

國立交通大學

外國語文學系外國文學與語言學碩士班

碩士論文

閩南語 *Kah* 句式之空補語探究

The Null Complement in the Taiwanese *Kah* Construction



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摘要

此篇論文探討閩南語程度結構“*kah* 句式”的句法結構與語義特質，以及其空補語的性質與認可條件(licensing condition)。“*kah* 句式”有二個特性。第一，補語必須表達出極高程度的語義；第二，-*kah* 的補語可為一般補語或是空補語。然而，過去的研究，包含 H.-L. Lin (2003)及 W.-A. Wang (2010)，皆未解釋以上二個現象。Lin (2003)針對“*kah* 句式”提出一套非一致性的分析(diverse analysis)，但沒有考慮到閩南語修飾語的語序，以及空補語在“*kah* 句式”中的普及性。Wang (2010)認為-*kah* 為補語標記(complementizer)，但其分析面臨了以下的問題。第一，-*kah* 能帶名詞補語；第二，-*kah* 與屬於中心語居前的補語標記(head-initial complementizer)在本質上是不同的。為了解決上述問題與掌握“*kah* 句式”的特性，句法結構上，本文採納 C.-T. Huang (2006)對漢語結果句式(resultatives)的分析，提出-*kah* 為“*kah* 句式”的主要謂語，可選擇一個名詞、子句、代詞或是無語音形式的成分當補語，而-*kah* 前方的謂語，則為修飾語。語義上，針對補語必須表達出極高程度的現象，Doetjes (1997)認為程度動詞(scalar verb)和名詞中存在一個尚未滿足的表量變項(quantity-position)，以及程度形容詞(scalar adjective)中存在一個尚未滿足的表質變項(grade-position)，本文採用她的看法，提出補語的指定語位(specifier)中存在一個運符(operator)，其工作是無擇約束(unselectively binds)補語中程度變項，進而得到高程度的語義；接下來，此運符給予-*kah* 前方謂語中尚未滿足的表量變項或表質變項極高程度的值，藉由此機制，“*kah* 句式”即擁有極高程度的語義。至於空補語的類別，此空補語為一個代詞性無語音形式的成分(Pro)，原因如下：第一，此空補語必須出現在一個高度語義相關的語境下，如同 C.-S. Liu(2004)提出的隱性消極言談代詞(empty anaphor)；第二，此空補語可以擁用回指語義(anaphoric reading)與絕對語義(arbitrary reading)；第三，此空補語可和疑問詞共現；第四，此空補語前方-*kah* 的音調為本調。因此，身為代詞性無語音形式的成分，此空補語必須遵守認可條件(licensing condition)與識別準則(identification convention)。主要謂語-*kah* 對其後的補語有語義選擇，故帶有很強的語義特徵，藉此可以核准其後的空補語，並給予其語義內涵。此分析進而能解釋為何像閩南語般缺乏呼應標記(agreement marker)和格位標記的語言能予許空補語的存在。

The Null Complement in the Taiwanese *Kah* Construction

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ABSTRACT

This thesis is about the syntax and semantics of the Taiwanese *kah* construction and the nature of its null complement with the attempt of contributing to the system of the empty category in human languages. There are two important properties of the Taiwanese *kah* construction. Firstly, the complement should denote an extraordinary high tone sense. Secondly, the construction can occur in the form, where the complement is overt, and the form, where the complement is not phonetically realized. However, previous studies, including H.-L. Lin (2003) and C.-A. Wang (2010), does not provide an explanation for those phenomena. Lin (2003) proposes a diverse approach to analyze the construction, which is challenged by the phrasal structure of Taiwanese, and the productivity of the null complement following *-kah*. Wang (2010) argues that *-kah* is the head of the embedded CP which is the complement of the main predicate, but his analysis faces the problems of the permission of NP complements, the clitic property of *-kah*, and the essence of the head-initial complementizer in Taiwanese. In order to solve the problems of the previous analyses and capture the properties of the construction, syntactically, I propose a unified analysis of the Taiwanese *kah* construction based on C.-T. Huang (2006)'s analysis of Mandarin resultatives. The main verb is *-kah*, which expresses the main event change-of-state, and V_1 , which adjoins to *-kah*, expresses the manner of the main event. Besides, the complement of *-kah* is a CP, NP, proform or null complement. Semantically, *-kah* requires the complement to express an extraordinary high tone sense. Doetjes (1997) argues that the open *g*-position of scalar adjectives and the open *q*-position of scalar verbs and nouns can be saturated by theta-identification or theta-binding. Following her argument, I propose that there is an operator in the specifier of the CP or NP complement which unselectively binds the degree variable of scalar predicates or nouns, or the degree variable which is entailed by the exaggeration expression or metaphorical expression. Then, the operator expressing high degree sense theta-identifies with the open *g*-position or *q*-position of V_1 , and the Taiwanese *kah*

construction can express a very high degree sense. As far as the nature of the null complement is concerned, the null complement is a Pro since (i) it should occur in a pragmatic oriented environment just like the empty anitlogophor proposed by C.-S. Liu (2004), (ii) it has the arbitrary reading and the anaphoric reading referring to the context, (iii) it can cooccur with the overt *wh*-element, and (iv) it does not trigger the tone sandhi. The null complement Pro is licensed by the verb *-kah* with strong semantic features, which require the complement to denote an extraordinary high tone sense, and Pro identifies with the semantic features on *-kah*. This proposal offers a licensing condition and an identification convention of the null object Pro in the languages without the rich agreement system and overt case markers like Taiwanese.



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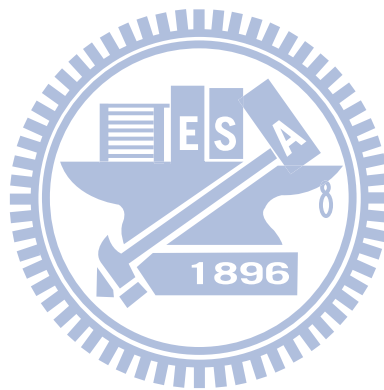
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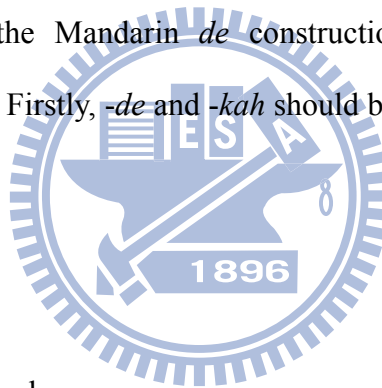


CHAPTER 1

INTRODUCTION

The phrasal resultative and descriptive construction in Mandarin Chinese (henceforth the Mandarin *de* construction) has been one of the popular topics over the years (cf. Huang 1988, 2006; Tang 1990). However, few linguists pay attention to its near counterpart, the *kah* construction in Taiwanese Southern Min (henceforth the Taiwanese *kah* construction).

The similarities of the Mandarin *de* construction and the Taiwanese *kah* construction are as follows. Firstly, *-de* and *-kah* should be preceded by a predicate, as (1)-(2) illustrates.¹



(1) *Mandarin*

a. Ta chi-de hen bao. (resultative)

He eat-DE very full

‘He ate so much that he was very full.’

b. Ta pao-de hen kuai. (descriptive)

He run-DE very fast

‘He ran very fast.’

(2) *Taiwanese*

a. I ciah-kah cin pa. (resultative)

¹ Romanization used in this paper is according to the TLPA (Taiwan Language Phonetic Alphabet), and the tone markers are omitted here.

He eat-KAH very full

‘He ate so much that he was very full.’

b. I cau-kah cin kin. (descriptive)

He run-KAH very fast

‘He ran very fast.’

-de and *-kah* are preceded by the predicate ‘eat’ in (1a) and (2a), and ‘run’ in (1b) and (2b). Secondly, *-de* and *-kah* can be followed by resultatives or descriptives, as shown in (1)-(2). *-de* and *-kah* precede the resultative clauses ‘very full’ in (1a) and (2a), and the descriptive clauses ‘very fast’ in (1b) and (2b). Thirdly, *-de* and *-kah* both have the inchoative, ‘pure’ causative, and ‘causing-with-a-manner’ causative reading (cf. Huang 2006), as shown in (3a)-(3c) and (4a)-(4c), respectively.

(3) *Mandarin*

a. Lisi xiao-de duzi teng. (inchoative)

Lisi laugh-DE stomach ache

‘Lisi got to the state of having stomach ache from laughing.’

b. Zhe xiaohua xiao-de Lisi duzi teng. (‘pure’ causative)

This joke laugh-DE Lisi stomach ache

‘This joke got Lisi to have stomach ache from laughing.’

c. Wo da-de ta gui-di-qiu-rao. (‘causing-with-a-manner’ causative)

I hit-DE he kneel-ground-ask-forgiveness.

‘I hit him until he surrendered.’

(4) *Taiwanese*

a. Li-e chio-kah paktoo thiann. (inchoative)

Li-e laugh-KAH stomach ache

‘Lie laughed so much that he got a stomach ache.’

b. Cit-kiann taici co-kah gua thiam-uaiuai. (‘pure’ causative)

This-CL work do-KAH I tired-bent-bent

‘This work got me to become very tired from doing.’

c. Gua pha-kah I tng-kha-tng-chu. (‘causing-with-a-manner’ causative)

I hit-KAH he break-leg-break-arm

‘I hit him so much that I cause him to have a broken leg and arm.’

Fourthly, the complement of *-de* and *-kah* can be an adverbial phrase, as illustrated by (3)-(4), or a full clause, as in (1)-(2).

However, the Taiwanese *kah* construction has two unique properties. Firstly, the whole complement clause after *-kah* (i.e., the descriptive and resultative phrases) can be omitted, as shown by (5a) (H.-L. Lin 2003, (46)) and (5b).

(5) *Taiwanese*

a. Cau-kah gua thiam-kah e.

Run-KAH I tired-KAH

‘I got so tired from running.’

b. Cau-kah gua thiam-kah [_{CP} ue ma kong be chutlai].

Run-KAH I tired-KAH word also say not out

‘I got so tired from running that I cannot even say a word.’

The complement clause following *thiam-kah* ‘tired-KAH’ in (5b) can be phonetically unrealized, as shown in (5a). On the contrary, *-de* in the Mandarin *de* construction can not occur without an overt complement, as illustrated by the contrast below.

(6) *Mandarin*

a. *Wo lei-de e.

I tired-DE

‘I got so tired.’

b. Ta lei-de [_{CP} hua dou shuo bu chulai].

He tired-DE word also say not out

‘I got so tired that I cannot even say a word.’

The complement clause should be phonetically realized, or the sentence will be ungrammatical, as (6a) shows. Interestingly, with *kan* ‘look’ and *qiau* ‘look’ in the initial of a sentence, *-de* can occur without an overt complement, as shown in (7) (T.-C. Tang 1990, (41)).

(7) a. Kan ni mei-de [s' ϕ].

Look you beautiful-DE

Lit. ‘Look at you! You are so beautiful!’

b. Qiau ni shou-de [s' ϕ].

Look you talk-DE

Lit. ‘Look at you! You talk so excitedly!’

Secondly, the complement of the Taiwanese *kah* construction should denote an extraordinary high tone sense; otherwise, the sentences will be ungrammatical, as the contrast below shows.

(8) *Taiwanese*

a. *I cau-kah siokua-a ban.
 He run-KAH a-little-bit slow

‘He ran a little bit slowly.’

b. I cau-kah cin ban.
 He run-KAH very slow

‘He ran very slowly.’

siokua-a ‘a little bit’ in (8a) does not express a high degree sense, so the sentence is ungrammatical. On the contrary, *cin* ‘very’ denotes a very high degree sense, so the sentence is well-formed. However, Mandarin does not have the restriction, as exemplified in (9).

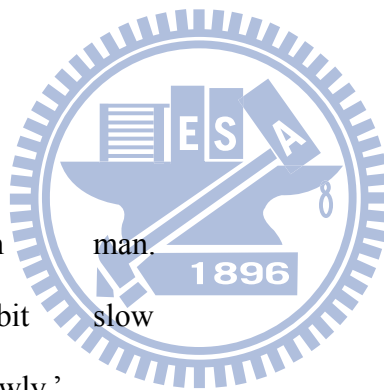
(9) *Mandarin*

a. Ta pao-de youdian man.
 He run-DE a-little-bit slow

‘He ran a little bit slowly.’

b. Ta pao-de hen man.
 He run-DE very slow

‘He ran very slowly.’



The complement following *-de* can express a low degree sense as *youdian* ‘a little bit’ in (9a) or a high degree sense as *hen* ‘very’ in (9b).

The core of this paper is to account for the two unique properties mentioned above. That is, the complement of the Taiwanese *kah* construction can be phonetically unrealized, and the complement must denote an extraordinary high tone sense. Syntactically, I will propose a unified analysis for the structure of the Taiwanese *kah*

construction, and explore the nature of the emptiness after *-kah*. Semantically, I will derive the interpretation of the extraordinary high tone sense denoted by the complement and establish the thematic relation between V_1 -*kah* and the very high degree sense. Moreover, I will explain why the Taiwanese *kah* construction allows its complement to be phonetically unrealized but the Mandarin *de* construction does not.

The organization of this paper is as follows. Chapter 2 explores the syntactic, semantic, phonological properties of the Taiwanese *kah* construction. Chapter 3 reviews previous studies about the Taiwanese *kah* construction, including H.-L. Lin (2003), and C.-A. Wang (2010). Chapter 4 proposes the syntactic analysis based on C.-T. Huang (2006)'s analysis of Mandarin phrasal resultative. Then, I will examine the nature of the null complement, and argue that it is a covert proform. Chapter 5 concerns the interpretation of the Taiwanese *kah* construction. Chapter 6 proposes a licensing condition and an identification convention of the covert proform in the Taiwanese *kah* construction, and explains the asymmetry of the permission of the null complement between the Taiwanese *kah* construction and the Mandarin *de* construction. Chapter 7 is the conclusion.

CHAPTER 2

THE PROPERTIES OF THE TAIWANESE *KAH* CONSTRUCTION

The Taiwanese *kah* construction not only has a form, in which the complement is overt, but often occurs in a form, where the complement of *-kah* is not phonetically realized, as shown in (10).

(10) a. I cang hoo lang pang-sat, tit pangking-lai khau-kah

She yesterday HOO person dumped in room-in cry-KAH

[cin soongsim].

very sadly

‘She was dumped yesterday, and she cried very sadly in the room.’

b. I cang hoo lang pang-sat, tit pangking-lai khau-kah *e*.

She yesterday HOO person dumped in room-in cry-KAH

‘She was dumped yesterday, and she cried very sadly in the room.’

In this Chapter, I explore the syntactic, semantic and phonological properties of the Taiwanese *kah* construction.

2.1 The Syntactic Properties

One of the syntactic properties of the Taiwanese *kah* construction, either the form with or without an overt complement, is that *-kah* must occur along with a preceding predicate (henceforth V_1). Significantly, the selection between *-kah* and V_1

is quit lax. V_1 can be an individual-level adjective, stage-level adjective, stative verb, active verb, semelfactive verb, and achievement verb, as shown in (11)-(16), respectively.

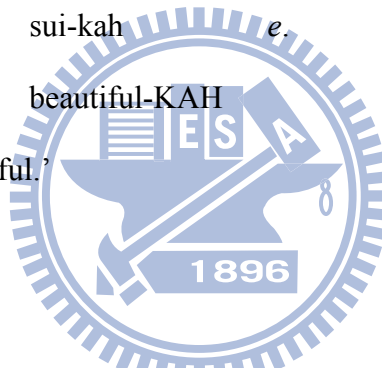
(11) *Individual-level adjectives*

- a. Cit-e caboo-kiann sui-kah [len Ong-e ma hoo
 This girl beautiful-KAH even Ong-e also HOO
 be-khi].
 fascinated

‘This girl is so beautiful that even Onge was fascinated by her.’

- b. Cit-e caboo-kiann sui-kah e.
 This girl beautiful-KAH

‘This girl is so beautiful.’



(12) *Stage-level adjectives*

- a. I khi-kah [bo-siunnbeh kongue].
 He angry-KAH no-want talk

‘He is so angry that he does not want to say a word.’

- b. I khi-kah e.
 He angry-KAH

‘He is so angry.’

(13) *Stative verbs*

- a. Ong-e i ai-kah [cit kang bo khuann-tioh i to be
 Ong-e she love-KAH oneday no see him then no
 ciah be khun].

eat no sleep

‘Onge, she loves him so much that she can not eat or sleep if she does not see him for one day.’

b. I Ong-e ai-kah e.

She Ong-e love-KAH

‘She loves Onge so much.’

(14) *Active verbs*

a. Kinajit chuan cit toh, i iting ciah-kah [cin huann-hi].

Today prepare this table he must eat-KAH very happy

‘We prepare a lot of delicious food. He must eat very happily.’

b. Kinajit chuan cit toh, i iting ciah-kah e.

Today prepare this table he must eat-KAH

‘We prepare a lot of delicious food. He must eat a lot / very happily.’

(15) *Semelfactive verbs*

a. I mnia huatsio, koh sau-kah [cin giamtiong].

He not-only fever also cough-KAH very serious

‘Not only did he have a fever, he coughed very seriously as well.’

b. I mnia huatsio, koh sau-kah e.

He not-only fever also cough-KAH

‘He did not only have a fever, but also coughed a lot / seriously.’

(16) *Achievement verbs*

a. Gua takbai ka i pisai long su-kah [thng-khoo].

