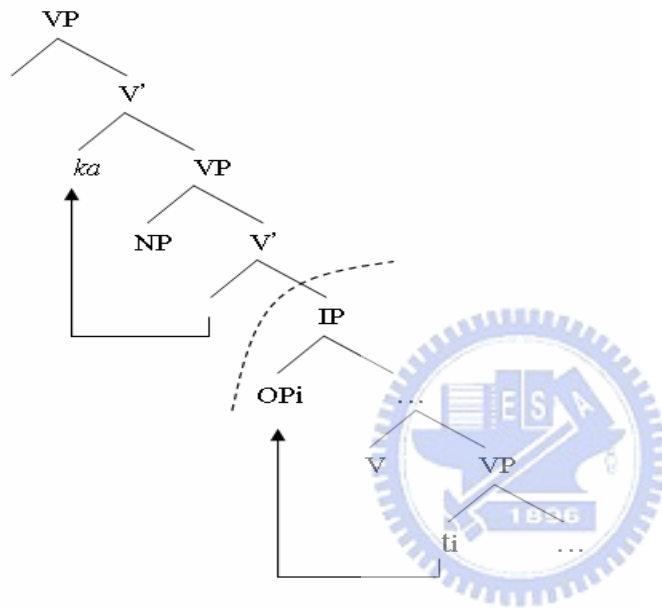
(Yang 2006)

b. Mandarine *ba*-construction

(Yang 2006)

In (27) we notice that in the *ka* construction, the *ka*-NP is farther away from the main predicate than the *ba* NP is. Besides, *ka*-NP here is situated in the higher VP

shell and the main predicate is located in the embedded IP closed off by the null

operator in the *ka* construction. This is why *ka*-NP cannot require the main predicate

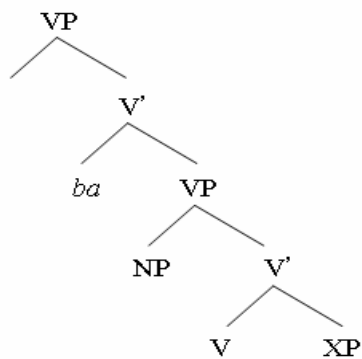to be bounded. For the same reason, a bare verb is allowed to occur in the *ka*

construction.

Broadly speaking, *ka* is more analytic and lexical than *ba*. Yang's argument has

suggested that the position of the *ka* NP is far away from the main predicate, and thus

fails to require a bound event. But Yang did not explain why. In addition, such

hypothesis also fails to give a persuasive interpretation explaining why sentences like

"*i ka goa2 phah*" and "*i ka goa2 phah chit8-e7*" in Taiwanese are grammatical. There

seems to be no direct connection between the two phenomena.

To sum up, the NOP approach can solve the problem how various theta roles

are assigned in the *ka* construction, and whether *ka* NP is the result of the movement

or base generated. But when it comes to X-factor, the NOP approach still cannot give

us a convincible explanation. Another unsolved question is why a *ba*-NP always has a

non-*ba* counter part but the *ka* construction does not always has a non-*ka* counter part?

These questions are left to be further explored.

In 2.3 we will discuss the event-structural approach provided by Sybesma, and

explore whether this approach could help answer the questions above.

2.3 Rint Sybesma (1999): The Event Structural Approach

Sybesma has suggested that there are two kinds of *ba* construction: one is causative *ba* construction and the other is canonical *ba* construction. These two kinds of *ba* construction can be differentiated by subject. A canonical *ba* sentence has an animate subject and a causative *ba* sentence has an inanimate subject. Regardless which kind of *ba* construction used, Sybesma has proposed that a *ba* sentence is always a CAUS-sentence in an abstract sense, and that these two kinds of *ba* sentences share most syntactic and semantic characteristics. (28) is the construction that Sybesma devised for both causative *ba* construction and canonical *ba* construction:

(28)
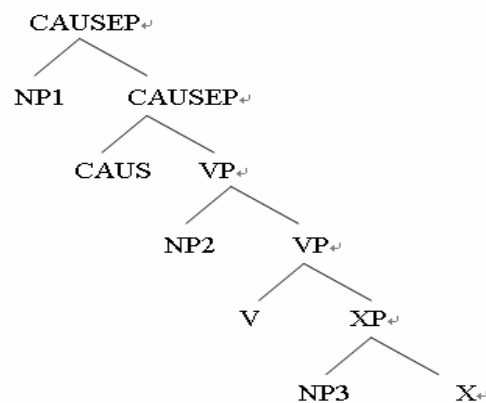
Sybesma has proposed that the meaning of the *ba* sentence can be paraphrased as 'the subject causes the *ba*-NP to undergo the event denoted by the VP', so he

choose a CausP as its projection. The VP embedded under the CAUSP is unaccusative in this sense. An unaccusative VP has no external argument. VP here only has a resultative small clause as its complement. The thematic role of NP1 stems from the head CAUSE, not from the verb. NP2 is the *ba* NP and NP3 is NP2's trace. NP2 must be the subject of the embedded clause and has no direct semantic relation with the matrix verb. It is thematically dependent on the constituent embedded under V. Since an unaccusative verb has no objective Case, the object must move and derive its case from CAUS.

Sybesma also suggests that the head of CAUS must be filled. There are two possibilities: one is move V to the CAUS, the other is to insert *ba* into the position of the CAUS. The first one produces a non-*ba* sentence, and the second results in a *ba* sentence.

Sybesma adopt P. Wang's analysis to explain why *ba* construction always requires an X-factor following the verb. He believes that the *ba*-NP is always related to the X-factor. Whether this is interpreted as 'disposal of' or not depends on the nature of the post verbal constituent. A longer X-factor results in a stronger disposal meaning demonstrated by the construction.

Sybesma attempts to fit is analysis to all kinds of *ba* construction. However, there still remain problems. The first is regards NP2; Sybesma mentioned that the

NP2 must be the subject of the embedded clause. For example:

(29) a. nei-ge   nuhai   ku-de   Zhang San nian-bu-xia   nei-ben-shu.

That-CL girl   cry-DE Zhang San read-not-on   that-CL book

'That girl cried so that Zhang San could not continue reading that book.'

b. nei-ge   nuhai   *ba* Zhang San   ku-de   nian-bu-xia   nei-ben-shu.

that-CL   girl   *ba*   Zhang San cried-DE   read-not-on   that-CL book

'That girl cried so that Zhang San could not continue reading that book.'

c.* nei-ge   nuhai   *ba*   nei-ben-shu   ku-de   Zhang San   nian-bu-xia.

that-CL girl   *ba*   that-CL book cried-DE Zhang San   read-not-on

However, while this may be true under most circumstances, not all *ba* sentences

follow such restrictions, for example:

(30) a. nei-ge   nuihai ku   de   mei   ren   gan   mo   na shoupa

That-CL girl   cry   de   no   people dare   touch that handkerchief

'That girl cries so hard that no people dare to touch that handkerchief.'

b. nei-ge   nuihai *ba* na   shoupa   ku   de   mei   ren   gan   mo

That-CL girl   *ba* that handkerchief cry   de   no   people dare touch

c.*nei-ge   nuihai *ba* mei   ren   ku   de   gan   mo   na   shoupa

That-CL   girl *ba*   no   people cry   de   dare   touch that handkerchief

In (30a), *shoupa* obviously is not the subject of the embedded clause; it is the object

of the embedded clause. According to Sybesma's analysis, if *shoupa* becomes the *ba*

NP, the sentence is ungrammatical. However, in (30b) the sentence remains

grammatical with *shoupa* as the *ba* NP. If we raise the subject of the embedded clause

mei ren here as (30c), the sentence becomes ungrammatical. This suggests that the

assumption Sybesma made is too strong.

Secondly, Sybesma believes the *ba* structure always has a CAUSP. This is

because the meaning of *ba* sentences can be paraphrased as 'the subject causes the

ba-NP to undergo the event denoted by the VP' and this is why he put *ba* on the

specificier of CAUSP.

Nevertheless, this may be questioned if we use the actual CAUSP '*shi*' in

Mandarin to instead of '*ba*':

(31) a. ni   *ba*   zhe-kuai   rou   qie-qie   ba!

you   *ba*   this-Cl   meat   cut-cut   Par!