I every-time KA he compete all lose-KAH take-off-pants

‘Every time when I compete with him, I lose so much that I even lose my pants.’

b. Gua takbai ka i pisai long su-kah e.

I every-time KA he compete all lose-KAH

‘Every time when I compete with him, I lost by a lot of points / money.’

Nevertheless, accomplishment verbs are not allowed to be the V_1 in the Taiwanese *kah* construction, as shown by (17).²

(17) *Accomplishment verbs*

a. *Kinann chai cin chennchau, gua ciah-pa-kah [beh thoo]-a.

Today dish very plentiful I eat-full-KAH going-to throw-up-ASP

‘There is a lot of food today. I eat a lot. I am so full that I am almost throwing up.’

b. *Kinann chai cin chennchau, gua ciah-pa-kah e.

Today dish very plentiful I eat-full-KAH

‘There is a lot of food today. I am very full from eating.’

I will explain the incompatibility between accomplishment verbs and the Taiwanese *kah* construction in Section 5.2 of Chapter 5.

Another important property of the Taiwanese *kah* construction is that the complement can be a CP or a NP, as illustrated by (18)-(19) (cf. L.-H. Lin 2003: 82).

² Accomplishment verbs are also incompatible with the Mandarin *de* construction, as exemplified in (i).

(i) *Jintian cai hen fongsheng, wo chi-bao-de yiao thu-le.
Today dish very plentiful I eat-full DE going-to throw-up-ASP
‘There is a lot of food today. I eat a lot. I am so full that I am almost throwing up.’

(18) *CP complements*

a. Ong-e i ai-kah [CP cit kang bo khuann-tioh i to
Ong-e she love-KAH one day no see him then
be ciah be khun].
no eat no sleep
'Ong-e, she loves him so much that she can not eat or sleep if she does not see
him for one day.'

b. Cit-e caboo-kiann sui-kah [CP tah-e cabocit khuann-tioh
The girl beautiful-KAH every boy as-soon-as see
i to hoo be-khi].
her then HOO fascinated
'This girl is so beautiful that every boy will be fascinated by her as soon as he
sees her.'



(19) *NP complements*

a. Li chua-kah [NP hit-le boo], lau-len-a!
You marry-KAH that wife useless-ASP
'You married that wife, who is useless.'

b. Li-e kau-kah [NP hiah-ce lu-pingiu]-o!
Li-e have-KAH that-much girlfriend-ASP
'Lie has so many girlfriends.'

c. Lin kiann kuan-kah [NP hit-le-hing], si ciah sann?
Your son tall-KAH that-type be eat what
'Your son is tall like that. What did he eat?'

d. Cit-e caboo-kiann sui-kah [NP hitciong thingtoo], bok-kuai
The girl beautiful-KAH that-kind degree no-wonder

Ong-e ma hoo be-khi.

Ong-e also HOO fascinated

‘This girl is so beautiful. No wonder Onge is also fascinated by her.’

In (18), *-kah* takes a conditional sentence as its complement, so *-kah* can be followed by a CP complement. As for (19), the complement can be a definite NP, as *hit-le boo* ‘that wife’ in (19a), a numeral phrase, as *hiah-ce lu-pingiu* ‘so many girlfriends’ in (19b), or a pronoun, as *hit-le-hing* ‘that type’ in (19c) and *hitciong thingtoo* ‘that degree’ in (19d). DP, NumP and pronouns all belong to the nominal category, so I will treat them as NPs in this thesis.

Moreover, the NP and CP complement can be replaced by a proform, *anne* ‘this’, as (20) illustrates, or even omitted as shown in (11)-(16).

(20) *Proforms*

a. Ong-e I ai-kah [_{CP} anne]-o!

Ong-e she love-KAH this-ASP

‘She loves Onge like this.’

b. Lin kiann kuan-kah [_{NP} anne], si ciah sann?

Your son tall-KAH this be eat what

‘Your son is tall like that. What did he eat?’

anne ‘this’ can refer to the corresponding CP complement in (17a) or the NP complement in (18c).

This section explores the syntactic properties of the Taiwanese *kah* construction, and concludes that V_1 can be an individual-level adjective, stage-level adjective, stative verb, active verb, semelfactive verb, and achievement verb, except for an

accomplishment verb, and the complement can be a CP, NP, proform, or a covert form.

2.2 The Semantic Properties

This section discusses three fundamental semantic properties of the Taiwanese *kah* construction. Firstly, *-kah* must take a complement, which denotes an extraordinary high degree sense, no matter whether V_1 is a verb (henceforth the verbal V_1) or an adjective (henceforth the adjectival V_1); otherwise, the sentences will be ungrammatical, as the contrast below shows.

(21) a. * I cau-kah siokua-a ban. (verbal V_1)

He run-KAH a-little-bit slow

‘He ran a little bit slowly.’

b. I cau-kah cin ban. (verbal V_1)

He run-KAH very slow

‘He ran very slowly.’

(22) a. *I-e soohak ho-kah khochi long tecap mia. (adjectival V_1)

His math good-KAH exam all tenth place

‘His math is so good that he always take the tenth place in the exams.’

b. I-e soohak ho-kah khochi long te-it mia. (adjectival V_1)

His math good-KAH exam all one place

‘His math is so good that he always take the first place in the exams.’

The complement *siokua-a ban* ‘a little bit slow’ and *tecap mia* ‘the tenth place’ do not

denote a very high degree sense, so (21a) and (22a) are ungrammatical. Crucially, even when *-kah* is not followed by an overt complement, the sentence also denotes an extraordinary high tone sense, as (23) illustrates.

(23) a. I mnia huatsio, koh sau-kah. (verbal V₁)

He not-only fever also cough-KAH

‘He did not only have a fever, but also coughed a lot / seriously.’

Not. ‘He did not only have a fever, but also had some cough.’

b. I khi-kah. (adjectival V₁)

He angry-KAH

‘He got so angry.’

Not. ‘He got a little bit angry.’

Besides, not only a clause containing a scalar predicate, which has an degree argument, can denote the extraordinary high tone sense, but also a NP, an exaggerated expression, a metaphorical expression, or an expression which refers to a special case can express a very high degree sense, as exemplified in (24)-(29), respectively.

(24) *Scalar adjectives*

a. I cau-kah cin ban. (verbal V₁)

He run-KAH very slow

‘He ran very slowly.’

b. I sui-kah sui-tang-tang. (adjectival V₁)

She beautiful-KAH very-beautiful

‘She is very beautiful.’

(25) *Scalar verbs*

a. I khau-kah baksai tit-tit lau. (verbal V₁)

She cry-KAH tear continuous flow

‘she cried so hard that she cannot stop her tears.’

b. I sui-kah Ong-e it-tit ka khuann. (adjectival V₁)

She beautiful-KAH Ong-e continual KA look

‘She is so beautiful that Onge cannot turn his eyes of her.’

(26) *NPs*

a. I sau-kah hit-le-hing, cin kholian. (verbal V₁)

He cough-KAH that-type very pitiful

‘He coughed like that. He was so pitiful.’

b. Cit-e caboo-kiann sui-kah hitciong thingtoo. (adjectival V₁)

The girl beautiful-KAH that-kind degree

‘This girl is so beautiful. No wonder Onge is also fascinated by her.’

(27) *Exaggerated expressions*

a. I khau-kah chuting long henkhia-a. (verbal V₁)

She cry-KAH roof all lift-ASP

‘She cried so hard that the roof was lifted up.’

b. Gua khi-kah thoo hue. (adjectival V₁)

I angry-KAH vomit blood

‘I was so angry that I vomited blood.’

(28) *Metaphorical expressions*

a. I khau-kah kanna thinn be pang-luai-a. (verbal V₁)

She cry-KAH like sky going-to collapse-ASP

‘She cried so hard as the sky was going to collapse.’

b. I sui-kah kanna cit-lui hue. (adjectival V₁)

She beautiful-KAH like a flower

‘She is so beautiful just like a flower.’

(29) *Expressions denoting a special case*

a. Ong-e i ai-kah cit-kang bo khuann-tioh I to be ciah be khun.

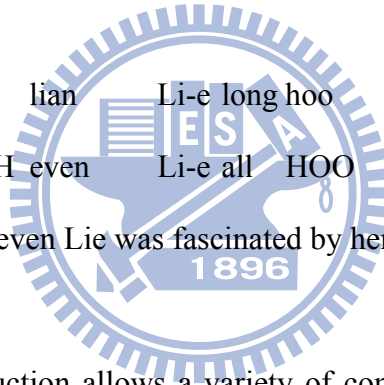
Ong-e she love-KAH one-day no see him then no eat no sleep

‘Ong-e, she loves him so much that she can not eat or sleep if she does not see him for one day.’

b. I sui-kah lian Li-e long hoo be-khi.

She beautiful-KAH even Li-e all HOO fascinated

‘She is so beautiful even Lie was fascinated by her.’



The Taiwanese *kah* construction allows a variety of complements, as shown above. Scalar adjectives contain an open degree position, so it is natural for the complement containing a scalar adjective to denote a degree sense. As for other complements without a scalar predicate, such as (25)-(29), I will propose a semantic mechanism to interpret the examples in Section 5.2 of Chapter 5.

Secondly, recall that *-kah* has the inchoative, ‘pure’ causative and ‘cause-with-a-manner’ causative reading when it is followed by an overt complement, as exemplified in (4) (repeated as (30)).

(30) a. Li-e chio-kah paktoo thiann. (inchoative)

Li-e laugh-KAH stomach ache

‘Lie laughed so much that he got a stomach ache.’

b. Cit-kiann taici co-kah gua thiam-uaiuai. (‘pure’ causative)

This-CL work do-KAH I tired-bent-bent

‘This work got me to become very tired from doing.’

c. Gua pha-kah I tng-kha-tng-chu. (‘causing-with-a-manner’ causative)

I hit-KAH he break-leg-break-arm

‘I hit him so much that I cause him to have a broken leg and arm.’

However, *-kah* only has the inchoative reading when it is not followed by an overt complement, as the contrast shown in (31).³

(31) a. I chio-kah.

He laugh-KAH

‘He laughed so much (that he had stomach ache).’

b. *Gua pha-kah.

I hit-KAH

Int. ‘I hit him so much that I cause him to have a broken leg and arm.’



(inchoative)

(causative)

As *-kah* with the overt counterpart of the complement in (30a), *-kah* in (31a) has the inchoative sense. The missing complement can even be recovered by enough background knowledge or the context. In terms of *-kah* in (30b), which is followed by

³ The reading of the ‘causing-with-a-manner’ causative can be rescued when the subject of the embedded clause is passivized, as in (ia), or preposed by *ka*, as in (ib).

- (i) a. Ong-e hoo Li-e pha-kah.
Ong-e HOO Li-e hit-KAH
‘Ong-e was hurt badly by Lie from hitting.’
- b. Li-e ka Ong-e pha-kah.
Li-e KA Ong-e hit-KAH
‘He got Ong-e to be hurt badly from hitting.’

the overt counterpart of the complement in (31b), it has the causative reading. However, *-kah* without the overt complement can only have the inchoative sense. Therefore, (31b) is ungrammatical since *-kah* following *pha* ‘hit’ is forced to have the causative reading. That is, it is odd for a person to change into the situation of hitting a lot on his own, in which *-kah* has the inchoative reading. Hence, *-kah* in (31b) has the causative reading, which is incompatible with the requirement of *-kah* occurring without an overt complement, so (31b) is ungrammatical. Notice that if *-kah* preceded by *pha* ‘hit’ can be interpreted as the inchoative reading, the sentence is well-formed, as (32) shows.

(32) Li-e ciok thoia Ong-e, cit tu-tion to pha-kah. (inchoative)

Li-e really hate Ong-e if meet then hit-KAH

‘Lie hates Onge very much. If Lie meets Onge, they will change into the situation of having a furious fight.’

Not: ‘Lie hates Onge very much. If Lie meets Onge, he will hit Onge so much that Onge will have a broken leg and arm.’

-kah in (32) can only have the inchoative reading instead of the causative reading.

This section shows that *-kah* must take a complement, which denotes an extraordinary high tone sense. Significantly, even without an overt complement, the Taiwanese *kah* construction still presents an extraordinary high tone sense. Besides, *-kah* has the inchoative, ‘pure’ causative and ‘causing-with-a-manner’ causative reading when it occurs with an overt complement, whereas *-kah* can only have the inchoative reading when it is not followed by an overt complement.

2.3 The Phonological Properties

As we know in the literature, Taiwanese has two kinds of tones, the citation tone (i.e., the underlying or base tones, which is associated with syllables spoken in isolation or domain final) and the sandhi tone (i.e., the derived tones occurring in the sandhi domain). According to Y. M. Chen (2000), southern Min dialects, including Xiamen and Taiwanese, has eight citation tones, as listed in (33).

(33) *The Citation tones in Taiwanese* (Chen 2000)⁴

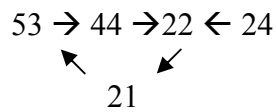
	tone	example	
smooth syllables	44	<i>phang</i>	‘fragrant’
	53	<i>cing</i>	‘swollen’
	21	<i>pa</i>	‘leopard’
	24	<i>tam</i>	‘wet’
	22	<i>dang</i>	‘heavy’
checked syllables	32q	<i>siah</i>	‘throw’
	4q	<i>lok</i>	‘deer’

-q marks a ‘checked’ tone

As for sandhi tones, citation tones will change into corresponding sandhi tones when it is in the domain-initial or domain-internal (i.e., the sandhi domain). The alternation is diagrammed in (34) and (35).

⁴ The tones in Taiwanese can be divided into two classes, smooth tones and checked tones. The former are associated with smooth or slack syllables, (i.e., the syllables ending with a vowel or nasal), such as *pa* ‘leopard’, and *phang* ‘fragrant’. The latter occur with checked syllables which ends in an stop, such as *siah* ‘throw’ and *lok* ‘deer’ (*h* is a glottal stop), and they are always shorter than the smooth tones.

(34) smooth syllable tone sandhi (Chen 2000)



(35) checked syllable tone sandhi (Chen 2000)

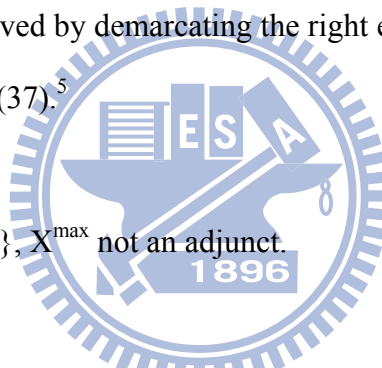
4q → 21q

32q → 4q for syllables ending in p, t, k

53q for syllables ending in h

The domain mentioned above refers to the domain of a phonological phrase, or p-phrase, which can be derived by demarcating the right edge of a maximal projection, X^{\max} , as shown in (36) and (37).⁵

(36) p-phrase: {Right, X^{\max} }, X^{\max} not an adjunct.



(37) [CP [NP I] # [IP m siong-sin [NP ing-ko] # e kong-we].

He not believe parrot can talk

‘He doesn’t believe that parrots can talk.’

The words in the domain final have the citation tones, such as *i*, *ko*, *we* in (37), and the other words in the sandhi domain have the sandhi tones. Notice that the XP is a p-phrase only if it functions as an argument, as (38) shows.

(38) [NP I] # [VP [ADV_P thiaokooi] [NP ciong phue] # thiahphuà-a].

He purposefully CIONG letter tear-ASP

⁵ # marks the boundary between p-phrases.

‘He purposefully tore up the letter.’

The AdvP *thiaokooi* ‘purposefully’ is an adjunct, so it is not a p-phrase. On the other hand, the NP *phue* ‘letter’ is an argument, so it is the domain of a phonological phrase. Hence, the former has the sandhi tone, and the latter has the citation tones.

As for the Taiwanese *kah* construction, the citation tone of *-kah* is 4q, so it should change into the corresponding sandhi tone 21q when it precedes a tone-carrying syllable in the same p-phrase, as (39) shows.

(39) a. [NP I] # [VP *cih-kah*^{21q} cin pa].

He eat-KAH very full

‘He ate so much that he was very full.’

b. [NP *cit-e caboo-kiann*] # [VP *sui-kah*^{4q}].

this girl beautiful-KAH

‘This girl is so beautiful.’

In (39a), *-kah* precedes a tone-bearing syllable *cin*²² ‘very’, so it has the sandhi tone 21q. As for *-kah* in (39b), it is followed by a phonetically unrealized complement, and *-kah* has the citation tone 4q. I will have more discussion about the property in Section 4.2.2.2 of Chapter 4.

Section 2 presents the syntactic, semantic and phonological properties of the Taiwanese *kah* construction, and shows that the construction occurring in the form without an overt complement following *-kah* shares most properties of the form with an overt complement. Firstly, *-kah* can be preceded by any type of predicate, except for an accomplishment verb. Secondly, the sentences, with or without an overt complement following *-kah*, denote an extraordinary high tone sense. Thirdly,

sentences without an overt complement have almost the same meaning as sentences with the overt counterpart. Hence, it is reasonable to argue that the two forms belong to the same construction. Interestingly, there are two differences between the two forms. Firstly, *-kah* has the inchoative reading, ‘pure’ causative reading and ‘causing-with-a-manner’ causative reading when it occurs with an overt complement, while *-kah*, without an overt complement, can only have the inchoative reading. Secondly, *-kah* has the sandhi tone 21q if it precedes an overt complement; otherwise, *-kah* has the citation tone 4q. In the following chapters, I will propose a syntactic structure and semantic mechanism, which can capture the properties mentioned in this chapter.