'Cut the meat!'

36

b.(?) ni *shi* zhe-kuai rou qie-qie ba !

you *shi* this-CL meat cut-cut Par !

'You cause the meat to be cut!'

In (31a) and (31b), the meaning of the sentence is totally changed. In fact, (31b) is not intuitively grammatical to most native speakers. Thus, it is not appropriate for *ba* to be put on the specifier of CAUSP is been strongly proved.

In fact, Sybesma's suggestion that the X-factor following the main verb functions to make the disposal meaning stronger is an *ad hoc* solution. If the X-factor is to give the disposal meaning, then why can the Taiwanese *ka* construction tolerate a bare verb form, give that *ka* is the counterpart of the Mandarin *ba* construction? Why does the Taiwanese *ka* construction not need the X-factor to intensify the disposal meaning? The existence of the X-factor remains an unsolved question.

2.4 Summary

In section 2 we provide a discussion of the previous analyses that Audrey Li, Barry Yang, and Rint Sybesma has developed. We found that although these analyses can solve portions of the problems inherent in the Mandarin *ba* and Taiwanese *ka* construction, none of them are able to provide a satisfactory solution to all other

questions surrounding the Taiwanese *ka* construction. This is especially the case with respect to the different uses of X-factor between Mandarin *ba* and Taiwanese *ka* construction. There seems to be no convincing explanation for this phenomenon. The origin of the *ka*-NP is also a controversial issue deserving further investigation. In sentences such as, "*Abu ka Asan se sann*"("Mother washes clothes for Asan."), the *ka* NP is obviously not the result of movement, but base generated. In the sentences such as, "*i ka goa2 pah*" ("He hits me."), the *ka*- NP is obviously the result of movement. We provide our proposal and a reasonable solution for the questions regarding the origin of the *ka*-NP in Section 3. We use the Government-Nucleus Stress Rules to explain the different uses of and requirements of the X-factor in Section 4.
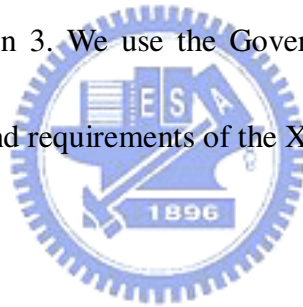
CHAPTER 3

PROPOSAL

In this Chapter, basic observations of *ka*-construction and some theoretical concepts of applicative construction will be introduced as preliminaries of our analysis. Specifically, we propose that *ka* in Taiwanese not only is the counterpart of Mandarin *ba* but also can be an applicative marker that introduces an additional argument.

3.1 Preliminary

In 3.1.1 some observations of *ka*-construction in Taiwanese will be described. It was found that *ka* is more lexical than *ba* because *ka* is capable to assign theta role to the following NP. In the *ka* construction, not all of the *ka*-NPs are the result of movement. Some of the *ka*-NP is obviously base-generated. We will bring up our assumptions for the Taiwanese *ka* construction. In 3.1.2 we are going to introduce the applicative construction for our further analyses as the background knowledge.

3.1.1 The observations of the Taiwanese *ka* construction

Most of the previous analyses suggested that *ka* in Taiwanese could be understood as the counterpart of the Mandarin *ba*. For example:

(32) a. *li   ka   chit-nia2   saN   se2   se2   e*

You *ka*   this-CL   clothes wash wash PRT

(You) wash this clothes

a'. *ni   ba   zhe   jian   yifu   xi   xi   ba*

You ba   this-CL   clothes   wash   PRT

(You) wash this clothes

b. *Ong-e ka   phoe   sia2   hoo a*

Ong-e *ka*   letter   write done-PRT

Ong-e finished writing the letter

b'. *Ong-e   ba   xin   xie   hao le*

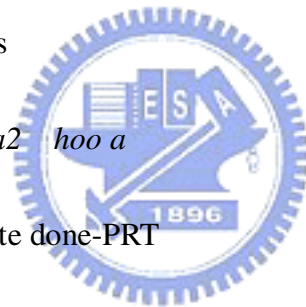Ong-e   ba   letter write   done-PRT

Ong-e finished writing the letter.

c. *i   ka hit siang e5-a ching-phua a*

He *ka* that-CL shoes wear-threadbare PRT

He wore his shoes threadbare

d. *ta   ba na shuang xie-zi chuan-po le*

He *ba* that-CL shoes wear-threadbare PRT

He wore his shoes threadbare

Judging from the parallelism shown in (32), *ka* could be treated as the counterpart of *ba* in this type of construction. Moreover, we believe that like *ba*-NP, the post-*ka* object NP (*ka*-NP henceforth) undergoes Case-driven from the object position of the verb to the surface position after *ka*. The main verb is unaccusativized and thus incapable of Case-marking. We assume that the Case of the *ka*-NP is from *ka*. Our assumption could be proved by the observation that *ka*-NP is inseparable from *ka* in the sentence. In order to get the Case, *ka*-NP must follow adjacency condition.
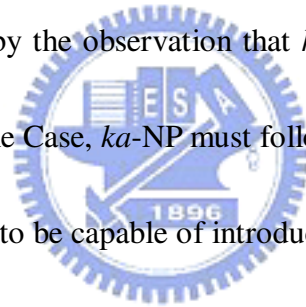
In addition, *ka* is found to be capable of introducing an additional argument into a thematically-saturated sentence:

(33) a. li   m-hoN   *ka*   goa2 *the5-cha2   ha7-ban.*

you   don't   *ka*   me   earlier   off work

'Don't get off work earlier (than you should) on me.'

b. li   na   *ka*N   *ka*   goa2   chau2, goa2   chiu   ho   li   ho2-khoaN3

you if   dare   *ka*   me   leave,   I   then   let   you good-look

'If you dare to leave on me, I will show you the consequence.'

Obviously, the *ka*-NP *goa2* in (33) is thematically unrelated to the main verb *ha-ban/tsao*. However, according to Theta Criterion, *goa2* must receive a theta-role or it cannot be used in the sentence grammatically. Nevertheless, it is not possible for the main verb to assign a theta role to the *ka*-NP because the main verb is already thematically saturated. Witness the fact that sentences in (33) remain grammatical without the presence of *ka* and *ka*-NP as shown in (34a/b/c)), and the ill-formed sentences (34c/d/e) obtained after removing only *ka* from the sentence, we assume that *ka* is responsible for assigning theta role to the applicative *ka*-NP and thereby licenses its appearance.

(34) a. *i   ka   goa2   se2   saN*

    He *ka*   me   wash   clothes

    He washs clothes for me/ He helps me wash clothes

    b. *i   ka goa2   chau2 khui a*

      he *ka* me   leave-go-PRT

      He leaves from me

    c. *i   ka   goa2   be2   chhia*

He *ka*   me   buy   car

He helps me buy car

d.* *i*   φ   *goa2 se2 saN*

He φ   me wash clothes

e. **i*   φ   *goa2 chau2 khui a*

He φ   me leave-go-PRT

f. **i*   φ   *goa2 be2 chhia*

He φ   me buy car

More sentences with applicative *ka* are provided in (34a/b/c). Given the fact that the *ka*-NP in these sentences is thematically unrelated to the main verb, it is reasonable to suspect that the *ka*-NP in applicative *ka*-construction is base-generated at its surface position instead of moving from certain position within VP like those in (32).

So far, the *ka*-construction can be differentiated into two types according to how *ka*-NP is produced. On the one hand, the applicative use of *ka* introduces/licenses an additional argument NP that is thematically unrelated to the main verb and such *ka*-NP is assumed to be base-generated at its surface position. On the other hand, when the *ka* is treated as the counterpart of *ba*, the *ka*-NP undergoes Case-driven A-movement to its surface position from the complement position of the main verb.

Though it is generally assumed that *ka* is the counterpart of *ba*, there is one vital distinction between them as pointed out by Li (2002). That is, there is an obligatory post-verbal X factor in *ba*-construction. However, such constraint does not hold in *ka*-construction:

(35) a. *goa2 ka   Abing   phah*

      I   *ka*   Abing   beat

      I beat Abing

    b. **wo   ba   Zhangsan   da*

      I   *ba*   Zhangsan   beat

    b' *wo ba Zhangsan   da   le*

      I   *ba* Zhangsan   beat   le
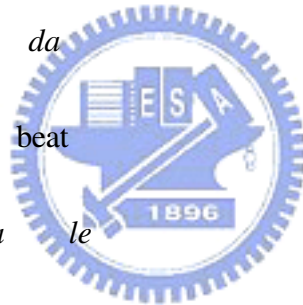
      I beat Zhangsan

    c. *goa2 ka i ma7*

      Me *ka* i scold

      I scolded him

   d. **wo ba ta ma*

      I *ba* him scolded

    d' *wo ba ta ma-le*

I *ba* him scolded-PRT

I scolded him

Sentences in (35) demonstrated the X-factor is obligatory in the *ba* construction but not in the *ka* construction. The *ka* sentence remains grammatical under some circumstances. In order to explain this phenomenon, I would like to suggest Government Nucleus Stress Rules (G-NSR) to provide another path to find out the different need of the X factor in Mandarin and Taiwanese. There will be more detailed discussion about the X factor in section 4.
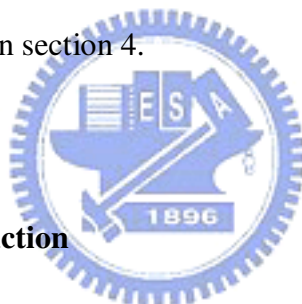
3.1.2 The applicative construction

In Section 3.1.1 we proposed the two functions of *ka*. First, it is the counterpart of the Mandarin *ba*. Second, *ka* can function as an applicative marker. In Taiwanese, an additional argument can be added into a sentence with the help of *ka*. In this section, the analyses of applicative construction will be introduced.

Typically, applicative construction provides an extra position for placing an additional argument in a sentence. Applicative construction can be used to increase the transitive of verbs (Peterson 2007)[4]. For example, if applicative construction is

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[4] Peterson (2007) mentioned that applying applicative construction may intensify the transitivity of the verb or simply result in the rearrangement of an argument structure. The applicative construction we discuss here is the one that gives a verb the phenomenon of argument augmentation.

used in a sentence having a transitive verb, the transitive verb will be able to carry an additional object. In English, sentence like 'I cooked Mary a meal' is treated as a sentence applying applicative construction.

Applicative construction can be introduced either by a word or by an affix. A word or affix which introduces the applicative argument, is known as the applicative marker. In Austronesian languages, an affix is used as the applicative marker to introduce an additional argument:

(36) no-helo'a-ako   te   ina-no   [Tukang Besi]

    3R-cook-APPL   core   mother-3-POSS

    They cooked for their mother   (Bresnan and Moshi 1990)
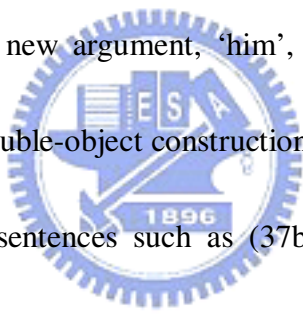
Some languages do not use applicative markers to present applicative construction. Instead, they use double-object construction. For instance, non-marked double-object construction functions as applicative construction in English. The function of applicative construction does not change, regardless of whether it is introduced by an applicative marker or by the double-object construction. The purpose of the applicative construction is to intensify the transitivity of a verb and enable the verb to carry an additional participant of the event:

(37) a. I cooked a meal.   [English]

    b. I cooked him a meal.

Marantz (1993) proposed that a sentence like (37) is an example of hiding applicative

construction in a double-object construction. In (37a), 'cook' carries one object, 'a

meal,' in the sentence. A transitive verb can only carry one object. Therefore 'cook' is

a transitive verb. Applying applicative construction to (37a) allow the transitive verb

'cook' to carry an additional new argument, 'him', as shown in (37b). This is an

example of using non-mark double-object construction as applicative construction.

    Marantz believed that sentences such as (37b) are applicative constructions

because, within applicative construction, the applied argument will asymmetrically

c-command the direct object. This c-command irregularity is a defining property of a

double-object and of applicative construction (Barss and Lasnik 1986, Marantz 1993).

In applicative construction, the theme object must follow a beneficiary object. (Alex

Alsina and Sam A. Mchombo 1993)

    The usage of applicative construction is not an isolated phenomenon. It is

widely found in various world languages. In African tongues, such as Bukusu,

Luganda and Kinchaga, applicative construction is observed:

(38) a. n-a-i-lyi-i-a   m-ka   k-elya   [Kinchaga]

   Foc-1s-PR-eat-app-FV   1-wife   7-food

   He is eating food for/on his wife

 b. wanjala   a-mu-kul-il-a   sii-tabu

   Wanjala   3ss-CL10-buy-APP-FV   CL7-book

   Wanjala bought her a book

 c. Mukasa   ya-tambu-le-dde   Katonga   [Luganda]

   Mukasa   PAST-walk-APPL-PAST   Katonga

   Mukasa walked for Katonga   (Pylkkanen 2002)

   (38a), (38b) and (38c) represent that, in African languages, applicative
construction can be denoted by the addition of the affix. The main verbs of the
sentences (38a), (38b) and (38c), 'eat' and 'bought,' are both transitive and can carry
only one object. After applicative construction is applied, both verbs have the ability
to carry an additional argument.

   Applicative construction can also be found in languages like Japanese, Korean,
and Albanian:

(39) a. Taroo-ga   Hanako-ni   tegami-o   kaita   [Japanese]

Taro-NOM Hanako-DAT   letter-ACC   wrote

Taro wrote Hanako a letter.

b. John-i   Mary-hanthey   pyunci-lul   sse-ess-ta   [Korean]

John-NOM Mary-DAT   letter-ACC   wrote-PAST-PLAIN

John wrote Mary a letter

c. Drita   i   poqi   Agimit   kek   [Albanian]

Drita   ACC-CL   baked   Agim.DAT cake

Drita baked Agim a cake

(Pylkkanen 2002)

An argument introduced by applicative construction is known as an affectee, or

a beneficative if it is animate[5]. This is because an argument introduced by applicative

construction is usually influenced by the event described by the verb phrase or by the

object in the sentence. Therefore, it is reasonable to assume that the thematic roles of

the animate applicative NPs are either that of benefactive or an affectee. For example:

(40)a. Katonga   ya-kwaant-i-dde   Mukasa ensawo   [Luganda]

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[5] 'Animate' here means a living thing or a thing that is living at the moment we talk. This feature is specifically for human.

Katonga   PAST-hold-APPL-PAST   Mukasa bag

Katonga held the bag for Mukasa

b. Nd-aka-uray-ir-a   nyoka   pa-dombo   [Changa]

I-PST-steal-APPL-FV   1-mother   9-money

I stole money form my mother

(Pylkkanen 2002)

In (40a), the applicative affix '-i-' introduces an additional argument. 'Mukasa', is the beneficative of the event 'Katonga held the bag.' In (40b), the applicative affix '–ir-' makes 'mother' the affectee of the event 'I stole money.' Both of the introduced arguments are influenced by the action of the main verb.
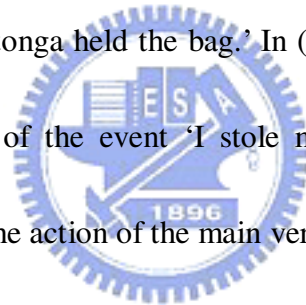
In English, double object construction, as seen in (37) and (40), is used as applicative construction:

(41) a. Elmer baked Hortense a cake   (Marantz 1993)

b. I wrote John a letter   (Pylkkanen 2002)

Marantz explained that, in English, a double-object construction like (41a) is an applicative construction. He claimed that, in a double object construction like (41a),

the benefactive is outside the event, affecting the theme, whereas the affectee is located inside the event on the specifier of the applicative phrase. In (41b), the benefactive object, 'John,' is above the original object, 'the letter,' leading us to believe that it is applicative construction as well.

While many languages use the same applicative marker to indicate both affectees and benefactives, others use different applicative markers to differentiate between the two. If a language has only one applicative marker, the semantic meaning of the sentence can be used to distinguish between a benefactive applied object and an affectee applied object.