This section concerns the previous studies related to the Taiwanese *kah* construction. Section 3.1 reviews H.-L. Lin (2003)'s analysis of the Taiwanese postverbal secondary predicates, and section 3.2 discusses C.-A. Wang (2010)'s analysis of the Taiwanese phrasal resultatives.

3.1 H.-L. Lin (2003)

Lin argues that resultative, descriptive, and extent constructions are three postverbal secondary predicates in Taiwanese, which all involve the use of *-kah*, as illustrated by (40) (H.-L. Lin 2003, (5), (7) and (8)).

(40) a. I penn-kah khia-be-khilai. (resultative)

He sick-KAH stand-not-up

‘He was so sick that he could not stand up.’

b. I penn-kah ukau giamtiong-e. (descriptive)

He sick-KAH very seriously-ASP

‘He was seriously ill.’

c. Thinnting kng-kah chinchan jitsi kangkhuan. (extent)

Sky bright-KAH like daytime same

‘The sky is so bright that (it is) like the daytime.’

She argues that the three constructions differ from each other in the scope of modification, passivization, and word order. As for the scope of modification, the resultative construction may predicate on the subject or object, as illustrated by (41) (H.-L. Lin 2003, (11) and (12)).

(41) a. I thiau-kah cin thiam. (subject-oriented resultative)

He dance-KAH very tired

‘He danced himself tired.’

b. I ciong sann se-kah cin cingki. (object-oriented resultative)

He CIONG clothes wash-KAH very clean

‘He washed his clothes clean.’

In terms of the descriptive construction, it modifies the verb (i.e., V_1 in this paper) instead of the subject or object, as shown in (40b), where *ukau giamtiong* ‘very seriously’ refers to the degree of the person’s being ill. As for the extent construction, there are two types. Firstly, the ‘pure’ extent constructions are not predicated of the subject or object, as (40c) illustrates. Secondly, if the constructions predicate on the subject or object, the event described in the extent clause cannot be the result of the main clause, as exemplified in (42), where *m cai chenn* ‘not knowing waking up’ is just the extent to which the person slept.

(42) I khun-kah m cai chenn. (extent)

He sleep-KAH not know wake

‘He slept so well that he did not wake up for a long time.’

In terms of the passivization, the descriptive construction does not have any

passive counterpart, and the extent construction only allows the object of the main verb to undergo passivization, as shown in (43)-(44).

(43) a. I ji sia-kah cin kin. (descriptive)

He word write-KAH very fast

‘He writes very fast.’

b. *Ji hoo i sia-kah cin kin. (descriptive)

Word HOO he write-KAH very fast

‘Words are written very fast.’

(44) a. I ka in kiann phah-kah lian chupinn long chutlai khuann. (extent)

He KA his child hit-KAH even neighbor all out see

‘He hit his child so much that even the neighbors came out to have a look.’

b. In kiann hoo i phah-kah lian chupinn long chutlai khuann. (extent)

His child HOO he hit-KAH even neighbor all out see

‘His child was hit so much that even the neighbors came out to have a look.’

c. *Chupinn hoo i ka in kiann phah-kah long chutlai khuann. (extent)

Neighbor HOO he KA his child hit-KAH all out see

‘The neighbors came out to have a look because he hit his child so much.’

However, the resultative construction allows passivization of the subject of the resultative construction and the object of the main verb, as exemplified in (45)-(46) (H.-L. Lin 2003, (23)-(26)).

(45) a. I chio-kah ehai long lauhkhi-a. (resultative)

He laugh-KAH jaw all drop-ASP

‘He laughed so much that his jaw dropped.’

b. Ehai hoo i chio-kah long lauhkhi-a. (resultative)

Jaw HOO he laugh-KAH all drop-ASP

‘His jaw dropped because he laughed so much.’

(46) a. I ciong in kiann pah-kah hunkhi. (resultative)

He CIONG his child hit-KAH faint

‘He hit his child so much that he/she fainted.’

b. In kiann hoo i pah-kah hunkhi. (resultative)

His child HOO he hit-KAH faint

‘His child was hit so much that he/she fainted.’

As far as the word order is concerned, the three constructions have different word orders when the main verb is transitive. In the descriptive and extent construction, the semantic object of the main verb must precede it, whereas in the resultative construction, the object may precede or follow the main verb, as illustrated in (47)-(49) (H.-L. Lin 2003, (29)-(31)).

(47) a. I ji sia-kah cin kin. (descriptive)

He word write-KAH very fast

‘He writes very fast.’

b. *I sia-kah ji cin kin. (descriptive)

He write-KAH word very fast

‘He writes very fast.’

(48) a. I ka in kiann pah-kah lian chupinn long chutlai khuann. (extent)

He KA his child hit-KAH even neighbor all out see

‘He hit his child so much that even the neighbors came out to have a look.’

b. *I phah-kah in kiann lian chupinn long chutlai khuann. (extent)

He hit-KAH his child even neighbor all out see

‘He hit his child so much that even the neighbors came out to have a look.’

(49) a. I gin-a phah-kah hunkhi. (resultative)

He child hit-KAH faint

‘He hit the child so much that he/she fainted.’

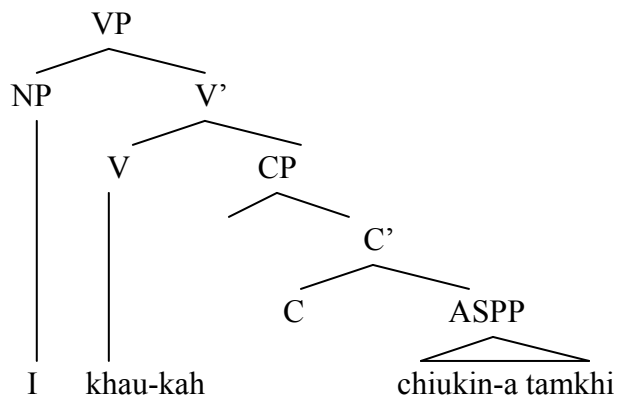
b. I phah-kah gin-a hunkhi. (resultative)

He hit-KAH child faint

‘He hit the child so much that he/she fainted.’

Based on the differences among the descriptive, resultative, and extent constructions above, Lin proposes three structures for each construction. Firstly, resultatives are clausal complements subcategorized for by *V-kah* (i.e., V_1 -*kah* in this paper), as shown in (50) (H.-L. Lin 2003, (38) and (39)).

(50) (resultative)



He cry-KAH

handkerchief wet-ASP

‘He cried so much that the handkerchief was all wet.’

chiukin-a ‘handkerchief’ is the subject of the resultative clause because it can occur in *lian...long* ‘even...all’ construction, which is known as a preverbal focus position (cf. Gu and Pan 2001), as (51) (H.-L. Lin 2003, (38b)) shows.

- (51) I khau-kah lian chiukin-a long tamkhi-a. (resultative)
 He cry-KAH even handkerchief all wet-ASP
 ‘He cried so much that even the handkerchief was all wet.’

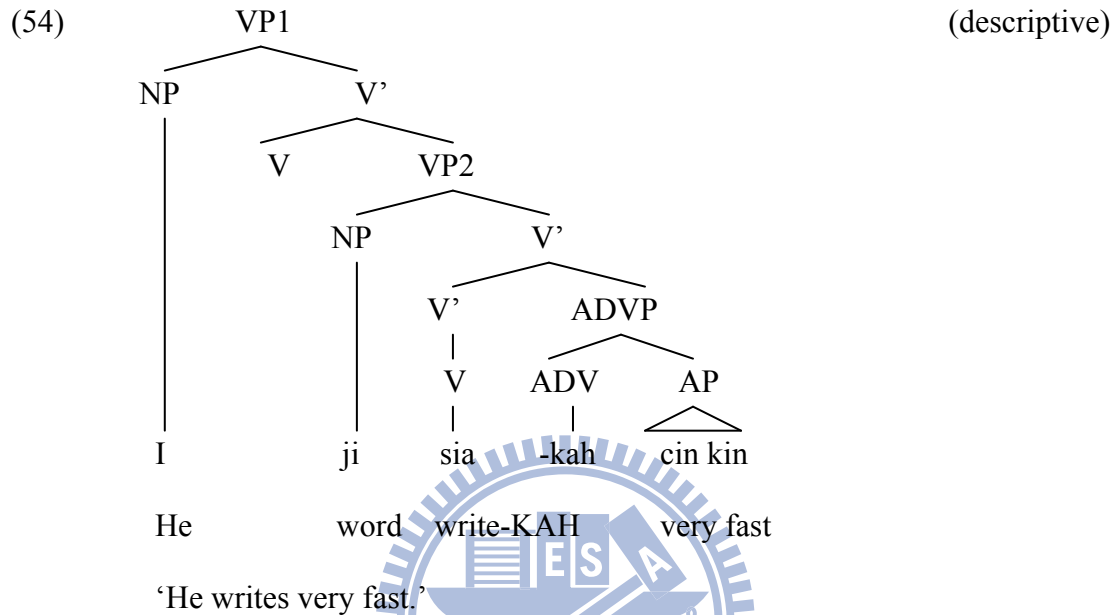
Another important issue of resultatives is the status of *-kah*. Lin follows T.-C. Tang (1990)’s analysis, in which the counterpart of *-kah* in Mandarin, namely *-de*, is a suffix and it is attached to the main verb in the lexicon. That is to say, *V-de* is treated as a complex verb, and the analysis is supported by the fact that the whole complement following *-de* can be omitted, as in (6a) (repeated as (52)).

- (52) Kan ni mei-de [s' ϕ]. (Mandarin)
 Look you beautiful-DE
 Lit. ‘Look at you! You are so beautiful!’

Based on Tang’s analysis, Lin treats *-kah* as a suffix attached to the main verb in the lexicon because the same type of examples can be found in Taiwanese, as illustrated by (53) (H.-L. Lin 2003, (46)).

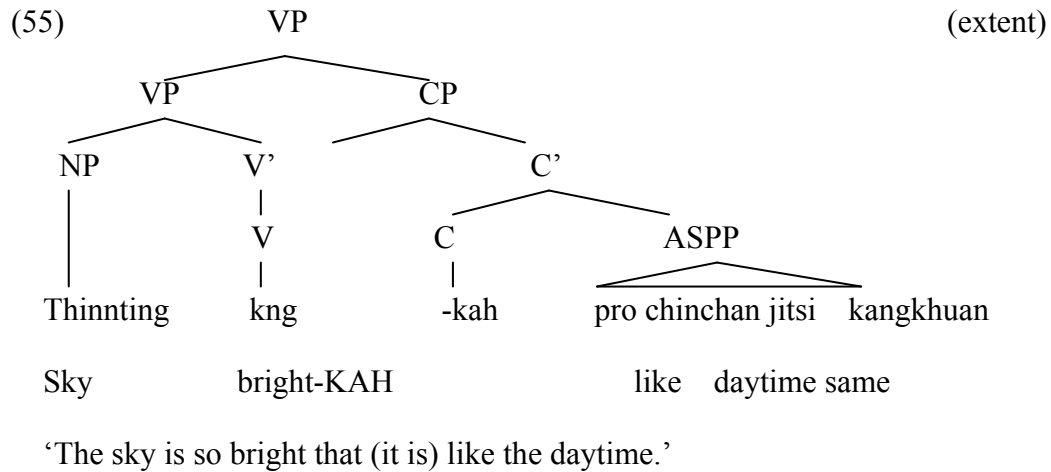
- (53) Cau-kah gua thiam-kah e. (Taiwanese)
 Run-KAH I tired-KAH
 ‘I got so tired from running.’

Secondly, the descriptive construction is an adverbial adjunct headed by *-kah*, and the AdvP is adjoined to V', as (54) illustrates (H.-L. Lin 2003, (59)).



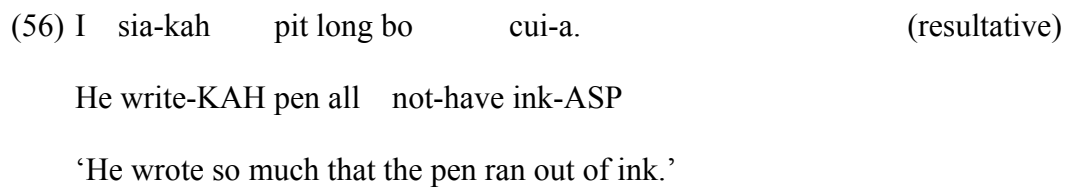
-kah is like an adverbial marker that changes AP into AdvP, which then modifies the main verb. Besides, *-kah* is a clitic-like element, which should attach to the preceding verbal element at PF. Hence, the semantic object of the main verb must precede *V-kah*, or the object will block the attachment of *-kah*, and the sentence will be ungrammatical, as shown in (47).

Thirdly, the extent construction is proposed to be an CP adjunct attached to VP, and *-kah*, as the head of the CP, takes a clause as its complement, as shown by (55) (H.-L. Lin 2003, (65)).



As the descriptive construction, *-kah* in the extent construction is a clitic-like element, which attaches to the preceding verbal element at PF, so the object of the main verb has to precede *V-kah*, as exemplified in (48).

Lin explores the Taiwanese *kah* construction in detail, and proposes a diverse approach to analyze the construction. However, her analysis seems to need to be reconsidered under a closer scrutiny. Firstly, the differentiation of the scope of modification is problematic. For instance, as one reviewer points out, the resultative construction does not always predicate on the subject or object, as illustrated by (56) (H.-L. Lin 2003, (20)).



The resultative clause *pit long bo cui* ‘pen all not-have ink’ is not predicated on the subject *i* ‘he’ of the matrix clause, but on the main predicate *sia-kah* ‘write-KAH’. Besides, in addition to descriptives, extent constructions also modify the main predicate *penn-kah* ‘sick-KAH’, as shown by the following sentences.

(57) a. I penn-kah ukau giamtiong-e. (descriptive)

He sick-KAH very seriously-ASP

‘He was seriously ill.’

b. I penn-kah ising ma bo huatto. (extent)

He sick-KAH doctor also no solution

‘He was so sick that doctor cannot help him.’

More importantly, following the classification Lin proposed, we will predict that (44a) (repeated as (58)) is ambiguous.

(58) I ka in kiann phah-kah lian chupinn long chutlai (extent / resultative)

He KA his child hit-KAH even neighbor all out

khuann.

see

‘He hit his child so much that even the neighbors came out to have a look.’

The complement may refer to the extent of the event denoted by V_1 *phah* ‘hit’ or the result of *phah* ‘hit’. Therefore, (58) may be an extent construction as Lin argues, or a resultative construction. Accordingly, (58) can be passivization and the semantic object of V_1 -*kah* may precede or follow it when (58) is interpreted as a resultative construction. However, the prediction is not born out, as shown by (59)-(60).

(59) *Chupinn hoo i ka in kiann phah-kah long chutlai khuann. (resultative)

Neighbor HOO he KA his child hit-KAH all out see

‘The neighbors came out to have a look because he hit his child so much.’

(60) a. I ka in kiann phah-kah lian chupinn long chutlai khuann. (resultative)

He KA his child hit-KAH even neighbor all out see

‘He hit his child so much that even the neighbors came out to have a look.’

b. *I phah-kah in kiann lian chupinn long chutlai khuann. (resultative)

He hit-KAH his child even neighbor all out see

‘He hit his child so much that even the neighbors came out to have a look.’

Therefore, the classification Lin proposed should be revised. Without a correct classification, the analysis may not be absolutely right.

Secondly, as well known in the literature (C.-T. Huang 1982), the adjunct in Chinese, including Mandarin and Taiwanese, must be preverbal, as shown in (61)-(62).

(61) a. Zhangsan manman-de zou. (Mandarin)

Zhangsan slowly walk

‘Zhangsan walked slowly.’

b. *Zhangsan zou manman-de (Mandarin)

Zhangsan walk slowly

‘Zhangsan walked slowly.’

(62) a. Ong-e tautau-a kiann. (Taiwanese)

Ong-e slowly walk.

‘Ong-e walked slowly.’

b. *Ong-e kiann tautau-a. (Taiwanese)

Ong-e walk slowly.

‘Onge walked slowly.’

However, Lin argues that the descriptive and extent construction are adjuncts postverbally attached to V and VP, respectively, as illustrated in (54)-(55). Unfortunately, the analysis is incompatible with the phrasal structure of Taiwanese.

Thirdly, the status of *-kah* should be reconsidered. As Lin proposed, *-kah* in resultatives is a suffix, which is attached to V₁ in the lexicon, while *-kah* in the other constructions is a clitic-like head, which attaches to V₁ at PF. Accordingly, her analysis predicts that the complement of *-kah* in resultatives can be dropped but the complement in the other constructions cannot. However, her claim is challenged by examples like (63)-(65).

(63) *Descriptive constructions*

a. I ciah iau, kinajit chuan cit toh, i iting ciah-kah cin pa.

He that hungry, today prepare this table he must eat-KAH very full

‘He is so hungry, and we prepare a lot of delicious food. He must eat so much that he is very full.’

b. I ciah iau, kinajit chuan cit toh, i iting ciah-kah e.

He that hungry, today prepare this table he must eat-KAH

‘He is so hungry, and we prepare a lot of delicious food. He must eat so much that he is very full.’

(64) *Resultative constructions*

a. I ciah iau, kinajit chuan cit toh, i iting ciah-kah cin huannhi.

He that hungry today prepare this table he must eat-KAH very happily

‘He is so hungry, and we prepare a lot of delicious food. He must eat very

happily.’

b. I ciah iau, kinajit chuan cit toh, i iting ciah-kah e.

He that hungry today prepare this table he must eat-KAH

‘He is so hungry, and we prepare a lot of delicious food. He must eat very

happily.’

(65) *Extent constructions*

a. I ciah iau, kinajit chuan cit toh, i iting ciah-kah beh

He that hungry today prepare this table he must eat-KAH going-to

too.

throw up

‘He is so hungry, and we prepare a lot of delicious food. He must eat so much that he is going to throw up.’

b. I ciah iau, kinajit chuan cit toh, i iting ciah-kah e.

He that hungry today prepare this table he must eat-KAH

‘He is so hungry, and we prepare a lot of delicious food. He must eat so much

that he is going to throw up.’

In fact, not only the resultative construction but also the descriptive and extent construction allow the complement following *-kah* to be omitted, which is contrary to Lin’s analysis.

Fourthly, the contrast of passivization and word order is actually not attributed to the classification of the three constructions. As far as the passivization (cf. (43)-(46)) is concerned, Lin proposes that the descriptive construction does not have any passive counterpart, and the extent construction only allows the object of the main verb to undergo passivization, as illustrated by (43b) and (44c) (repeated as (66)).

(66) a. **Ji hoo i sia-kah cin kin.* (descriptive)

Word HOO he write-KAH very fast

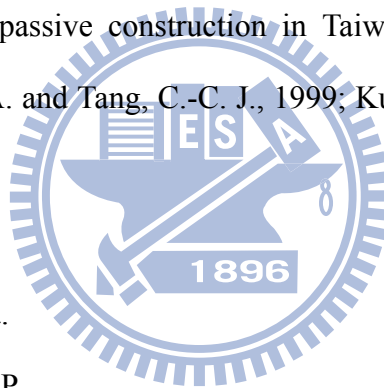
‘Words are written very fast.’

b. **Chupinn hoo i ka in kiann phah-kah long chutlai khuann.* (extent)

Neighbor HOO he KA his child hit-KAH all out see

‘The neighbors came out to have a look because he hit his child so much.’

Actually, (66a) and (66b) are ungrammatical because the subject and clausal complement following the passive marker *hoo* do not have an adversative relationship, which is required by the passive construction in Taiwanese (cf. Cheng, L. L.-S.; Huang, C.-T. J., Li, Y.-H. A. and Tang, C.-C. J., 1999; Kuo, P.-J., 2009). Consider the contrast below.



(67) a. *Gua hoo i phah-a.*

I HOO he hit-ASP

‘I got hit by him.’

b. **Gua hoo i oolo-a.*

I HOO he praise-ASP

‘I got praised by him.’

The subject *gua* ‘I’ should be negatively affected by the clausal complement following *hoo*, such as *i phah* ‘he hit’ in (67a). Hence, (67a) is grammatical but (67b) is ungrammatical. In terms of the Taiwanese *kah* construction, the subject *ji* ‘word’ in (66a) and *chupinn* ‘neighbor’ in (66b) are not negatively affected by the clausal complement *i sia* ‘he write’ and *i ka in kiann phah* ‘he hit his child,’ respectively, so

(66a) and (66b) are ill-formed. Crucially, if the relation of the subject and predicate has the adversative reading, the Taiwanese *kah* construction can have the passivization counterpart, as shown in (68).

- (68) a. i ka chiu-a io-kah gua ai sau kuikang-e chiuhioh.
 he KA tree shake-KAH I have-to clean all-day-E leaf
 ‘He shook the tree so violently that I had to clean the leaves all day long.’
- b. Gua_i [_{VP} Op_i [hoo i ka chiu-a io-kah t_i ai sau kuikang-e chiuhioh].
 I HOO he KA tree shake-KAH have-to clean all-day-E leaf
 ‘I got cleaned the leaves all day long by his shaking the tree.’

Since the relationship of the subject *gua* ‘I’ and the VP has the adversative meaning, it can have the passivization form no matter whether (68) is interpreted as a resultative or extent construction. Hence, whether the sentence allows passivization is related to if there is an adversative reading between the subject and the VP rather than which construction the complement belongs to. In terms of the contrast of the word order (cf. (47)-(49)), the ungrammaticality of (47b) and (48b) is due to the syntactic structure of the Taiwanese *kah* construction, and I will come back to the issue in Section 4.2 of chapter 4.

Based on the empirical and theoretic challenges proposed above, the diverse analysis for the Taiwanese *kah* construction should be reconsidered.

3.2 C.-A. Wang (2010)

Wang (2000) explores phrasal resultatives and resultative compounds in Mandarin and Taiwanese. In this thesis, I only review the phrasal resultative part,

which is relevant to the topic in question. He proposes that phrasal resultatives in Mandarin and Taiwanese are both bi-clausal, and the functional particle (i.e., *de/kah*) is a complementizer, as shown by (69)-(70) (Wang 2010:19-20).

(69) a. Lisi da de na zhi zhanglang si le. (Mandarin)

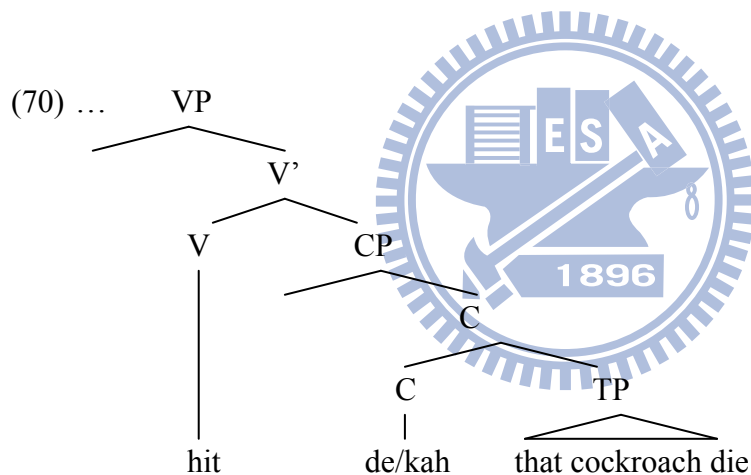
Lisi hit DE that CL cockroach die ASP

‘Lisi hit that cockroach (and as a result) it was dead.’

b. Abun pha kah hit chiah katsua si a. (Taiwanese)

Abun hit KAH that CL cockroach die ASP

‘Abun hit that cockroach (and as a result) it was dead.’



A piece of evidence Wang offers for the structure of the complement is the coordination restriction. In Chinese, two CPs generally cannot be coordinated, but two TPs can, as (71)-(72) illustrate (Wang 2010: 63-64).

(71) *Mandarin*

a. * [[_{CP} Lisi xihuan Ahua ma] erqie [_{CP} Zhangsan taoyan Amei ma]]?

Lisi like Ahua Q and Zhangsan hate Amei Q

Int. ‘Did Lisi like Ahua and did Zhangsan hate Amei?’

- b. [[_{TP} Lisi xihuan Ahua] erqie [_{TP} Zhangsan taoyan Amei]] ma?
 Lisi like Ahua and Zhangsan hate Amei Q
 ‘Did Lisi like Ahua and did Zhangsan hate Amei?’

(72) *Taiwanese*

- a. * Abun jinui [[_{CP} kong Agi kai Atin] jichhiaN [_{CP} kong Ahiong kai Aleng]].
 Abun think COMP Agi like Atin and COMP Ahiong like Aleng
 Int. ‘Abun thinks that Agi likes Atin and that Ahiong likes Aleng.’
- b. Abun jinui kong [[_{TP} Agi kai Atin] jichhiaN [_{TP} Ahiong kai Aleng]].
 Abun think COMP Agi like Atin and Ahiong like Aleng
 ‘Abun thinks that Agi likes Atin and Ahiong likes Aleng.’

In (71a), because of the sentence-final particle *ma*, the two conjuncts are parsed as CPs, so the sentence is ungrammatical. In (71b), without *ma* in the first conjunct, the sentence can be parsed as the coordination of two TPs; thus, the sentence is well-formed. As far as the Taiwanese sentences are concerned, *kong* in (72) is analyzed as a complementizer (cf. Hsieh, F.-F. and Sybesma, R. 2008; Simpson and X.-Z. Wu 1999; K.-W. Yeung 2006). Hence, (72a), with *kong* in the second conjunct, is ungrammatical because of the coordination of two CPs, whereas (72b) is grammatical because the sentence can be parsed as two TPs conjuncts.

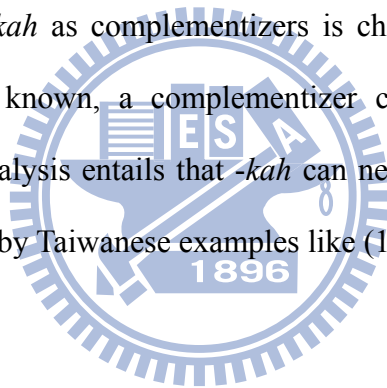
As for the phrasal resultatives, the similar restriction of CP coordination is also observed, as illustrated by the contrast below (Wang 2010: 61-62).

- (73) a. *Lisi da [[_{CP} de zhe zhi zhanglang si le] erqie [_{CP} de na zhi chong ye si le]].
 Lisi hit DE this CL cockroach die ASP and DE that CL bug also die ASP
 Int. ‘Lisi hit (so that) this cockroach was dead and that bug was also dead.’

- b. Lisi da de [[_{TP} zhe zhi zhanglang si le] erqie [_{TP} na zhi chong ye si le]].
 Lisi hit DE this CL cockroach die ASP and that CL bug also die ASP
 ‘Lisi hit (so that) this cockroach was dead and that bug was also dead.’

With the occurrence of the complementizer *de* in the second conjunct, the sentence has to be parsed as involving two coordinated CPs, so (73a) is ungrammatical. However, without *de* in the second conjunct, the sentence can be analyzed as TP coordination, so (73b) is grammatical. Through the test, Wang argues that it is necessary to have a CP projection headed by *de* and *kah* in phrasal resultatives.

I agree with Wang’s analysis of the necessity of the CP complement. However, his argument of *-de* and *-kah* as complementizers is challenged by the phenomena below. Firstly, as we all know, a complementizer can only take an IP as its complement, so Wang’s analysis entails that *-kah* can never have a NP complement. Yet his claim is challenged by Taiwanese examples like (19) (repeated as (74) below).



(74) *NP complements*

- a. Li chua-kah [_{NP} hit-le boo], lau-len a !
 You marry-KAH that wife useless
 ‘You married that wife, who is useless.’
- b. Li-e kau-kah [_{NP} hiah-ce lu-pingiu]-o!
 Li-e have-KAH that-much girlfriend-ASP
 ‘Lie has so many girlfriends.’
- c. I sau-kah [_{NP} hit-le-hing], cin kholian.
 He cough-KAH that-type very pitiful
 ‘He coughed like that. He was so pitiful.’

Secondly, the ungrammaticality of (72a) is not due to the coordination restriction but attributed to the clitic property of *-de* and *-kah*, which is required to attach to V_1 . For instance, *-de* and *-kah* cannot be separated from V_1 by a pause marker *a* (cf. D.-X. Zhu, 1982: 213-214), as shown by the contrast in (75)-(76).

(75) *Mandarin*

a. Lisi da-de a zhe zhi zhanglang si le.

Lisi hit-DE PAUSE this CL cockroach die ASP

‘Lisi hit (so that) this cockroach was dead.’

b. *Lisi da a de zhe zhi zhanglang si le.

Lisi hit PAUSE DE this CL cockroach die ASP

‘Lisi hit (so that) this cockroach was dead.’

(76) *Taiwanese*

a. Abun pha kah a hit chiah katsua si a.

Abun hit KAH PAUSE that CL cockroach die ASP

‘Abun hit that cockroach (and as a result) it was dead.’

b. *Abun pha kah hit chiah katsua si a.

Abun hit PAUSE KAH that CL cockroach die ASP

‘Abun hit that cockroach (and as a result) it was dead.’

-de and *-kah* can be followed by a pause, but they cannot be preceded by it because *-de* and *-kah* are clitic elements, which should attach to the preceding element. Therefore, (72a) is ungrammatical because *-de* in the second conjunct has nothing to attach to rather than violate the coordination restriction.

Thirdly, the phenomena of the coordination of two constituents are complicated,

and the grammaticality depends on the connective word. Although *ergie* ‘and’ cannot coordinate two CPs, *haishi* and *iasì* ‘or’ are allowed to have CP coordination in Mandarin and Taiwanese, as in shown (77).

(77) a. [_{CP} Ni xihuan chi mian ne] *haishi* [_{CP} xihuan chi fan ne]? (Mandarin)

You like eat noodles Q or like eat rice Q

‘You like to eat noodles or like to eat rice?’

b. Li siunn [_{CP} kong minacai be khi siongkho] *iasì* (Taiwanese)

You think COMP tomorrow want to go class or

[_{CP} kong khi Taipak]?

COMP go Taipei

‘(You consider that) you will go to school or go to Taipei tomorrow?’

The sentences above are parsed as the coordination of two CPs because the sentence final particle *-ne* occurs in the two conjuncts in (77a) and *kong* also appears in both conjuncts in (77b). Contrary to Wang’s observation, the sentences are grammatical.

Fourthly, in Chinese including Mandarin and Taiwanese, a complementizer is head-final in most cases, but there are some exceptions. For instance, *shuo* ‘say’ in Mandarin and *kong* ‘say’ in Taiwanese are head-initial complementizers (cf. Hsieh, F.-F. and Sybesma, R. 2008; Simpson and X.-Z. Wu 1999; K.-W. Yeung 2006), as exemplified in (78).

(78) a. Wo xiang shuo ta hui lai. (Mandarin)


I think COMP he will come

‘I think that he will come.’

b. Gua siunn kong i be lai. (Taiwanese)

I think COMP he will come
 ‘I think that he will come.’

The head-initial complementizer has the following properties universally (cf. Wu 2004; K.-W. Yeung 2006). Firstly, the complementizer is derived from verbs of saying or verbs of cognition through grammaticalization. Secondly, it can only be preceded by certain predicates, such as cognition, perception and ‘say’ predicates. *shuo* and *kong* follows the properties above. They are verbs of saying, and they can only be preceded by those predicates, such as cognition and perception predicates *xiang/siunn* ‘think’ in (80), and ‘say’ predicates *chengren/singjin* ‘admit’ in (79).

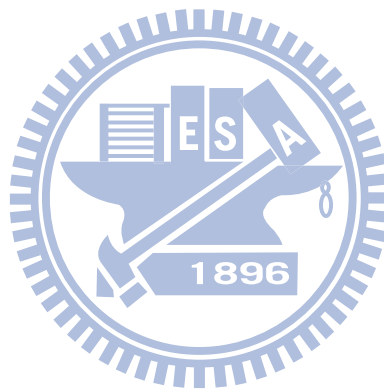
- 
- (79) a. Wo chengren shuo dongxi shi wo tou de.
 I admit COMP thing be I steal DE
 ‘I admit that I stole the thing.’
- b. Gua siunn kong mihkiann si gua theh-e.
 I admit COMP thing be I steal-ASP
 ‘I admit that I stole the thing.’

Therefore, *shuo* and *kong* are verbs which undergo grammaticalization and are reanalyzed into head-initial complementizers.

In terms of *-de* and *-kah* in the phrase resultatives, Wang analyzes them as head-initial complementizers. Chinese only allows the kind of head-initial complementizers mentioned above, so similarly *-de* and *-kah* as verbs should undergo grammaticalization and be reanalyzed as complementizers because. However, *-de* and *-kah* do not have those properties mentioned above. Firstly, *-de* and *-kah* are not verbs of saying or cognition; instead, they express the meaning of ‘change-of-state.’

Secondly, *-de* and *-kah* do not have the selection restriction with the preceding verb. Actually, *-de* and *-kah* can be preceded by an individual-level adjective, stage-level adjective, active, stative, semelfactive, and achievement predicate, as shown in (11)-(16). Hence, it is problematic to analyze *-de* and *-kah* as complementizers.

Because of the theoretical and empirical problems mentioned above, Wang's analysis should be reconsidered.

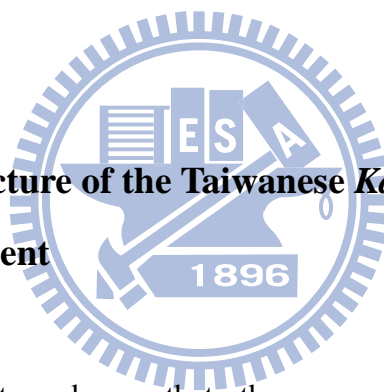


CHAPTER 4

THE SYNTAX OF THE TAIWANESE *KAH* CONSTRUCTION

Following C.-T. Huang (2006)'s analysis of phrasal resultatives in Mandarin, I propose a unified analysis for the syntactic structure of the Taiwanese *kah* construction, which can account for the syntactic, semantic and phonological properties mentioned in Chapter 2. Besides, I also explore the syntax of the Taiwanese *kah* construction occurring in the form, where the complement is not phonetically realized.

4.1 The Syntactic Structure of the Taiwanese *Kah* Construction with an Overt Complement



The previous chapter shows that the non-unified analysis should be reconsidered and *-kah* cannot be analyzed as a complementizer. Alternatively, I propose a unified analysis of the Taiwanese *kah* construction based on Huang (2006)'s analysis of phrasal resultatives in Mandarin. In this section, I review Huang (2006)'s analysis, and then revise it slightly to capture the properties of the Taiwanese *kah* construction.