If the applicative marker is removed from the sentence, the additional argument must be omitted concurrently, or the sentence will become ungrammatical. Only with the help of the applicative marker can the transitivity of a verb be intensified. Without the applicative marker, a verb can only bring the grammatically allowable number of arguments.

Semantically speaking, applicative construction can be separated into high applicative and low applicative. Pylkkanen (2002) pointed out that high applicatives denote a relationship between an event and an individual, while low applicatives denote a relationship between two individuals. She has proposed that low applicative construction can only occur with a transitive verb. High applicative construction does

not have such rules. High applicative construction can occur with various verb forms, despite its transitivity. The theory is reasonable because the high applicative denotes a thematic relationship between the event described by the verb and the applied object; therefore, the transitivity of the verb is irrelevant. On the other hand, a low applicative describes the relation between two individuals. Without a transitive verb, only one object will exist in the sentence:

(42) a. Mukasa   ya-som-e-dde   Katonga   ekitabo [Luganda]

     Mukasa   3G.PAST-read-APPL-past   Katonga   book

   b. Mukasa   ya-tambu-le-dde   Katonga   [Luganda]

     Mukasa   PAST-walk-APPL-PAST

     Mukasa walked for Katonga

   c. Kantonga   ya-kwaant-i-dde   Mukasa   ensawo [Luganda]

     Katonga   PAST-hold-APPL-PAST   Mukasa   bag

     Katonga held the pot for Mukasa   (Pylkkanen 2002)
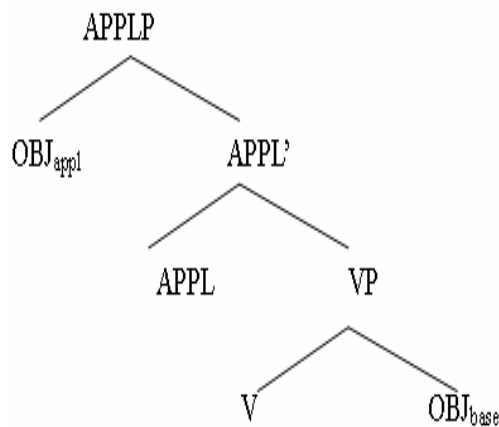
(43)   a. I baked him a cake

      *b. I run him

In example (42), the transitivity of the verb does not influence the grammaticality of

applicative construction. A multitude of verbs are compatible with applicative construction. Based on this reason, we confirm that Luganda has high applicative construction. In (42), because the transitive verb is only able to use applicative construction, to avoid making the sentence ungrammatical, we conclude that English has low applicative construction.

If we discuss the syntactic structure of high and low applicative construction, we may find that the location in which each construction places its applicative argument is different. High applicative places its applicative argument out of the VP, like in (44a). Low applicative places its applicative argument inside the VP, like in (44b). The only similarity between the two is that no matter whether high applicative or low applicative is used—both of their applied objects must c-command the direct object.

(44a) high applicative   (44b) low applicative
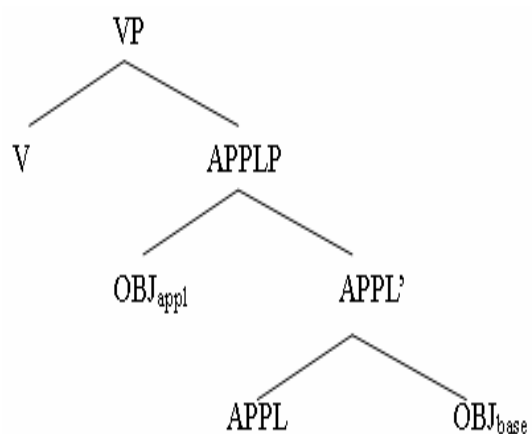
(Peterson 2007)

In summary, applicative construction does exist and is applied widely in many languages. Although there may be different ways to present applicative construction, its purpose is always to intensify the transitivity of a verb and introduce an additional argument into a sentence. In the next section, the method of applying applicative construction and its function in the Taiwanese *ka* will be shown.

3.2 The analysis: Two functions of *ka*

In Section 3.1.1, we proposed that *ka* has two functions. One is as an applicative marker and the other is as a counterpart of the Mandarin *ba*. In this section, we start by introducing an analysis of the applicative *ka* construction. Then, we prove the other function of *ka*.

We claim that *ka* is capable of being an applicative marker for introducing an additional argument into a sentence. Our proposal can be proven by the following sentences:

(45) a. *i   chau2   a*

He   run PRT

He ran away

a'. *i   ka   goa2 chau2 a*

He *ka*   me   ran PRT

He ran away (and makes me become an affectee)

a''* *i   φ goa2   chau2 a*

He φ   me   run PRT

b.   *i   poan   i2-a2*

He move chair

He moved the chair

b'   *i   ka   goa2   poan   i2-a2*

He   *ka*   me   move   chair

He moved the chair (and makes me become the benefactive)

b''* *i   φ   goa2   poan   i2-a2*

He φ   me   move   chair

c.   *O-eng   ha7 pan*

O-eng   off the duty

O-eng is off duty

c'   *O-eng   ka   goa2   ha7 pan*

O-eng   *ka*   me   off the duty

O-eng is off duty (and makes me become an affectee)

c" *O-eng   φ   goa2   ha7 pan*

O-eng   φ   me   off the duty

*Chau2/*run is a one-place predicate, as (45a) indicates. A one-place predicate should have only one argument in a sentence. In (45a') *chau2* is able to carry an additional argument *goa2/*me with the help of *ka.* If we omit *ka* and leave the additional argument in the sentence, the additional argument makes the sentence ungrammatical. The same phenomenon occurs in (45b). The main verb in (45b), *poan/*move, is a transitive verb. A transitive verb has only one object. An additional argument *goa2* /me is introduced into the sentence with the help of *ka.* All of these phenomena explain one thing—the transitivity of a main verb becomes stronger with the addition of *ka* in a sentence. With the help of *ka*, we can correctly introduce an additional argument into an argument-saturated sentence.

The phenomenon presented in (45) demonstrates our assertion－*ka* is capable of introducing an additional argument into a sentence and intensifying the transitivity of the main verb. The characteristics of introducing an additional argument to the sentence and intensifying the transitivity of the main verb are identical to those of an applicative marker. Thus, we suggest that *ka* can function as an applicative marker in

Taiwanese.

However, if *ka* is purely an applicative marker in Taiwanese, the origin of the

ka-NP in sentences like *'goa2 ka chhai3 be2 a/* I buy the vegetables' and *'i ka goa2*

phah/ He hit me,' is difficult to explain. The *ka*-NP in these sentences is obviously not

an additional argument. It is the object of the main verb. In order to explain sentences

like *'goa2 ka tsa ibei a/* I buy the vegetables' and *'i ka goa2 poan i2-a2/* He moves

the chair for me at the same time,' we propose that *ka* has two syntactic functions

when added to a sentence:

(a) To be the counterpart of the Mandarin *ba*[6]

(b) To be the applicative marker[7]

Function (a) operates when we present the disposal meaning. If function (a) is

utilized, *ka* would render the main verb unable to assign the inherent Case to its object.

According to Burzio's generalization[8], the main verb will lose its external subject.

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[6] The reason that we do not treat the function (a) as the applicative construction is because that the relationship between the arguments does not change after we add this kind of *ka* into the sentence.

[7] Tsai (2007) has pointed out that Taiwanese applicative *ka* construction is believed to be the counter part of Mandarin *gei* construction. Taiwanese applicative *ka* construction can be used to exhibit the usage of the affectee and the benefactive, which is very similar to the Mandarin *gei* construction. In this thesis we focus on the two functions of *ka* and the differences between these two functions. Detailed discussion about the relationship between *ka* and *gei* see Tsai (2007).

[8] Burzio's generalization:

(i)   A verb which lacks an external argument fails to assign accusative Case.

(ii)   A verb which fails to assign accusative Case fails to theta-mark an external argument.

T$\leftrightarrow$A (Burzio's 1986:185) T represents the external theta role, assigned indirectly. A stand for accusative Case.