4.1.1 C.-T. Huang (2006)

Huang proposes a structure of resultatives based on the event structure. Resultatives is composed of two events. One is the main event including causation or

inchoation, and the other is the sub-event that specifies the manner, by which the main event takes place, as shown by the general templates of resultatives in (80) (Huang 2006, (62) and (65)-(66)).

(80) a. The inchoative template:

[BECOME_{<MANNER>} [x <STATE>]]

b. The ‘pure’ causative template:

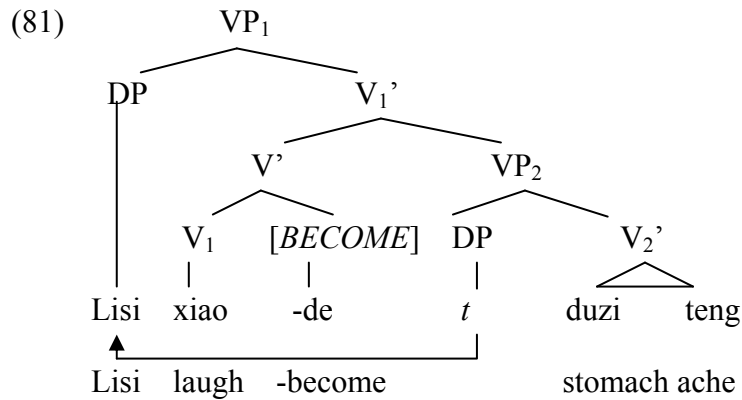
[x CAUSE [BECOME_{<MANNER>} [y <STATE>]]]

c. The ‘causing-with-a-manner’ causative template:

[x CAUSE_{<MANNER>} [BECOME[y <STATE>]]]

The main event, namely the inchoation and causation, are expressed by *-de* in phrasal resultatives, which is supported by the fact that *-de* ‘get’ can be paraphrased as *bian-de* ‘become’ and *shi-de* ‘cause’. As for the sub-event, it is expressed by V₁ in the V₁-*de* construction.

Further, he proposes syntactic structures for the general templates above. Firstly, the inchoative template may be exemplified by a syntactic structure, in which *-de*, representing the inchoative sense, is modified by V₁ like ‘laugh,’ as shown by (81) (Huang 2006, (63)). Thus, *-de* is the main verb, and V₁ is only an adjunct in the syntactic structure.



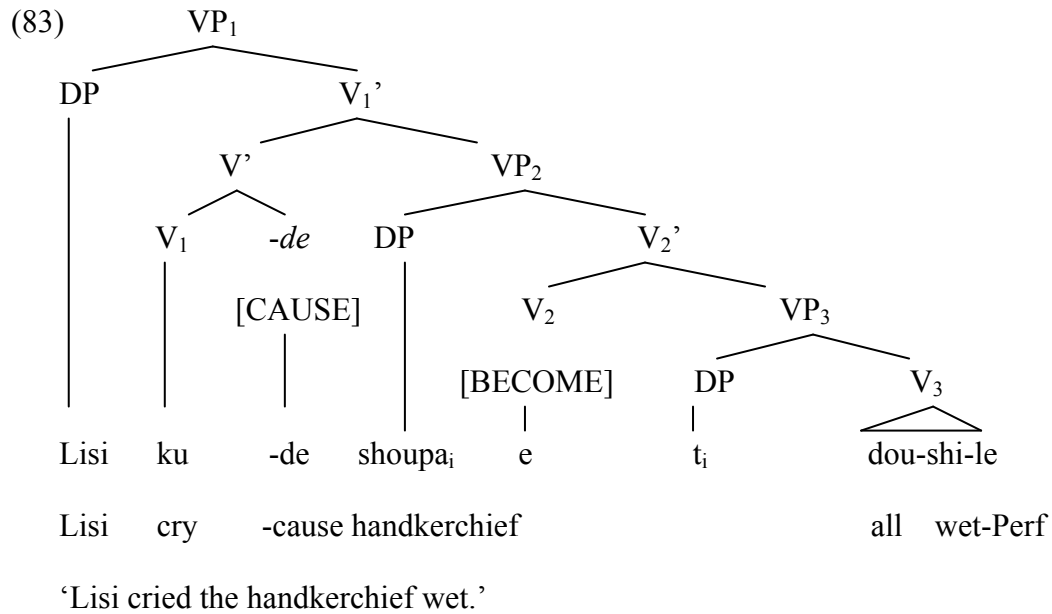
‘Lisi got to the state of having stomach ache from laughing.’

Secondly, the ‘pure’ causative template may be exemplified by a syntactic structure, in which an unmodified light verb CAUSE is added to the inchoative template and the V_1 -*de* denoting BECOME_{<MANNER>} incorporates to the light verb CAUSE, as shown in (82) (Huang 2006, (67)).

(82) Zhe xiaohua xiao-de_i Lisi t_i duzi teng.
 This joke laugh-*de* Lisi t stomach ache

‘This joke got Lisi to have stomach ache from laughing.’

Thirdly, the ‘causing-with-a-manner’ causative template may be exemplified by a syntactic structure, where the modified causative light verb CAUSE embeds an unmodified BECOME, as shown in (83) (Huang 2006, (70)).

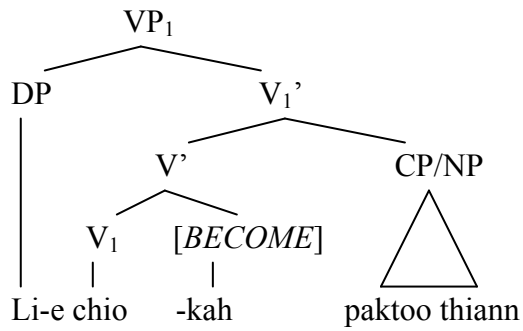


Phrasal resultatives in Mandarin have three meanings, inchoative, ‘pure’ causative, and ‘causing-with-a-manner’ causative, and have three corresponding structures. *-de* is the main verb and V_1 is only an adjunct.

4.1.2 The Structure of the Taiwanese *Kah* Construction with an Overt Complement

As the Mandarin phrasal resultatives, the Taiwanese *kah* construction also expresses the inchoative, ‘pure’ causative and ‘cause-with-a-manner’ causative reading (cf. Section 2.1), so it has three general templates above. The corresponding syntactic structures are illustrated below.

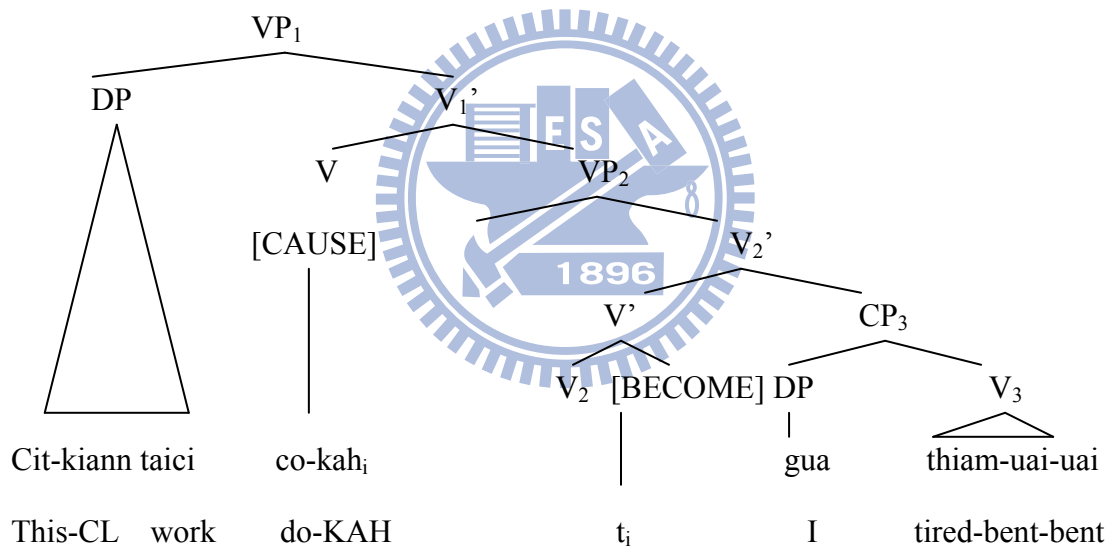
(84) *inchoative reading*



Li-e laugh -become stomach ache

Lit: 'Lie got to the state stomach ache from laughing.'

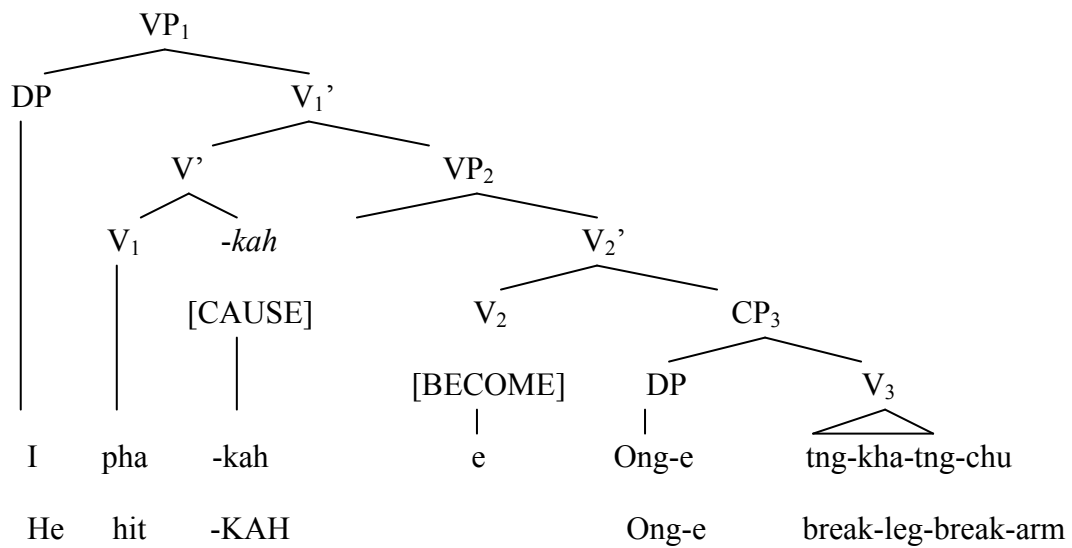
(85) *'pure' causative reading*



Cit-kiann taici co-kah_i t_i gua thiam-uai-uai
 This-CL work do-KAH I tired-bent-bent

'This work got me to become very tired from doing.'

(86) 'cause-with-a-manner' causative reading



‘He hit Onge so much that he causes Onge to have a broken leg and arm.’

The syntactic structure of the Taiwanese *kah* construction is proposed as follows. Firstly, *-kah* is the main verb just as its Mandarin counterpart, which expresses the main event. Secondly, V_1 is an adjunct, and denotes the sub-event which specifies the manner. Thirdly, different from Mandarin, the complement following *-kah* is a NP, CP or proform (cf. Section 2.1). The analysis explains why V_1 has no selection restriction with *-kah* in syntax (cf. Section 2.1). Notice that semantic incompatibility is the real reason why *-kah* cannot be preceded by an accomplishment verb. I will explore the issue in Section 5.2 of Chapter 5.

Before closing this section, there is one more important problem I would like to explain. In Section 3.1 of Chapter 3, H.-L. Lin (2003) proposes the contrast of the word order between the resultative construction and the others, as shown in (47)-(49) (repeated as (87)-(89)).

- (87) a. I gin-a phah-kah [_{CP} hunkhi]. (resultative)
 He child hit-KAH faint

‘He hit the child so much that he/she fainted.’

b. I phah-kah [_{CP} gin-a hunkhi]. (resultative)

He hit-KAH child faint

‘He hit the child so much that he/she fainted.’

(88) a. I ji sia-kah [_{CP} cin kin]. (descriptive)

He word write-KAH very fast

‘He writes very fast.’

b. *I sia-kah [_{NP} ji] [_{CP} cin kin]. (descriptive)

He write-KAH word very fast

‘He writes very fast.’

(89) a. I ka in kiann phah-kah [_{CP} lian chupinn long chutlai khuann]. (extent)

He KA his child hit-KAH even neighbor all out see

‘He hit his child so much that even the neighbors came out to have a look.’

b. *I phah-kah [_{NP} in kiann] [_{CP} lian chupinn long chutlai khuann]. (extent)

He hit-KAH his child even neighbor all out see

‘He hit his child so much that even the neighbors came out to have a look.’

Lin argues that the descriptive and extent construction require the semantic object of V₁-kah to precede it, whereas resultatives do not have the restriction, so (88b) and (89b) are ungrammatical but (87b) is well-formed. However, the ungrammaticality of (88b) and (89b) is actually not attributed to the type of the complement, but due to the structure of the Taiwanese *kah* construction above. *-kah* can only take a complement, a NP, CP, or proform. (87b) is well-formed since the NP *gin-a* ‘child’ can be predicated by *hunkhi* ‘faint’ and form a CP, which obeys the structure of the

Taiwanese *kah* construction. On the contrary, *ji* ‘word’ in (88b) cannot be predicated by *cin kin* ‘very fast,’ so *ji* is forced to be parsed as another complement of *-kah*, which violates the argument structure of *-kah* and the Postverbal Constraint requiring a Chinese verb to be followed by only one constituent (Y.-R. Chao 1986; C.-T. Huang 1982). Hence, (88b) is ungrammatical. Also, (89b) is ungrammatical because there are two complements, a NP and CP, following the verb *-kah*. Therefore, the contrast of the word order restriction will not be a problem for the unified analysis.

4.2 The Syntax of the Null Complement

Sentences with an overt complement and sentences without an overt complement have similar properties in syntax and semantics (cf. Chapter 2). Therefore, it is reasonable to argue that *-kah* actually takes a phonetically unrealized complement in the latter case. In this section, I provide some evidences to show that there is a covert complement following *-kah* in Section 4.2.1, and I explore the nature of the null complement in Section 4.2.2.

4.2.1 Empty or Phonetically Unrealized

In the Taiwanese *kah* construction, the emptiness following *-kah* can be analyzed in two ways. Firstly, it is true empty. That is, it is null phonetically and semantically. Secondly, there is a covert constituent following *-kah*. In the other words, it is unrealized only in the phonetics but not in the semantics.

The former hypothesis is ruled out theoretically and empirically. Theoretically, the Taiwanese *kah* construction still expresses an extraordinary high tone sense even without an overt complement (cf. Section 2.2). Given that *-kah* is not followed by any

element, in order to capture the property, *-kah* might be analyzed as an adverb like *cin* ‘very’, which denotes a very high degree sense and modifies the preceding V_1 , as shown in (90).

(90) I [_{VP} [_{v'} [_v kuan] [_{Adv} kah]].

He tall KAH

‘He is so tall.’

The analysis is implausible because adverbs, which are adjuncts, must precede the predicates they modify in Taiwanese, as shown by the contrast below.

(91) a. *i kuan cin.

he tall very

‘He is very tall.’

b. i cin kuan

he very tall

‘He is very tall.’



In addition, the analysis entails that there are two *kah* constructions denoting the same meaning in Taiwanese, which violates Occam’s razor and is doubtful from the theoretical point of view.

Empirically, the covert complement can be recovered by the context, as shown in (92) and (93).

(92) a. I khi-kah e.

(adjectival V_1)

He angry-KAH

‘He was so angry.’

b. I khi-kah bo-siunnbeh kongue (adjectival V₁)

He angry-KAH no-want talk

‘He was so angry that he did not want to say a word.’

(93) a. I ciah iau, kinajit chuan cit toh, i iting ciah-kah. (verbal V₁)

He that hungry today prepare this table he must eat-KAH

‘He is so hungry, and we prepare a lot of delicious food. He must eat a lot / very happily.’

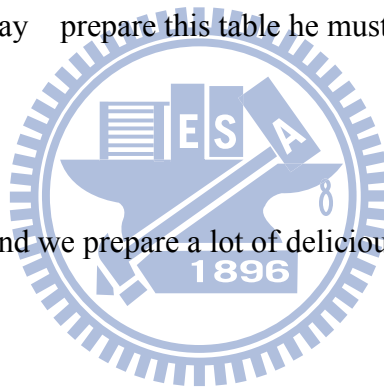
b. I ciah iau, kinajit chuan cit toh, i iting ciah-kah (verbal V₁)

He that hungry today prepare this table he must eat-KAH

cin huannhi.

very happy

‘He is so hungry, and we prepare a lot of delicious food. He must eat very happily.’



(92a) and (93a) do not have an overt complement, but their meanings are almost identical to the meanings of their overt counterpart (94b) and (95b) in a compatible context. Without a covert complement, the property cannot be explained.

The latter analysis that the complement is just phonetically empty can explain the two properties mentioned above. That is, it is the covert complement that denotes the extraordinary high tone sense and can be recovered by the context. Consequently, the unified analysis can be applied even to the sentences, where *-kah* occurs without an overt complement, just as the sentences with an overt complement following *-kah*. Then, we can explain the properties of the Taiwanese *kah* construction by only one *-kah*. Therefore, it is reasonable to argue that *-kah* is followed by a covert

complement.

4.2.2 Ellipsis or Empty Category

There are two approaches to analyze the phonetically unrealized complement following *-kah*. First, the covert complement is an elided structure. Second, the constituent is base-generated as an empty category. In this section, I briefly introduce the two approaches and examine which approach is better. Then, I claim that the null complement is a covert proform.

4.2.2.1 Ellipsis

Sentences always undergo elliptical process if the information in certain contexts is redundant. That is, a more economic expression will be permitted by omitting the structure, which expresses the information already mentioned in the context before, as in (94a) (Merchant 2001:15).