Because the object loses the Case given by the main verb, it is forced to move to the post-*ka* position and receive the Case given by *ka*. Due to the adjacency condition that *ka*-NP must follow so that the NP will recieve the Case from *ka*, the phenomenon of why in the *ka* construction, *ka* and *ka*-NP are always inseparable becomes explainable. The movement of *ka*-NP is because of its need for the Case. Why putting emphasis on *ka* keep the main verb from assigning the Case to its complement NP is because that only if the main verb fails to assign the Case to the object, we would be able to explain why, in sentences like '*goa2 ka chhai3 be2 a/* I buy the vegetables' and '*i ka goa2 phah/* He hit me,' the object needs to move to a position following *ka*.

The phenomenon of an added element which makes the main verb lose its external argument and simultaneously, its ability to assign the inherent Case, is not an isolated occurence. We find similar circumstances in the passive form of English. Burzio's generalization states that a verb in passive form loses its external argument and its ability to assign the Case to an object.

The second function of *ka* in a sentence, as (b) presents, is to operate as an applicative marker. When *ka* is treated as an applicative marker, it introduces an additional argument into the sentence. *Ka* is responsible and necessary for grammatically introducing an additional participant into a sentence. When *ka* is added to the sentence and when an appropriate candidate for the additional argument is

found in the lexical array, sentences with saturated arguments may add this additional argument after *ka*. It is not necessary for *ka* to have the main verb fail to assign the Case to the object. *ka* itself is already satisfied with an additional argument. *Ka* does not need to assign the Case to the object of the main verb. The specific phenomenon is called feature-checking. If we can satisfy the demand to assign the Case for *ka* under the local domain, *ka* would not need to take the strategy of making the main verb fail to assign the Case. *Ka* would instead move the verb-complement upward to do the feature checking. The applicative *ka* construction is believed to be similar to the Mandarin *gei* construction, for both of them are able to bring an additional argument to be an affectee or a benefactive[9].
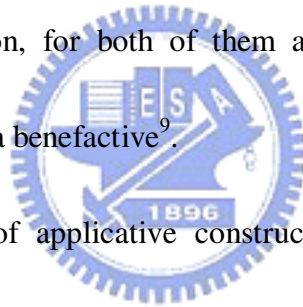
There are two kinds of applicative constructions. One is high applicative construction, and the other is low applicative construction. We propose that the Taiwanese applicative *ka* construction is an example of high applicative. This is because the position of the Taiwanese applicative *ka* construction is located in a position higher than that of the VP. We use a manner adverb to prove our assumption:

(46) a. *i   ka   goa2   kai   ji*

     he   *ka*   me   spend   money

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[9] For more detail discussion, see Tsai (2007).

He spend money (and makes me an affectee)

b. *i   ka   goa2   luan   kai   chiN5*

   he *ka* me   without concern   spend money

   He spends money without concern (and makes me an affectee)

c.(?) *i   luan   ka goa2   kai   chiN5*

   He without concern *ka*   me   spend money

The structure of (46b) is presented as follows:
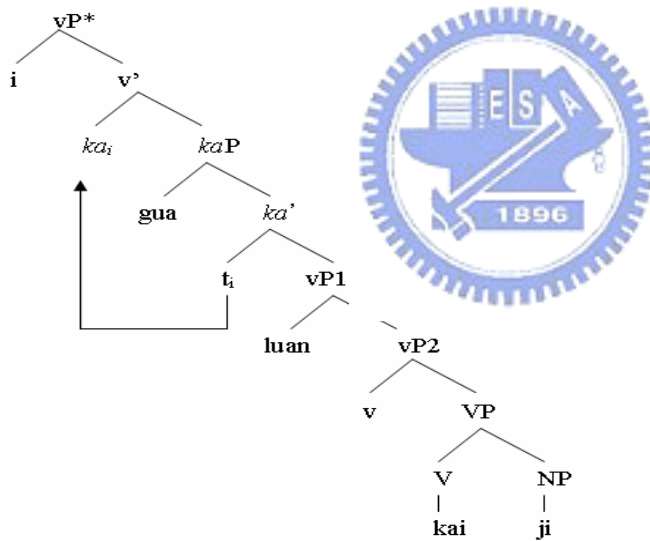
To confirm that the *ka*P is above the VP, we perform a test using a manner adverb. As (46b) presents, we find that the manner adverb always follows the *ka*P. The sentence will become less acceptable if we put the manner adverb before the *ka*P. Thus, the *ka*P should be located above the VP. Because of this conclusion, we adopt the structure that Li (2002) proposed: that the Taiwanese *ka* construction is, in fact, the applicative

ka construction. Because *ka* functions as the theta-role assigner, as Li mentioned, we keep its light verb structure on its construction. Owing to the *ka* construction being at a position higher than the VP, we conclude that the Taiwanese *ka* construction belongs to high applicative construction. Another reason which leads us to our conclusion, is the semantic meaning of *ka*.

The semantic meaning exhibited by the Taiwanese applicative *ka* construction is always found between an event and an individual introduced by *ka*; not between two individuals:

(47) a. *i   ka   goa2   be2   chheh*

　　　He *ka*   me   buy   books

　　　He helps me to buy the book

　b. *Abu   ka   goa2   se2   saN*

　　　Mother *ka*   me   wash   clothes

　　　Mother helps me to wash my clothes

　c. *goa2   ka   i   poan   i2-a2*

　　　Me   *ka*   him   move   chair

　　　I help him to move the chair.

In (47), the relationship between the applicative *ka*-NP and the event described by the verb confirms the high applicative construction we mentioned. In (47a), *goa2* is the benefactive of the event '*i be2 chheh/*He buys the book.' In (47b), *goa2* is the benefactive of the event '*Abu se2 saN/* Mother washes clothes.' In (47c), *i* is the benefactive of the event '*goa2 poan i2-a2/* I moved the chair.' The applicative *ka* NP is always influenced by the whole event described by the main verb. Following the definition proposed by Pylkkanen, the high applicative always introduces the relationship between an event and an individual. This confirms that the Taiwanese applicative *ka* construction belongs to high applicative construction.

Also, the Taiwanese applicative *ka* construction is able to combine with a unergative verb. Following Pylkkanen's definition, only high applicatives can combine with unergative verbs.

(48) a. *he le phaiN2-lang5   keng3-jian5   ka goa2 si2-a*

   That bad guy   unexpectedly   *ka* me die

   That bad guy die unexpectedly (and makes 'me' an affectee)

   b. *i   ka   goa2   chau2-a*

     He   *ka*   me   run-PRT

     He runs (and makes 'me' an affectee)

Because the Taiwanese applicative *ka* construction always presents the semantic relationship between an event and an individual, and its structural location is above the VP, we find that it belongs to the high applicative. Owing to the conclusion that the Taiwanese *ka* applicative construction belongs to high applicative construction, no specific restriction on the verb selection exists. If only a qualified argument exists in the lexical array, the applicative *ka* construction would be allowed to produce a multitude of verbs.

In summary, the function of *ka,* wherein the main verb loses its external argument and fails to assign the Case to the object, would not work if we aim to present applicative construction. On the contrary, if we wish to present a disposal meaning like the Mandarin *ba* construction, *ka* will take the object of the main verb as its argument. To determine whether or not the result of the *ka* NP is NP movement or applicative construction is quite easy: If we remove *ka* and the following *ka* NP, and the sentence is still grammatical, it is an applicative *ka* construction[10].

Take '*i ka mih8 a2 kun hoo a*/He *ka* things put already' as an example. The original sentence should be '*i kun hoo mih8 a2 a*/He put things already.' This is a

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[10] Beyond the examples presented above, the other kind of applicative *ka* construction is discovered, for example: *i ka goa2 chin san*/ He helped me to dress up. Unlike the examples presented above, if the *ka*+NP had been deleted, although the sentence remains grammatical, the meaning of the sentence will become totally different. Unlike the applicative *ka* construction we have introduced above, this kind of applicative *ka* construction may be considered as the mid applicative (Tsai 2007). For the more detail discussion, see Tsai (2007).

typical transitive sentence. The addition of *ka* results in '*i ka kun hoo mih8 a2 a*/He *ka* things put already.' *Ka* forces '*mih8 a2*' to move to the position after *ka* to receive the Case given by *ka*. The sentence '*i ka mih8 a2 kun hoo a*' is generated. This *ka* construction is not applicative construction, because once we remove *ka* and the *ka*-NP, the sentence will become ungrammatical. The *ka*-NP here is not an additional argument but the object of the main verb.

Next, we use the sentence '*i ka goa2 phah*/He *ka* me hit' as an example. We assert that the original sentence should be '*i phah goa2,*' which is a typical transitive sentence. After *ka* is added, the sentence becomes '*i ka phah goa2.*' The addition of *ka* makes '*goa2*' move to a position after *ka* to receive the Case, and the sentence '*i ka goa2 phah*' is generated.
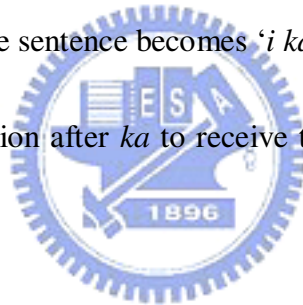
Thirdly, we use the example of '*i ka goa2 be2 nng7 pun2 chheh*/He *ka* me bought two books/He bought two books for me.' The primary sentence is '*i be2 nng7 pun2 chheh*' which is a typical transitive sentence. *Ka* and *goa2* are obviously not the argument of the original structure. If we insert *ka* and *goa2* in the position of *ka*-NP, the grammatical sentence '*i ka goa2 be2 nng7 pun2 chheh*' will be generated. This sentence is an applicative *ka* construction because we use *ka* to introduce an additional argument into an argument-saturated sentence. The sentence is still grammatical if we delete the *ka* and the *ka*-NP. This sentence presents the relationship

between an event ('buy books') and an individual ('me'). For this reason, this is considered high applicative construction.

Finally, we use '*i ka goa2 chau2 khui*/He *ka* me ran away/He ran away' (and makes 'me' an affectee). The original sentence is '*i chau2 khui*/ He ran away'. *Chau2* in Taiwanese is a unergative verb. The original sentence is an argument-saturated grammatical sentence. *Ka* and the *ka*-NP *goa2* are not the original arguments of the sentence. After *ka* and the *ka*-NP are added, the sentence '*i ka goa2 chau2 a*' is generated. This should be an applicative *ka* construction because we introduce an additional argument into an argument-saturated sentence. In this example, we can prove that the Taiwanese applicative *ka* construction belongs to the high applicative because *tsau* is a unergative verb. Only high applicative constructions can occur with the unergative verbs.

The examples above clearly demonstrate that when *ka* is treated as an applicative marker, it will retain the function of the main verb to assign Case to its object. If *ka* is used as the counterpart of *ba* in a sentence, the main verb will lose its ability to assign Case to the object because the addition of *ka*, which will shift the object of the verb to a post *ka* position. However, these two functions never occur simultaneously: if one works, the other will become automatically functionless. This can be regarded as evidence for our theory on the *ka* construction.

3.3 Summary

In this section we introduce our observations on the Taiwanese *ka* construction. We find that neither the NP movement nor base generated assumption is able to explain every variation of *ka*-NP. Therefore, we raise a new theory that *ka* has two functions. First, that *ka* can be an applicative marker. An applicative marker *ka* introduces a new participant in an argument-saturated sentence. Using to Pylkkanen's definition, we believe that the Taiwanese *ka* construction belongs to the high applicative. High applicative construction has no limits on the selection of a verb. Thus, the Taiwanese *ka* construction can combine with a multitude of verbs in Taiwanese. The other function of *ka* is to cause the main verb lose its function of assigning the Case to the object of the sentence. We also introduce the definition of applicative construction into the background knowledge of our analysis. We find that, following our proposal, the dilemma of the source of the *ka*-NP would be easily solved. We will discuss the various obligations of the X-factor in the Section 4.
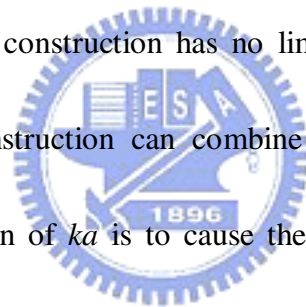
CHAPTER 4

ISSUES SURROUNDING THE X-FACTOR: THE GOVERNMENT-NUCLEUS

STRESS RULE

In this chapter the basic observations of non-X-factor sentences in Taiwanese

ka construction and theoretical concepts of the "Government-Nucleus Stress Rule"

will be revealed as preliminaries to the analysis. We propose that, unlike the Mandarin

ba construction, the Taiwanese *ka* construction needs not follow the

Government-Nucleus Stress Rule. This is because in Taiwanese, the nucleus stress

always falls on the final non-tone-sandhi syllable. What really causes diverse

obligations of the X-factor in Taiwanese is the boundness of the main verb.

4.1 Preliminary

In Section 4.1.1, we present the non-X-factor sentences in the Taiwanese *ka*

construction. Although bare verb forms are found in Taiwanese *ka* constructions, we

realize that not all verbs are always tolerated in their bare forms. We introduce the

Government-Nucleus Stress Rule (G-NSR) in Section 4.1.2 for further analysis.

4.1.1 The non-X-factor sentences in the Taiwanese *ka* construction

In Section 3.1.1, we have mentioned that although the Taiwanese *ka* construction is believed to be the counterpart of the Mandarin *ba* construction, they have one vital distinct feature—in the Taiwanese *ka* construction, a bare verb is sometimes found in a sentence. On the other hand, the Mandarin *ba* construction always requires an X-factor to co-occur with the main verb in the sentence. Like (50), the Taiwanese *ka* construction is grammatical without the X-factor under some circumstances:

(50) a. *i   ka   goa2   phah.*

    He *ka*   me   hit

    He hit me.

  a'. ta   ba   wo   da.

     He ba me   hit

     He hit me.

  b. *li   e   chheh, be   kio   siann-lang khi   ka   nia.*

    You ASSOC book want ask   who   go *ka*   collect

    Who would you ask to go and get your book.

  b'. ni   de   shu, yao   jiao shei qu   ba   ta   ling.

You ASSOC book, want ask who go ba   it   collect

Who would you ask to go and get your book.

c. *i   ka   goa2   that.*

He   *ka*   me   kick

He kicked me.

c'. ta   ba   wo   tee.

He ba   me   kick

He kicked me.

In (50a/b/c) the *ka* sentences carrying the bare verb are all grammatical. However, the *ba* constructions carrying the bare verb form in (50a'/b'/c') are ungrammatical. A *ba* sentence tolerates no bare verb form in the sentence, without exception. The *ba* sentence is always unacceptable without an X-factor.

Nevertheless, a bare verb sentence is not always grammatical in the Taiwanese *ka* construction. There remain counter-examples that must have the X-factor co-occur with the main verb to avoid an ungrammatical sentence. For instance:

(51) *a. *i   ka   chhu3   ki.*

He ka   house built

He built the house.

a'. *i   ka   chhu3   ki   hoo   a.*

He   ka   house   built   already   PRT

He already built the house.

*b. *goa2   ka   chheh   thak8.*

I   ka   book   read

I read the book.

b'. *goa2   ka   chheh   thak8   wan   a.*

I   ka   book   read   finished   PRT

I finished reading the book.

*c. *i   ka O-eng e lau7-pe2   tai.*

He ka O-eng's father   killed

He killed O-eng's father.

c'. *i   ka   O-eng e   lau7-pe2   tai see a.*

He   ka   O-eng's   father   killed die PRT

He killed O-eng's father.

In (51a/b/c), the sentences are unacceptable without the X-factor. Upon adding

X-factor into the sentence, the sentences become acceptable again. This differs greatly

from the examples in (50a/b/c). In (50a/b/c), the sentences are grammatical with or without the X-factor. But in (51a), (51b) and (51c), the sentences become ungrammatical without the X-factor- similar to the Mandarin *ba* construction.

In order to explain the difference between the obligations of the X-factor in Mandarin *ba* and Taiwanese *ka* construction, we would like to introduce the Government-Nucleus Stress Rule to provide an alternative method to deal with this problem.