(94) a. Abby saw him after Ben did.

b. Abby saw him after Ben saw him.

Ellipsis should follow at least the requirement of identification, namely the recovery of the omitted information. Compare (94a) with (94b), they have the same meaning, so the elided structure after ‘did’ in (94a) is ‘saw him,’ which is expressed in the main clause. Accordingly, the structure follows the identification requirement and (94a) is grammatical.

There are two approaches to ellipsis: deletion and copy. Let’s start with the

deletion analysis (cf. Merchant 2001). There are two full conjuncts at deep structure, and the redundant structure is deleted at SS. To put it more specific, the deletion occurs at PF, so the structure is still present at LF. Merchant (2001) proposes conditions on ellipsis, e- GIVENness and the focus condition, as stated in (95)-(97) (Merchant 2001:14, 24).

(95) e- GIVENness

An expression E counts as e-GIVEN iff E has a salient antecedent A and, modulo \exists -type shifting,

- (i) A entails F-clo(E), and
- (ii) E entails F-clo(A)

(96) Focus condition on VP-ellipsis

A VP α can be deleted only if α is e- GIVEN.



(97) F-closure

The F-closure of α , written F-clo (α), is the result of replacing F-marked parts of α with \exists -bound variables of the appropriate type (\exists -type shifting).

He applies those conditions to English examples, as shown in (98) (Merchant 2001:27).

(98) a. Abby called Chuck an idiot after BEN did.

b. = ...after BEN did ~~call Chuck an idiot~~.

The deleted VP in (98b) is e- GIVENness. The antecedent here is the VP in the first

clause, $[_{VP} \text{ call Chuck an idiot}]$, and this VP has an open variable corresponding to the subject, so the \exists -type shifting can be applied, which yields the F-closure of VP_A , as in (99a). As for the F-closure of the deleted VP_E , he assumes that the VP-internal trace of the subject BEN is F-marked, so replacing this trace by an \exists -bound variables yields (99b) (Merchant 2001:27-28).

- (99) a. $F\text{-clo}(VP_A) = \exists x.x \text{ called Chuck an idiot}$
 b. $F\text{-clo}(VP_E) = \exists x.x \text{ called Chuck an idiot}$

Clearly, VP_A' entails $F\text{-clo}(VP_E)$ and VP_E' entails $F\text{-clo}(VP_A)$, so the deleted structure is licensed.

Copy analysis (cf. Chung, Ladusaw, and McCloskey 1995) posits an empty category in the syntax, and it will be replaced by an appropriate syntactic structure at LF. Thus, the information can be recovered. The copying operation is restricted by the structural isomorphism condition. That is, the empty category should be identical to its antecedent.

Crucially, both the deletion and copy approach require the antecedent of the null structure to be mentioned in the preceding conjunct. More precisely, it is impossible for the context to be an antecedent, as shown by the ungrammaticality of (100) (Merchant 2001:174).

- (100) *She bought a car, but I don't know $[_{DegP} \text{ how } [_{BIG}]_i \text{ } [_{IP} \text{ she bought } [_{t_i}' \text{ a } t_i \text{ car}]]_j]$

According to Merchant (2001:179-180), 'though it is possible to reason from the asserted existence of a car to the existence of a size for that car, this second

proposition cannot be included in the common ground to satisfy GIVENness.’

Accordingly, the application of the ellipsis analysis to the Taiwanese *kah* construction is challenged by examples like (101).

(101)a. I ciah iau, kinajit chuan cit toh, I iting ciah-kah.

He that hungry today prepare this table he must eat-KAH

‘He is so hungry, and we prepare a lot of delicious food. He must eat very happily / a lot.’

b. ...ciah-kah [_{CP} cin huannhi / cin ce].

eat-KAH very happy very much

‘...eat very happily/ a lot.’

The CP in (101b) is the overt form of the null complement in (101a). Interestingly, we can not find a syntactic structure which can be analyzed as the antecedent; instead, the antecedent here is entailed from the preceding sentence, so it can be *cin huannhi* ‘very happy’, *cin ce* ‘very much’, or even any expression compatible with the context, as illustrated by (102).

(102)CP_A’= ∃_x. x cin huannhi / cin ce / beh thoo

very happily very much going-to throw up

However, the recoverability from the context of the covert complement is opposed to the argument of Merchant (2001) that the elided structure can not be recovered by a contextual antecedent.

Another evidence against the ellipsis analysis of the Taiwanese *kah* construction is the tone of *-kah*. *-kah* has the citation tone 4q when the complement is not

phonetically realized, so the null complement does not trigger tone sandhi, as shown in (39b) (repeated as (103)).

(103)_{[NP Cit-e caboo-kiann] # [VP sui-kah^{4q}]}.

This girl beautiful-KAH

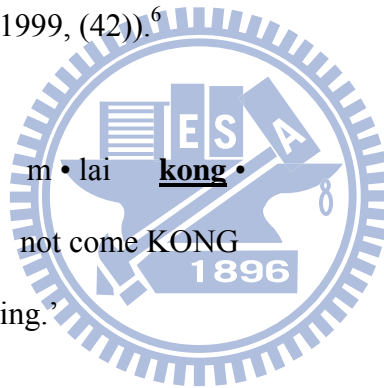
‘This girl is so beautiful.’

According to Simpson and Wu (1999), the tone sandhi in Taiwanese appears to reveal the underlying syntactic structure, so a syllable will have the sandhi tone if it is followed by other tone-bearing syllable in the deep structure. Consider the following example (Simpson and Wu 1999, (42)).⁶

(104) Gua siong • **kong** • i m • lai **kong** •

I think KONG he not come KONG

‘I think he is not coming.’



As opposed to the tone system in Taiwanese, *kong* in (104) have a sandhi tone even in the sentence final, which seems to be the domain-final. In order to explain the phenomenon, Simpson and Wu argue that *kong* in (104) is actually followed by an IP complement in the deep structure and the IP complement raises to the specifier of CP headed by *kong* after the application of the tone sandhi rules, as presented in (105). As a result, *kong* in sentence final has a sandhi tone in the surface structure.

(105)_{[CP [IP Gua siong • **kong** • i m • lai]_i **kong** • t_i]}.

⁶ The syllable undergoes tone sandhi if it is followed by a bolded dot.

As for the Taiwanese *kah* construction, if the covert complement following *-kah* is an elided structure, it would have a corresponding overt complement in the deep structure and would cause *-kah* to have a sandhi tone 21q. However, the prediction is not born out, as shown in (103).

Based on the two evidences above, the ellipsis analysis of the Taiwanese *kah* construction is ruled out. In the following section, I will examine the approach of empty category.

4.2.2.2 Empty Proform

In Chinese, there are at least two types of null object (cf. C.-T. Huang 1984, 1991; C.-S. Liu 2004). Firstly, Huang (1984) argues that the null object is a variable A^2 -bound by an operator in Chinese, as shown in (106) (Huang 1984, (19d)).

(106)a. Zhangsan shuo [_{CP} Lisi bu renshi e].

Zhangsan say Lisi not know

‘Zhangsan_i said that Lisi_j did not know him_{*i/*j/k}.’

b. [_{Op}_i [_{Zhangsan shuo} [_{Lisi bu renshi e}_i]]].

Huang argues that the null object violates the Generalized Control Rule (GCR), as defined in (107)-(108) (Huang 1989, (26)).

(107) Generalized Control Rule (GCR)

An empty pronominal is controlled in its control domain (if it has one).

(108) α is the control domain for β iff it is the minimal category that satisfies both (a)

and (b):

- a. α is the lowest S or NP that contains (i) β , or (ii) the minimal maximal category containing β (henceforth $MMC(\beta)$).
- b. α contains a SUBJECT accessible to β .

In (106), the null object can not be bound by the accessible SUBJECT *Lise* in its control domain, namely embedded CP, so it is not a Pro. Instead, it should refer to the discourse topic in the A'-position, so the null object is a variable.

Secondly, in addition to the variables analysis, C.-S. Liu (2004) argues that some Chinese null objects are empty antilogophors, which differ from the variables in the context they occur. The variable occurs in a pragmatically neutral environment, as illustrated by (106). On the contrary, the empty antilogophor must occur in a pragmatically oriented environment, where a pragmatically downgraded internal protagonist antecedent is available, as shown in (109) (Liu 2004, (3)).

(109) John_i, ta_i shuo ni bu ken bangzhu EA_i.

John he say you not will help

'John_i, he_i said that you would not help him_i.'

The matrix subject John can be understood as one demoting himself/herself for the purpose of getting help from others, so it is a pragmatically downgraded internal protagonist antecedent, which binds the empty antilogophor. In order to account for the phenomenon, Liu proposes the Empty Antilogophoric Condition, as stated in (110) (Liu 2004, (8)), and he argues that the empty antilogophor is a pronoun subject to Binding Condition B, as stated in (111) (Liu 2004, (7)).

(110) The Empty Antilogophoric Condition

An empty antilogophor (i.e., EA) must be anteceded by an internal protagonist which must (a) play a logophoric role (i.e., source, self or pivot) and (b) be pragmatically downgraded in the logophoric domain.

(111)a. Binding Condition B (Chomsky (1981: 188))

A pronominal is free in its governing category.

b. Governing Category (Chomsky (1981: 188))

α is the governing category for β if and only if α is the minimal category containing β , α governor of β , where $\alpha = \text{NP or S}$.

Therefore, the null object can be an empty pronominal element if it occurs in some highly pragmatic restricted context.

In terms of the Taiwanese *kah* construction, I argue that the null complement is an empty proform. Firstly, Taiwanese is a pro-drop language and its argument can be omitted freely, as exemplified in (112).

(112)A: Li kam-cai [_{CP} guakhau tileh lohoo]?

You know outside -ing rain

‘Do you know that it is raining outside?’

B: [_{NP} Pro] cai [_{CP} Pro_i]-a.

know ASP

‘I know.’

NP and CP arguments can be freely replaced by an empty proform, Pro.

Secondly, the null complement of *-kah* can only occur in a pragmatic oriented

environment. That is, it must occur in a context, which expresses a very high degree sense, as shown in (21) (repeated as (113)).

(113)a. * I cau-kah siokua-a ban. (verbal V₁)

He run-KAH a-little-bit slow

‘He ran a little bit slowly.’

b. I cau-kah cin ban. (verbal V₁)

He run-KAH very slow

‘He ran very slowly.’

Therefore, the covert complement of the Taiwanese *kah* construction is an empty proform Pro, just like the empty antilogophor (cf. C.-S. Liu 2004).

Thirdly, if the null complement is a Pro, we can explain why *-kah* has a citation tone 4q when it precedes a null complement. Pro does not trigger tone sandhi, and neither does the null complement of *-kah*, as shown in (114)-(115).

(114)A: [_{NP} Li] # [_{VP} ka kong⁴⁴ minacai men siongkho bo]?

You KA tell tomorrow not take-class not

‘Did you tell him that he does not have to go to school tomorrow?’

B: Pro [_{VP} kong⁵³ Pro]-a.

tell-ASP

‘I told him that.’

(115)a. [_{NP} I] # [_{VP} ciah-kah^{21q} cin pa].

He eat-KAH very full

‘He ate so much that he was very full.’

b. [_{NP} Cit-e caboo-kiann] # [_{VP} sui-kah^{4q} Pro].

This girl beautiful-KAH

‘This girl is so beautiful.’

Recall that a syllable has the sandhi tone only when it is followed by some other tone-bearing syllable (i.e., not in the domain-final) (cf. Section 2.3). Pro is phonetically unrealized in the deep structure, so it does not trigger tone sandhi. Hence, *kong* and *-kah* have the citation tone 53 and 4q in (114B) and (115b), respectively.

Fourthly, Pro can be bound by the context, so can the null complement in the Taiwanese *kah* construction, as illustrated by (116).

(116)a. Pro lai-a.

come-ASP

‘He/she/they came.’

b. I cang hoo lang pang-sat, tit pangking-lai khau-kah [_{CP/NP} Pro_i].

She yesterday HOO person dumped in room-in cry-KAH

‘She was dumped yesterday, and she cried very sadly / very seriously / a lot in the room.’

The reference of Pro in (116b) is determined by the context, which is *cin songcim* ‘very sad’ or any CP compatible with the context. Besides, in addition to the anaphoric reading above, Pro also has the arbitrary reading. Similarly, the null complement of *-kah* has the two readings, as exemplified in (117).

(117) Ong-e ciah kah [_{CP} cin pa]_i, Li-e ma ciah kah [_{CP} Pro_{i/j}].

Ong-e eat KAH very full Li-e also eat KAH

‘Onge ate so much that he was very full, and Lie also ate so much (anaphoric)
that he was very full.’

‘Onge ate so much that he was very full, and Lie also ate a lot.’ (arbitrary)

The anaphoric reading of *Pro* refers to the antecedent *cin pa* ‘very full’ in the first conjunct. Besides, *Pro* can also only express the very high degree sense and have the arbitrary reading.

Fifthly, null operators which bind variables can not cooccur with other (overt or null) operators (cf. Raposo 1984; Rizzi 1986), as shown by the Portuguese examples below (Rizzi 1986, (29)).

(118)a. [Op [a Joana viu *ec* na televisão ontem à noite]].

‘Joana saw (him) on TV last night.’

b. *[Quando Op [é que o João vai oferecer *ec* à Maria t]]?

‘When is joao going to offer (it) to Maria?’

The empty object in Portuguese is a variable which is bound by a discourse-bound null operator, so the null operator and the *wh*-element in (118b) are both in *Comp*. Therefore, the sentence is ungrammatical. However, if the null object is a *Pro*, which does not need to be bound by an operator, it is perfectly possible to have overt operators in *Comp*, as illustrated by the Italian examples below (cf. Rizzi 1986, (32)).

(119) Quale musica riconcilia ___ con se stessi?

‘Which music reconciles ___ with oneself?’

Interestingly, Taiwanese null object variables which are bound by null operators can not cooccur with overt operators like *siann*, as shown by (120) (cf. Huang 1989).

(120)a. Ong-e_i kong [_{CP} Li-e siksai *e**_{i/j}].

Ong-e say Li-e know

‘Onge said that Lie knows.’

b. *Ong-e kong [_{CP} Op_i Op_j [siann_i siksai *e*_j]]?

Ong-e say who know

‘Who did Onge say know?’

Crucially, the null object in the Taiwanese *kah* construction can perfectly occur with the *wh*-element *siann* ‘who’, as illustrates below.

(121)a. Ong-e kong [_{CP} cang Li-e khau-kah *Pro*]]?

Ong-e say yesterday Li-e cry-KAH

‘Onge said that Lie cried a lot yesterday?’

b. Ong-e kong [_{CP} Op_i [cang siann_i khau-kah *Pro*]]?

Ong-e say yesterday who cry-KAH

‘Who did Onge say cried a lot yesterday?’

Therefore, the null object must be a *Pro* rather than a variable; otherwise, (121b) would be ungrammatical.

Based on the semantic, syntactic and phonological evidence above, I argue that the null complement is a *Pro* in the Taiwanese *kah* construction.

4.2.3 The Structure of the Taiwanese *Kah* Construction with a Null Complement

Due to the similarities (cf. Section 2) between the Taiwanese *kah* construction occurring in the form, where the complement is overt, and the form, in which the complement is covert, it is plausible to argue that they have the same argument structure. More precisely, *-kah* may take a NP Pro or a CP Pro as its complement, just like its overt counterpart, as shown by (122)-(123).

(122) CP complement

- a. I khi-kah [CP bo-siunnbeh kongue].
 He angry-KAH no-want talk
 ‘He is so angry that he does not want to say a word.’
- b. I khi-kah [CP Pro].
 He angry-KAH
 ‘He is so angry that he does not want to say a word.’

(123) NP complement

- a. Cit-e caboo-kiann sui-kah [NP hitciong thingtoo], bok-kuai Ong-e ma
 The girl beautiful-KAH that-kind degree no wonder Ong-e also
 hoo be-khi.
 HOO fascinated
 ‘This girl is so beautiful. No wonder Onge is also fascinated by her.’
- b. Cit-e caboo-kiann sui-kah [NP Pro], bok-kuai Ong-e ma
 The girl beautiful-KAH no wonder Ong-e also
 hoo be-khi.

HOO fascinated

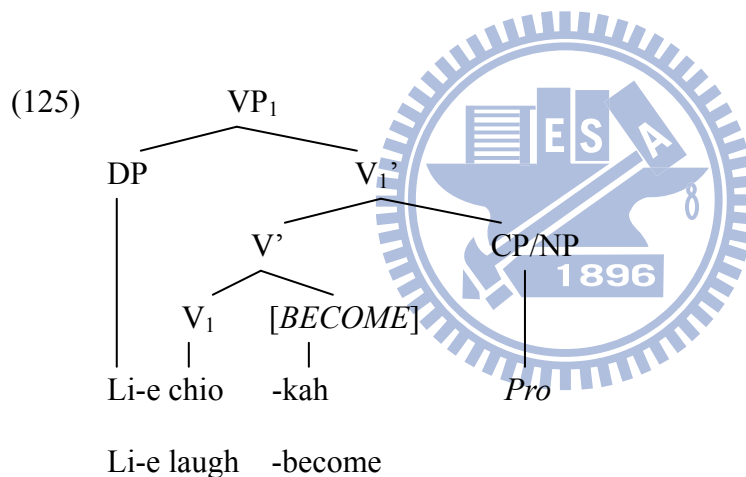
‘This girl is so beautiful. No wonder Onge is also fascinated by her.’