4.1.2 The Government-Nucleus Stress Rule

In order to explain what causes the different obligation of the X-factor in Mandarin and Taiwanese, we suggest the Government-Nucleus Stress Rule for our analysis. We believe that Mandarin *ba* construction always need an X-factor in the sentence is because of the special limitation of the prosody constraint in Mandarin. This prosody constraint is called Government-Nucleus Stress Rule (G-NSR hereafter). Owning to the limitation caused by the G-NSR, the X-factor becomes an obligatory construction in Mandarin *ba* construction.

Like the Nucleus Stress Rule introduced by Liberman and Prince (1977)[11], the G-NSR is a prosody rule that determines which word is able to carry the stress in a

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[11] Nucleus Stress Rule (Liberman & Prince 1977)
In a configuration [A B]$_c$
NSR: If C is a phrasal category, B is strong

sentence. The concept of the G-NSR was proposed by Feng (2005). Feng has stated

that, in Mandarin, the G-NSR is responsible for the grammaticality of the post-verbal

phrases. He believed that the post-verbal phrase is allowed to occur only if it receives

Nucleus Stress (NS henceforth) from the head. If the post-verbal phrase does not

receive the NS, the sentence will become ungrammatical. The post-verbal phrase can

receive the NS is by functioning the G-NSR.

Using the Nucleus Stress Rule (NSR) to determine the stress in a sentence is

not an isolated phenomenon in Mandarin. It also occurs in German and other

languages. Germans use selectional ordering to decide which element in a sentence

can receive NS. This is called Selectional-ordering Nucleus Stress Rule (S-NSR[12]). In

English, the relation of the asymmetric c-command is used to determine where to

locate the stress in a sentence. This is called the Command-Nucleus Stress Rule

(C-NSR)[13].

In order to understand the G-NSR more specifically, the definition of G-NSR is

presented as follows:

The G-NSR in Chinese:

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[12] The definition of the S-NSR is presented as follows: Given two sister nodes C1 and C2, if C1 and C2 are selectionally ordered, the one lower in the selectional ordering is more prominent. For a more detailed discussion, see Zubizarreta 1998

[13] Given two sister nodes Ci and Cj that are metrical sisters, the one lower in the syntactic asymmetric c-command ordering is more prominent.

Given two sister nodes C1 and C2, if C1 and C2 are selectionally ordered, the one lower in selectional ordering[14] and containing an element governed by the selector is more prominent

(Feng 2005, page 188)

Feng has proposed that unlike the S-NSR in German and the C-NSR in English, the NSR in Mandarin is government-based. The 'G' in the G-NSR indicates the relation of 'Government'. The definition of the Government here is presented as follows:

Government:

a governs b if and only if

a) a is an X^0 , and

b) a c-commands b, and

c) every branching node dominating a dominates b

(Feng 2005, page 188)

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[14] The selectional ordering is defined in the following form(Zubizarreta 1998):
(C, T, V1………Vi, P/Vm, Dm), with possibly m=1
(C, T,…..,Vi, Di), for i=1, 2,…..,m-1(for the cases where m>1)
where Di=1, 2,…..m-1 is the nominal argument of Vi (for the cases where m>1) and Dm is the nominal argument of the lowest (possibly only) verb or the prepositional predicate (P /Vm) in the selectional ordering.
Zubizarreta also pointed out that it is asymmetric in the sense that a selector is necessarily a head, but a selected constituent may be a head or some projection thereof.

The limitation of government makes the NSR in Mandarin more local than other languages. This is because only the internal structure of a metrical dominated directly by a governor is accessible to the computation of metrical structure (Feng 2005 page 190). Feng also claimed that only the selector (known as a head), which has a sisterhood relation with the selected constituent, has the ability to assign NS to a selected constituent. The selected constituent would then be the complement of the head.

In Mandarin, only complements and post-verbal elements would be assigned the NS from its head. This is because the G-NSR only operates on the complement. The complement is always located at the right of the verb in Mandarin. As a result, the direction for assigning the NS is always to the right. The G-NSR is available only when the selector and the selected constituent have government (or sisterhood) relation (Feng 2003). If there is any bounding category between the head and the complement, the head will fail to assign the NS to its complement. If there is no complement for the verb to assign its NS to, the NS will naturally fall on the verb itself. The phrase which received the NS must occur in the sentence.

It is pointed out that there are items prosodically invisible in a sentence. When we are dealing with the G-NSR, these prosodically invisible items should be ignored. The Invisibility Condition is defined as follows:

Invisibility Condition:

In Chinese, anaphoric elements are prosodically invisible constituents that have

no bearing on prosodic analysis.

(Feng 2005, page191)

The Invisibility Condition indicates that some elements should be ignored in the

prosodic structure. For example, elements such as traces, pronouns, and anaphors

should be invisible when applying the G-NSR[15] (Feng 2005:191). When we apply the

Nucleus Stress Rule in a sentence, we remove all prosodically invisible elements and

their syntactic branches from the tree structure. This is called the Structural Removing

Condition (SRC).

Notice that when we are dealing with the G-NSR, all syntactic operation must

be finished first. Only after syntactic operations can the prosodic be applied in a

sentence.

4.2 Applying the G-NSR on the Taiwanese *ka* and Mandarin *ba* construction

In the previous section we have mentioned that the G-NSR plays an important

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[15] Zubizarreta pointed out that anaphoric constituents and the empty category are metrically invisible in all languages.

role in Mandarin. Therefore, we believe that the reason why the X-factor is obligatory in the Mandarin *ba* construction is the result of functioning this special limitation. For example:

(52)a. *ta   ba   shu   fang   zai   zhuozi shang*
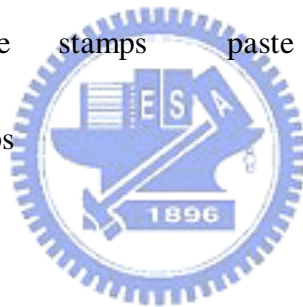
He *ba*   book   put   on   table

He put the book on the table

b. *qing   ni   ba   zhexie   youpiao   tie   shang*

please   you   *ba*   these   stamps   paste   on

Please paste these stamps

The main verb in (52a) is '*fang*'. According to G-NSR, the head should give the NS to its complement. However, the main verb '*fang*' is followed by a prepositional phrase. A propositional phrase is a bounding category for the NS assigner. In order to give the NS to the following complement, the preposition must be merged into the main verb '*fang*'[16]. This is a morphological merger, not a syntactic one. After we merge '*fang*' and '*zai*' together, we will have '*fang+zai*' as the Nucleus Stress assigner. Because the

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[16] Feng (2005) proposed that if the verb is attached to the proposition without the aspect marker between them, we still have to merge the main verb and the proposition together. He claimed that in the [….[V PP]] environment the [V-P] must be combined as a complex verb whether an ASP is present or not. He also claimed that this can be accounted for the Optimality Theory. The [V-P] can be seen as a prosodically forced morphological operation in the sense that the prosodic requirement (NSR) must be met even if it may violate the Local Dislocation for Merger.

prepositional phrase no longer exists and there is no bounding category between the main verb and the following complement, the main verb is able to assign the Nucleus Stress on the following complement '*zhouzi shang*.' Thus, the sentence is grammatical.

The main verb in (52b) is *tie shang*. S*hang* and *tie* are merge to become one phonological element. According to G-NSR, if there is no object following the main verb, the main verb will carry the nucleus stress on its own. Therefore, *tie shang* carries the nucleus by itself. Although it looks like we have an X-factor following the main verb *tie*, phonologically, *tie shang* is treated as a group.

Next, we discuss why the non-X-factor *ba* sentence is ungrammatical:
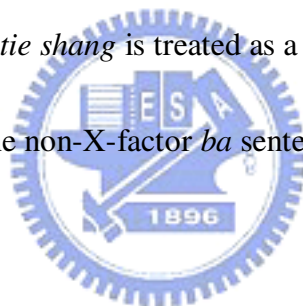
(53) *a. *ta   ba   wo   pian.*

    he   *ba*   me   cheat

    He cheated me.

    b. *ta ba wo   pian   le.*

    He *ba* me cheated ASP

    He cheated me.