Nevertheless, *-kah* only have the inchoative reading when it takes a covert complement (cf. Section 2.2), so it only has the inchoative template, as shown below.

(124) The inchoative template:

[BECOME_{<MANNER>} [x <STATE>]]

The corresponding syntactic structure is illustrated by (125).



Lit: ‘Lie got to the state expressing high degree sense from laughing.’

-kah, as the main verb, presents the main event change-of-state, and the preceding V_1 , which is an adjunct, modifies the main event in the construction. The complement of *-kah* ‘become’ can be a CP or NP *Pro*. As for the interpretation of (125), it expresses the meaning that *Lie* changes into the state *Pro*, which denotes the extraordinary high tone sense and can be recovered by the context, in the manner of V_1 *chio* ‘laugh’.

This section explores the structure of the Taiwanese *kah* construction, and I will discuss the interpretation of the extraordinary high tone sense in following chapter.

CHAPTER 5

THE INTERPRETATION OF THE EXTRAORDINARY HIGH TONE SENSE

-kah must take a complement, which denotes an extraordinary high tone sense (cf. Section 2.2), as shown in (21)-(22) (repeated as (126)-(127)).

(126)a. *I cau-kah siokua-a ban. (verbal V₁)

He run-KAH a-little-bit slow

‘He ran a little bit slowly.’

b. I cau-kah cin ban. (verbal V₁)

He run-KAH very slow

‘He ran very slowly.’

(127)a. *I-e soohak ho-kah khochi long te-cap mia. (adjectival V₁)

His math good-KAH exam all tenth place

‘His math is so good that he always take the tenth place in the exams.’

b. I-e soohak ho-kah khochi long te-ih mia. (adjectival V₁)

His math good-KAH exam all first place

‘His math is so good that he always take the first place in the exams.’

This section interprets the extraordinary high tone sense expressed by the Taiwanese *kah* construction. Following the analysis of Doetjes (1997), where she argues that adjectives as well as verbs contain an open thematic position required to be saturated

by a degree element, this section singles out the extraordinary high tone sense from the complement and establishes the saturation relationship between V_1 and the extraordinary high tone sense.

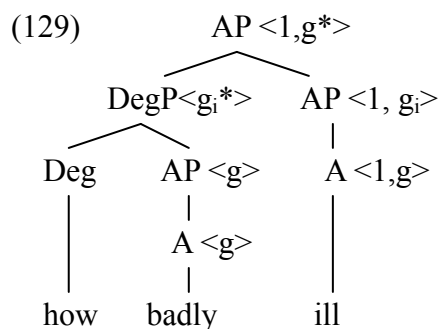
5.1 Doetjes (1997)

Doetjes argues that the conceptual scale can be realized as a quantity or as a grade. Extend the concept to languages, scalar verbs and nouns contain a thematic position, the *quantity*-position (henceforth *q*-position), and scalar adjectives have a *grade*-position (henceforth *g*-position), as shown in (128) (Doetjes 1997:41).

- | | |
|-------------------------------------|-------------|
| (128)a. more tables, more tea | (scalar NP) |
| b. John danced more than Peter. | (scalar VP) |
| c. more beautiful, more intelligent | (scalar AP) |



more saturates the *q*-position of the scalar NPs in (128a) and the scalar VP in (128b), and the *g*-position of scalar APs in (130c), which yields a theta relation between *more* and the scalar element, namely N, V or Adj, by theta-binding and theta-identification, as shown in (129) (Doetjes 1997:22).

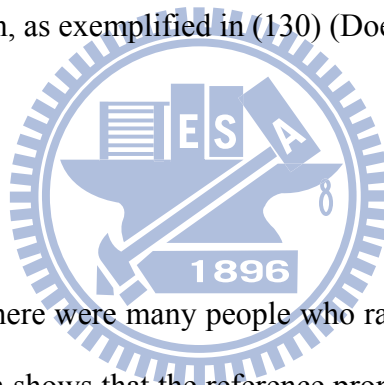


The degree head binds the open *g*-position of the scalar adjective *badly*, and saturates it. Then, the saturated DegP undergo theta-identification with the open *g*-position of the AP *ill*, and the open position is saturated.

Traditionally, scalar adjectives contain a *g*-position intrinsically, but scalar nouns and verbs do not. As for the relation between the quantity and nouns, she proposes that the thematic grid of nouns contains a *q*-position, which reflects the reference properties of nouns, namely mass or count. Only mass nouns, such as *stuff*, and plural count nouns, such as *bottles*, contain a scalar *q*-position within the *r*-position.

In terms of verbs, the *q*-position is an expression of the reference properties of the event, namely *e*-position, as exemplified in (130) (Doetjes 1997:55).

(130) They ran a lot.



(130) does not imply that there were many people who ran, but that there was a lot of running taking place, which shows that the reference properties of the verb are related to the atelic or telic distinction. Only the activities, states, and the events which can be iterated, as in (131) (Doetjes 1997:49), have a scalar *q*-position within the *e*-position.

(131) John ran across the street all afternoon.

Therefore, scalar nouns and verbs contain an open *q*-position, which should be saturated in the sentence.

5.2 Extraordinary High Tone Sense in the Taiwanese *Kah*

Construction

Following Doetjes (1997)'s analysis, in which a scalar adjective contains a *g*-position and a scalar verb and noun contain a *q*-position, I establish the thematic relationship between V_1 -*kah* and the extraordinary high tone sense denoted by the complement.

5.2.1 The Extraordinary High Tone Sense of the Complement

This section singles out the very high degree sense of the complement which is required by the main verb *-kah* (cf. (126)-(127)). The types of the complement in the Taiwanese *kah* construction are diverse. In order to single out the extraordinary high tone sense from the various complements, I propose that there is an operator in the specifier of the CP complement or the NP complement, which unselectively binds the degree variable in the complement. The semantic mechanism of each type is explored below. Firstly, the complement containing a scalar predicate has an open *g*-position or *q*-position (cf. Doetjes 1997), which is saturated by the degree element, as shown in (23)-(24) (repeated as (132)-(133)).

(132) *Scalar adjectives*

a. I cau-kah cin ban. (verbal V_1)

 He run-KAH very slow

 ‘He ran very slowly.’

b. I sui-kah sui-tang-tang. (adjectival V_1)

 She beautiful-KAH very-beautiful

‘She is so beautiful.’

(133) *Scalar verbs*

a. I khau-kah baksai tit-tit lau. (verbal V₁)

She cry-KAH tear continuous flow

‘she cried so hard that she cannot stop her tears.’

b. I sui-kah Ong-e it-tit ka khuann. (adjectival V₁)

She beautiful-KAH Ong-e continual KA look

‘She is so beautiful that Onge cannot turn his eyes of her.’

The open *g*-position of the scalar adjective *ban* ‘slow’ in (132) is saturated by the degree element *cin* ‘very’, and the open *q*-position of the scalar verb *lau* ‘flow’ in (133) is bound by the degree adverb *it-tit* ‘continuously’. In order to single out the extraordinary high tone sense from the complement, there is an operator in the specifier of embedded CP, which unselectively binds the degree variable of the scalar predicate, as shown in (134).

(134) V₁-kah [CP Op_i [... d_i-predicate]]

Secondly, *-kah* can also take a NP as its complement, as illustrated in (135).

(135) *Scalar NPs*

a. I sau-kah hit-le-hing, cin kholian. (verbal V₁)

He cough-KAH that-type very pitiful

‘He coughed like that. He was so pitiful.’

b. Li-e kau-kah [NP hiah-ce lu-pingiu]-o! (verbal V₁)

Li-e have-KAH that-much girlfriend-ASP

‘Lie has so many girlfriends.’

c. Cit-e caboo-kiann sui-kah hit-ciong thingtoo. (adjectival V₁)

The girl beautiful-KAH that-kind degree

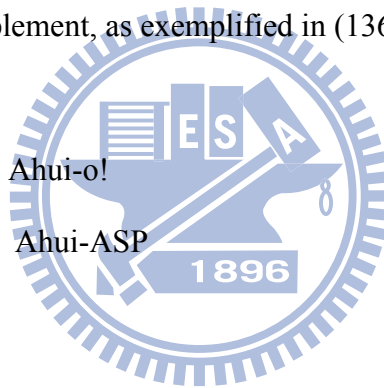
‘This girl is so beautiful.’

The NPs here are all scalar NPs, which includes mass nouns and plural count nouns (Doetjes 1997). *hing* ‘type’ in (135a) and *thingtoo* ‘degree’ in (135c) are mass nouns, and *hiah-ce lu-pingiu* ‘that-many girlfriend’ in (135b) is a plural count noun, so they are scalar nouns and contain an open *q*-position. Notice that *-kah* can not take a non-scalar noun as its complement, as exemplified in (136).

(136)*Li-e chua -kah Ahui-o!

Li-e marry-KAH Ahui-ASP

‘Lie married Ahui.’



Ahui is a proper name, and it can not be a scalar noun, so (136) is ungrammatical. As for the saturation of the scalar noun, the open *q*-position is bound by a degree element *hit(-le)* ‘that’. As D.-X. Zhu (1982: 86) (cf. Y.-H. Liu, W.-Y. Pan, and W. Gu 1996: 85) mentioned, *zhi* ‘this’ or *na* ‘that’ denotes a high degree sense, as shown in (137).

(137)Na-ge leng a, jiu buyong ti-le.

That-CL cold PARTICLE then not mention-ASP

‘Not even mention that coldness.’

The operator in the NP specifier then unselectively binds the degree variable of the

scalar noun, as illustrated by (138).

(138) V₁-kah [NP Op_i [d_i-hit(-le) ...]]

Thirdly, the complement, which contains a metaphorical expression, an exaggerated expression or an expression referring to a special case, can also denote the extraordinary high tone sense through the pragmatic entailment, as exemplified in (27)-(29). (repeated as (139)-(141)).

(139) *Exaggerated expressions*

a. I khau-kah chuting long henkhia-a. (verbal V₁)

She cry-KAH roof all lift-ASP
'She cried so hard that the roof was lifted up.'

b. I sui-kah kanna cit-lui hue. (adjectival V₁)

She beautiful-KAH like a flower
'She is so beautiful that she is like a flower.'

(140) *Metaphorical expressions*

a. I khau-kah kanna thinn be pang-luai-a. (verbal V₁)

She cry-KAH like sky going-to collapse-ASP
'She cried so hard as the sky was going to collapse.'

b. I sui-kah lian Li-e long hoo be-khi. (adjectival V₁)

She beautiful-KAH even Li-e all HOO fascinated
'She is so beautiful even Lie is fascinated by her.'

(141) *Expressions denoting a special case*

- a. Ong-e i ai-kah cit kang bo khuann-tioh i to (verbal V₁)
 Ong-e she love-KAH one day no see him then
 be ciah be khun.
 no eat no sleep
 ‘Ong-e, she loves him so much that she can not eat or sleep if she does not see
 him for one day.’
- b. Gua khi-kah thoo hue. (adjectival V₁)
 I angry-KAH vomit blood
 ‘I was so angry that I vomited blood.’

The extraordinary high tone sense is entailed by an exaggerated expression as in (139), a metaphorical expression as in (140), or an expression which denotes a special situation as in (141). The operator in the specifier of embedded CP then unselectively binds the degree variables entailed by the complement, as illustrated by (142).

(142) V₁-kah [CP Op_i ... d_i- [.....]]

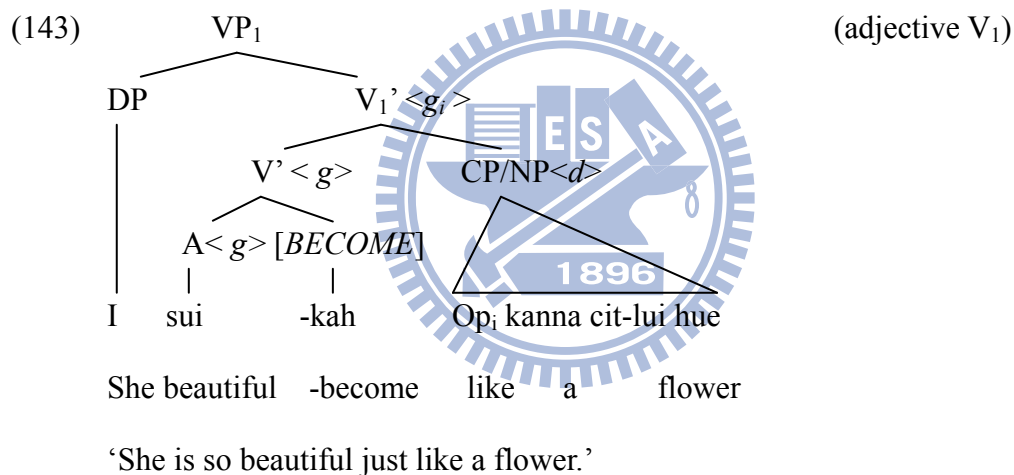
In terms of the Taiwanese *kah* construction with a covert complement, the interpretation is the same as its overt counterpart. In order to single out the extraordinary high tone sense, the covert complement contains an operator, which unselectively binds the degree variable. The only difference between the Pro complement and its overt counterpart is that the former is not phonetically realized.

This section singles out the extraordinary high tone sense from the complement by an operator, which unselectively binds the degree variable of scalar predicates, or scalar nouns, or the degree variable entailed by the whole clause in the complement.

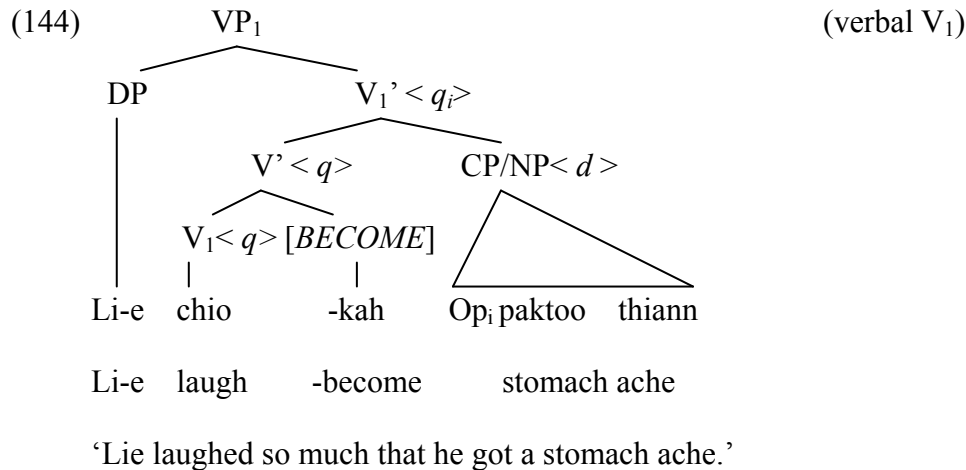
5.2.2 The Interpretation of the Taiwanese *Kah* Construction

The very high degree sense is singled out from the complement in the previous section, and this section tackles the question: which element in the matrix clause is theta-identified by the extraordinary high tone sense.

Following Doetjes (1997), an adjective V_1 contains an open g -position. The operator, which unselectively binds the degree variable in the complement, then theta-identifies with the unsaturated g -position, and the open position is saturated, as illustrated by (143).



The framework is also applied to the verbal V_1 , which contains an open q -position. Then, the operator denoting the very high degree sense in the complement theta-identifies with the open q -position, as illustrated by (144).



Crucially, it is V₁ that contains the thematic position instead of the main verb *-kah* ‘become’ since V₁ is atelic but *-kah* is telic. Recall that only atelic predicates are scalar and contain an open or *q*-position, which is obligatory for the saturation relationship between the extraordinary high tone sense and the main predicate.

As for the main verb *-kah*, it is a change-of-state verb, so it is telic. Besides, *-kah* is not iterated in the Taiwanese *kah* construction because the construction does not have the meaning that the quantity of the changing event expresses a very high degree sense. Instead, the interpretation is that the subject changes into a situation, which denotes an extraordinary high tone sense. Therefore, *-kah* is not a scalar verb, so it does not contain an open *q*-position. In terms of V₁, the Taiwanese *kah* construction also requires it to be atelic. Recall that V₁ can be an individual-level adjective, stage-level adjective, stative verb, active verb, semelfactive verb, and achievement verb (cf. Section 2.1). Individual-level adjectives, stage-level adjectives, stative verbs, and active verbs are atelic intrinsically, so they are perfectly possible to be V₁ in the construction (cf. (11)-(14)). As for semelfactive and achievement verbs, they are telic, but they can be iterated in Taiwanese, as shown in (145).

(145)a. Ong-e ittit sau. (semelfactive)

Ong-e all-the-time cough

‘Onge kept coughing.’

b. Ong-e ittit su. (achievement)

Ong-e all-the-time lose

‘Onge kept losing.’

Iterated verbs can be modified by the adverb *ittit* ‘all the time’, and semelfactive and achievement verbs can occur with the adverb, as in (142). Therefore, they contain an open *q*-position, which can be identified with the operator expressing the very high degree sense (cf. (15)-(16)). Significantly, only accomplishment verbs are not allowed to be followed by *-kah*, as shown in (17) (repeated as (146)).

(146)* Kinann chai cin chennchau, gua ciah-pa-kah beh thoo-a.

Today dish very plentiful I eat-full-KAH going-to throw-up-ASP

‘There is a lot of food today. I eat a lot. I am so full that I am almost throwing up.’

Accomplishment verbs are telic, and they can not be iterated in Taiwanese, as shown by (147).