According to G-NSR, the sentence like (53) should be grammatical. The main verb

pian does not have a complement; hence, the NS should fall on *pian* naturally.

However, this sentence is ungrammatical in Mandarin. This is because the verb in

(53a) does not follow the minimal word condition. Feng (2005) has proposed that a

minimal word is a foot formed by two syllables, and any syntactic organization of the

form [X+Y] cannot be an X^0 unless it is a minimal word[17]. A minimal word cannot be

less than two syllables and it cannot be a prosodic word. If it is not a prosodic word, it

cannot assign a nucleus stress. If we want the main verb in (53a) to carry the NS itself,

we have to give the verb some additional elements to intensify it because it is not a

prosodic word. The verb will be strong enough to carry the NS only if we add the

additional elements to make it follow the minimal word condition. This is why, in the

Mandarin *ba* construction, we always need an X-factor to go with the verb.
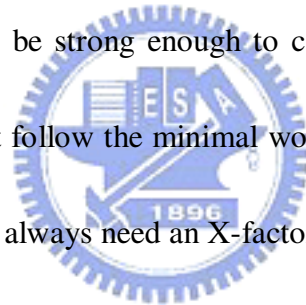
In (53b) we have an aspect marker *–le* following the main verb (the verbal *–le*).

Feng (2002) claimed that, when we are dealing with the aspect marker *–le* in a

sentence, we should lower the ASP and merge it into the verb. With *–le* in the

sentence final position, the verb form becomes prosodically heavier because we add

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[17] According to Feng (2006), he claimed that according to M&P 1998:299, there are five steps to
derive a minimal word:
a. All-Ft-Left: The left edge of every foot aligns with the left of some PrWd = Every foot is initial in
the PrWd
b. Parse-Syll: Every Syllable belongs to a foot
c. Prase-Syll>> All-FT-LEFT: The All-FT-LEFT demands that all feet be exactly at the left edge; the
All-FT-LEFT requires that every form be fully footed. Hence, it is believed that every syllable is
footed, and every foot is initial. As a logical consequence, only one configuration can meet both of
these requirements, that is , the Minimal Word, because it has a single foot that parses all syllables
and is itself properly Left-aligned:
d. [FT]$_{PrWd}$
e. Violation occurs in specified situations   (Feng 2006)

an additional syllable to transform it into a minimal word. And since the main verb is now a minimal word, it will now be able to assign and carry the NS itself.

When we exercise the G-NSR to deal with the *ba* construction, we must notice that only the verb that carries the meaning of 'affect/dispose the object' is able to appear in the *ba* construction. If the verb can bring no affecting or disposal meaning to the object, the sentence will remain ungrammatical, even if it follows the G-NSR. For example, a sentence like '*ta ba na-difang likai-le/* He left that place' is ungrammatical. This is because the main verb in the sentence, *likai*, cannot provide an affecting or disposal meaning to the object. So even if the G-NSR predicts the sentence would be grammatical, this sentence is not, because the main verb lacks the disposal meaning.
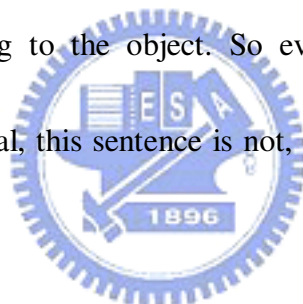
In regards to the Taiwanese *ka* construction, the non-X factor sentence is acceptable under some circumstances:

(54) *i   ka   goa2   that/niam/phah.*

   He *ka*   me   kick/pinched/hit

   He kicked/pinched/hit me.

However, not all of the verbs are tolerated in a sentence in their bare forms:

(55) * *i ka chhu3 ki/koa chhiu3N/i2-a2 poan.*

He *ka* house built/song sing/chair move

He built the house/sing the song/ moves the chair.

Both (54) and (55) should be grammatical under the prediction of the G-NSR. However, only the sentences in (54) are grammatical. The sentences in (55) are all unacceptable. We believe that this is because the prosodic constraint is different between Mandarin and Taiwanese. Unlike Mandarin, the Taiwanese does not follow the G-NSR.
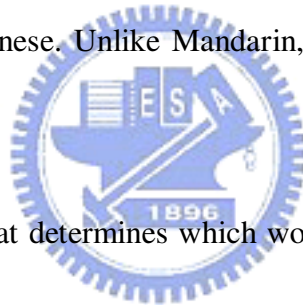
The G-NSR is a rule that determines which word or phrase can have the stress in a sentence. It plays an important role in Mandarin. However, Taiwanese does not use the G-NSR to determine which word or phrase will obtain the stress in a sentence. This is because Taiwanese follows the tone sandhi[18] rule. In Taiwanese, the final syllable of the topic or new message usually keeps the original tone. The one that keeps the original tone is usually able to receive the stress[19]. Function words or old messages receive no stress in a sentence. It is discovered there exists tone sandhi

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[18] In Taiwanese, at the level of the words, the last syllable usually reads as the base tone and the others as the sandhi tone. In fact, in most Taiwanese sentences, their final words usually keep the original tone. For a more detailed discussion, see Lu(2002)

[19] For a more detailed discussion, see 駱(2008)

group in Taiwanese. The tone sandhi group is used when tone sandhi is manipulated.

The sentence-final word always belongs to one of the tone sandhi group and the

sentence-final word will keep it original tone. The one keeps the original tone will

receive the stress. As a result, Taiwanese does not need to manipulate the G-NSR.

That is to say, in Taiwanese, whether the *ka* sentence needs the X-factor or not is not

determined by the G-NSR, because the G-NSR has no function in Taiwanese.

Since the G-NSR has no function in Taiwanese, we believe that the need of the

X-factor then depends on the boundness of the verb. We propose that if the verb itself

can provide enough boundness, the X-factor would not be necessary in a sentence.

For example, what differentiates the verb *pah*/ hit and the verb *ki*/ built is that

the former one describes a lower division event than the latter. We finish the action

pah at the moment that the fist touches on the other person's body. Verbs like *tah* and

niam function similarly. On the contrary, the verb *ki* can be divided into many parts.

Many inner stages exist in *ki*. The event *ki* is not always telic. That is why we have to

use the X-factor to make *ki* a bound event.

In comparing verbs like *ki* to verbs like *phah,* we realize that *ki* has many more

inner stages than *phah*. This is why when we are dealing with a verb that can be

divided into many inner stages we must have an X-factor to help the verb transform

into a bound event, because the X-factor can provide boundness for the verb. It also

helps us understand what stage the verb describes.

In summary, we believe that Mandarin *ba* construction always needs the X-factor because of the G-NSR. However, in Taiwanese, we do not use the G-NSR to determine where the stress should be located. What really affects the existence of the X-factor is the boundness of the verb.

4.3 Conclusion

In this section, we introduced the G-NSR for our analysis of the X-factor. We used an alternative method of explaining the phenomenon of the existence of the X-factor in Mandarin *ba* construction. We also claimed that Taiwanese does not use G-NSR to determine which syllable is able to receive the nucleus stress. Taiwanese follows the tone sandhi rule to decide which syllable should receive the stress. Therefore, what really affects the need for an X-factor is the boundness of a verb. If a verb can form a boundness predicate itself, then it does not have a need for the co-occurance of an X-factor.

CHAPTER 5

<div style="text-align: right">

CONCLUSION

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In this thesis, an alternative way to analyze the *ka* construction is provided. We propose that *ka* can either be the counterpart of *ba* or be an applicative marker. The Taiwanese applicative *ka* construction is believed to be the high applicative because of its syntactic structure and the semantic meaning.

We also propose that the requirement of the X-factor in the Mandarin *ba* construction can be explained by G-NSR raised by Feng (2005). In the Mandarin *ba* construction, X-factor is an obligatory element because a bare verb is not a minimal word in Mandarin. With the help of the G-NSR, the existence of the X-factor becomes explainable. Nevertheless, Taiwanese owns its own stress assignment rule, thus the G-NSR fail to apply in Taiwanese. We propose that the boundness of the verb is the key point for Taiwanese to deicide whether the X-factor needs to exist or not.

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