(147) *Ong-e ittit ciah-pa. (accomplishment)

Ong-e all-the-time eat-full

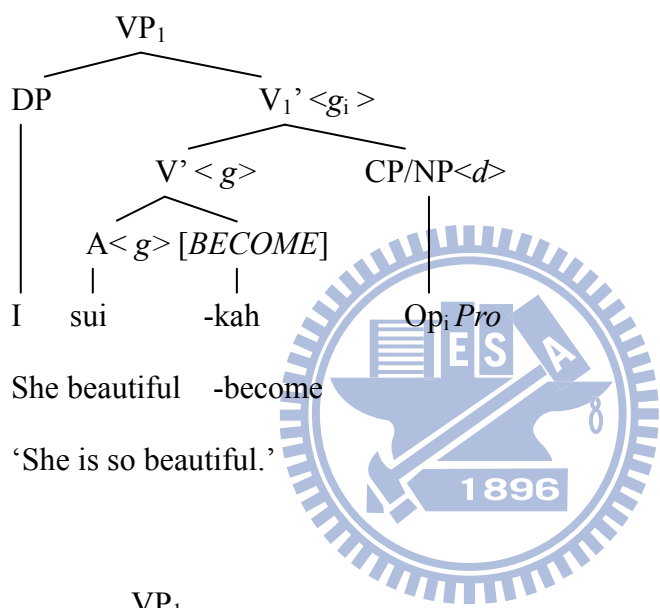
‘Onge kept eating full.’

Accomplishment verbs can not be modified by the adverb *ittit*, so they can only be telic, and do not have an open *q*-position. Hence, the saturation of the operator and the

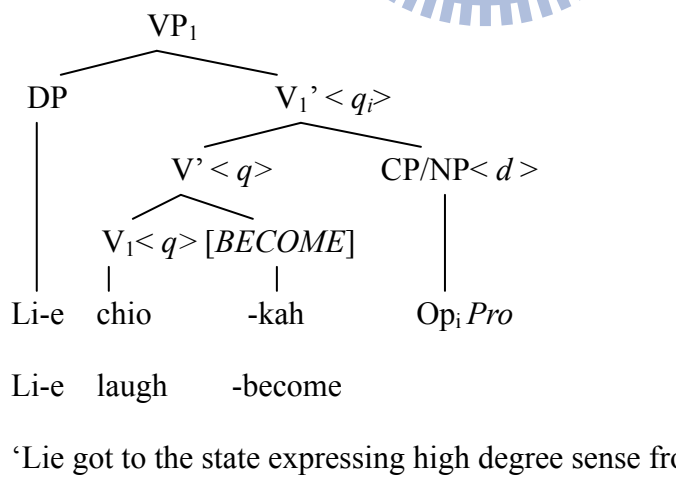
main predicate is crashed, so (146) is ungrammatical.

Moreover, the interpretation of the Taiwanese *kah* construction with a covert complement is the same as its overt counterpart. The operator, which unselectively binds the degree variable in the complement, theta-identifies the unsaturated *g*-position of the scalar adjectival V_1 or the *q*-position of the scalar verbal V_1 , as shown in (148)-(149).

(148) (adjectival V_1)



(149) (verbal V_1)



Through the thematic relationship between the operator and V_1 , the whole sentence including V_1 -*kah* and the covert complement denotes an extraordinary high tone sense.

CHAPTER 6

THEORETICAL CONSEQUENCES

So far, this thesis proposes a unified analysis of the Taiwanese *kah* construction. Syntactically, *-kah*, the main verb, expresses the sense of ‘change-of-state’ and takes a CP, NP, proform, or Pro as its complement. Semantically, the construction must denote an extraordinary high degree sense, which is derived by the theta-identification between the operator in the complement and V_1 in the matrix clause. The consequent question is why the Taiwanese *kah* construction allows a Pro to be its complement. This section explores the licensing condition and identification convention of the empty category Pro in the construction. Firstly, I will introduce the licensing condition of the null object in Pashto and Italian, and propose a possible explanation of the complement Pro in the Taiwanese *kah* construction. Secondly, I will explain why *-de* should be followed by an overt complement in the Mandarin *de* construction, while *-kah* can take a null complement in the Taiwanese *kah* construction.

6.1 The Licensing Condition and Identification Convention of the Null Object in Taiwanese

In addition to Taiwanese, the null object Pro can also occur in Pashto and Italian. Firstly, according to C.-T Huang (1984: 534-536), a pronoun in the object position can drop if there is a rich system of agreement between the verb and the object. To support his argument, he provides an important piece of evidence from Pashto, a split ergative language spoken in Afghanistan. The agreement system is ergative when

Pashto expresses past events. That is, the verb agrees with the subject if it is intransitive, but with the object if it is transitive, as illustrated in (150) (Huang 1984, (12)).

(150)a. Jan ra-g-ay. (intransitive)

John ASP-come-3msg

‘John came.’

b. Ma mana wə-xwar-a. (transitive)

I apple PRF-eat-3fsg

‘I ate the apple.’

The intransitive verb ‘come’ in (150a) agrees with the subject ‘John’, while the transitive verb ‘eat’ in (150b) agrees with the third feminine singular object NP ‘the apple’. Crucially, the arguments which the verbs agree with can drop, as shown in (151) (Huang 1984, (14)).

(151)a. *e* ra-g-ay. (intransitive)

DIR-come-3msg

‘[He] comes.’

b. Ma *e* wə-xwar-a. (transitive)

I PRF-eat-3fsg

‘I ate [it (fem.).]’

The object ‘apple’ can drop if it agrees with the verb ‘eat,’ as in (151b). Therefore, the null object Pro can be licensed and identified by the rich agreement system.

Secondly, Rizzi (1986) argues that Italian also allows null objects, and he

analyzes them as zero generic pronouns, which always have an arbitrary interpretation [+Masculine, +Plural], as shown in (152) (Rizzi 1986, (25a)).

(152) E un'illusione [PRO_{arb} sperare [che un buon pranzo possa riconciliare _____{arb} con se stessi]].

‘It is an illusion [PRO to hope [that a good meal can reconcile __ with oneself.]]’

The null object should follow the licensing condition and the interpretation convention, as stated in (153a) and (153b), respectively.

(153)a. *pro* is case-marked by X^0 .

b. Let X be the licensing head of an occurrence of *pro*: then *pro* has the grammatical specification of the features on X co-indexed with it.

The null object *Pro* can be identified and licensed by the agreement marker as in Pashto, or it can be case-marked by a head and co-index with the grammatical features on the head, as in Italian. However, either mechanism can not be applied to the null object *Pro* in the Taiwanese *kah* construction. Consider the following sentences.

(154)a. I cau-kah cin thiam.

He run-KAH very tired

‘He ran so much that he was very tired.’

b. I cau-kah anne.

He run-KAH that

‘He ran like that’

c. I cau-kah.

He run-KAH

‘He ran a lot/ very fast/ very tired.’

Firstly, there is no agreement marker on the main verb *-kah* or V_1 *cau* ‘run’. Secondly, Taiwanese does not have any overt case marker on the argument, and neither does the complement in the Taiwanese *kah* construction, as in (154). Therefore, the null object can not be licensed by the morphological or syntactic mechanism mentioned above. Alternatively, I propose that the null complement following *-kah* is licensed by a semantic mechanism, as shown below.

(155)a. Pro is lexical-licensed by X_y^0 .

b. Let X be the licensing head of an occurrence of Pro: then Pro has the semantic specification of the features on X coindexed with it.

The main verb *-kah* is a verb with lexical contents, and it requires the complement to have an extraordinary high tone sense. Therefore, the object Pro is lexical-licensed by *-kah*, and has the semantic specification of the degree feature on *-kah* coindexed with it. Consequently, even without the agreement system and the case-marking of the head, *-kah* can license and identify with the following complement Pro.

6.2 The Comparison of the Taiwanese *Kah* Construction and the Mandarin *De* Construction

Recall that the Taiwanese *kah* construction allows its complement to be

phonetically unrealized, but the Mandarin *de* construction does not, as shown in (5a) and (6a) (repeated as (156)).

(156)a. Cau-kah gua thiam-kah e. (Taiwanese)

Run-KAH I tired-KAH

‘I got so tired from running.’

b. *Ta lei-de. (Mandarin)

He tired-DE

‘He is so tired.’

However, Taiwanese and Mandarin share many syntactic properties. For example, the two languages are both lack of a rich system of agreement, and overt case markers, as shown in (156). Besides, they are both pro-drop languages, and the NP or CP argument can be replaced by a Pro, as exemplified in (157)-(158).

(157)A: Li kam-cai [_{CP} guakhau tileh lohhooh]_i? (Taiwanese)

You know outside -ing rain

‘Do you know that it is raining outside?’

B: [_{NP} Pro] cai [_{CP} Pro_i]-a.

know-ASP

‘I know.’

(158)A: Ni zhidau [_{CP} waimian zai xiayu]_i ma? (Mandarin)

You know outside -ing rain Q

‘Do you know that it is raining outside?’

B: [_{NP} Pro] zhidau [_{CP} Pro_i]-a.

know-ASP

‘I know.’

The subject NP ‘I’ and the complement CP ‘raining outside’ can be dropped in Taiwanese and Mandarin. Therefore, the asymmetry between the Taiwanese *kah* construction and the Mandarin *de* construction should be explained.

I propose that there are two differences between the Taiwanese *kah* construction and the Mandarin *de* construction: semantics and the lexicon. Semantically, *-kah* in Taiwanese requires its complement to denote a very high degree sense, but *-de* in Mandarin does not have the restriction, as exemplified by the contrast in (8)-(9) (repeated as (159)-160).

(159) *Taiwanese*

a. *I cau-kah siokua-a ban.

He run-KAH a-little-bit slow

‘He ran a little bit slowly.’

b. I cau-kah cin ban.

He run-KAH very slow

‘He ran very slowly.’

(160) *Mandarin*

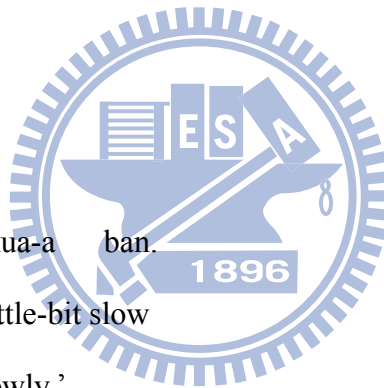
a. Ta pao-de youdian man.

He run-DE a little bit slow

‘He ran a little bit slowly.’

b. Ta pao-de hen man.

He run-DE very slow

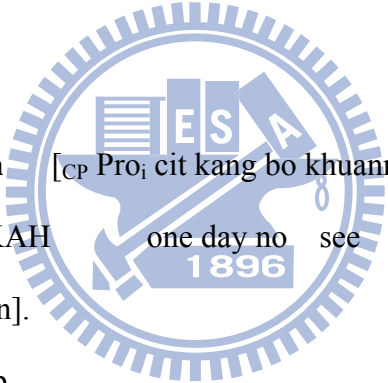


‘He ran very slowly.’

Therefore, *-kah* has a strong semantic feature with which the null object Pro can coindex, but *-de* does not. Accordingly, *-kah* selects a complement which denotes more specific meanings than *-de*, so when the complement is replaced by a Pro, it is easier for the Taiwanese *kah* construction to recover the meaning than the Mandarin *de* construction. Hence, *-kah* can select a null complement, but *-de* can not.

As far as the difference of the lexicon is concerned, *-kah* in Taiwanese is more lexical than *-de*. *-kah* can be followed by a NP, CP, or a proform *anne* ‘that’, as shown in (18)-(20) (repeated as (161)).

(161) *Taiwanese*

- 
- a. Ong-e i_i ai-**kah** [_{CP} Pro_i cit kang bo khuann-tioh i (CP)
Ong-e she love-KAH one day no see him
to be ciah be khun].
then no eat no sleep
‘Ong-e, she loves him so much that she can not eat or sleep if she does not see
him for one day.’
- b. Li chua-**kah** [_{NP} hit-le boo], lau-len a ! (NP)
You marry-KAH that wife useless
‘You married that wife, who is useless.’
- c. Ong-e i_i ai-**kah** [_{CP} anne]-o! (proform)
Ong-e she love-KAH this-ASP
‘She loves Ong-e like this.’

However, *-de* can only take a CP complement, as shown in (162a). In order to take a

NP or a proform as the complement, *-de* should be replaced by *-dao* ‘to’ or *-cheng* ‘become’, respectively, as illustrated in (162b) and (162c), respectively.

(162) *Mandarin*

- a. Ta ke-**de**/**-dao** lian linju dou tingdao-le. (CP)
 He cough-DE/to even neighbor all hear-ASP
 ‘He coughed so much that even the neighbors all heard his cough.’
- b. Ta-de gongsi fazhan-**dao** na-ge guimo. (NP)
 His company develop-to that-CL extent
 ‘His company has developed to that extent.’
- c. Ta pao-**cheng** nayang / zheyang. (proform)
 He run-become that this
 ‘He ran so much and change into that/this situation.’

-kah in Taiwanese can take various complements, so it does not have c-selection with the following complement. However, *-de*, *-dao*, and *-cheng* in Mandarin are more selective with respect to the category of its complement. The contrast above is attributed to how many lexical contents a verb has. A verb with more contents imposes semantic restrictions to the complement, namely the s-selection. Consequently, a verb with stronger s-selections has weaker c-selections and can take various complements. As for *-kah* in Taiwanese and *-de*, *-dao*, and *-cheng* in Mandarin, although they are all light verbs, *-kah* with strict s-selection and lax c-selection is more lexical than the three verbs, which have lax s-selection and strict c-selection. The semantic content which light verbs have is different due to the stage of grammaticalization which each verb undergoes. Since *-kah* is more lexical, it can take various phrasal complements, even a null one. On the contrary, *-de*, *-dao*, and

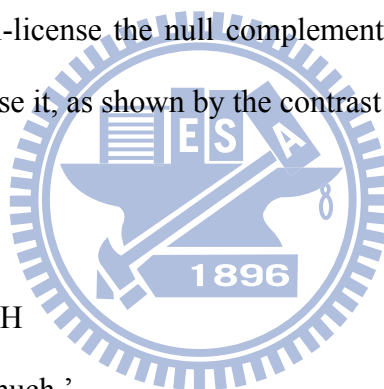
-cheng in Mandarin contain lighter semantic contents, so they have strict c-selection with the complement and the complement can not drop.

In addition, it is plausible to argue that light verbs can further be divided into light verbs with more lexical contents, and light verbs with less lexical contents. According to Kuo (2003), there are two groups of light verbs in Mandarin: the ‘make’ group containing *jinxing* and *zuo*, and the ‘give’ group containing *jiayi*, *yuyi* and *geiyu*. The former group has the semantic restriction, while the latter group does not. As for *-kah* in Taiwanese, *-kah* has the semantic restriction to the complement, so it belongs to the former group. However, *-de*, *-dao*, and *-cheng* in Mandarin do not have any semantic restriction, so they belong to the latter group. Therefore, *-kah* with more lexical contents can lexical-license the null complement, but the verb *-de*, *-dao* and *-cheng* are too light to license it, as shown by the contrast in (163) and (164).⁷

(163) Ong-e i ai-kah.

Ong-e she love-KAH

‘Ong-e, she loves so much.’



(Taiwanese)

(164)a. *Ta ke-de/-dao.

He cough-DE/to

(Mandarin)

⁷ T.-C. Tang (1990) proposes that the Mandarin *-de* can occur without an overt complement, as shown in (8) (repeated as (i) below).

(i) a. Kan ni mei-de [s' ϕ].

Look you beautiful-DE

Lit. ‘Look at you! You are so beautiful!’

b. Qiau ni shou-de [s' ϕ].

Look you talk-DE

Lit. ‘Look at you! You talk so excitedly!’

However, the *-de* in (i) is not the *-de* we discuss in the paper. The *-de* in the Mandarin *de* construction has two tones, the neutral tone and the second tone 35. On the contrary, the *-de* in (i) only has the neutral tone. Therefore, the absence of the complement in (i) is beyond the domain of this paper.

‘He coughed so much.’

b. *Ta-de gongsi fazhan-dao.

His company develop-to

‘His company has developed to that extent.’

c. *Ta pao-cheng.

He run-become

‘He ran so much and change into that/this situation.’

To conclude, the complement can be phonetically unrealized when it is properly licensed by a head, which has strong semantic features, and identified with it. In the Taiwanese *kah* construction, *-kah* has strong semantic features, which requires the complement to denote an extraordinary high tone sense, so it can license a null complement and the null object Pro can co-index with the semantic features. However, in the Mandarin *de* construction, *-de* does not have strong semantic features, and it does not specify the degree of the following complement; hence, *-de* can not take a null complement, or it will violate the licensing condition and the identification convention.

This thesis is about the syntax and semantics of the Taiwanese *kah* construction which contains the form, where the complement is overt, and the form, where the complement is not phonetically realized, and the nature of the null complement following *-kah*. Chapter 2 presents the syntactic, semantic and phonological properties of the two forms, and concludes that they share most of the properties. Firstly, *-kah* can be preceded by any type of predicate, except for an accomplishment verb. Secondly, the sentences, with or without an overt complement following *-kah*, denote an extraordinary high tone sense, and sentences without an overt complement have almost the same meaning as sentences with its overt counterpart. Hence, the two forms should be treated as the same construction. Nevertheless, there are two differences between the two forms. Firstly, *-kah* has the inchoative and ‘pure’ causative and ‘causing-with-a-manner’ causative reading when it occurs with an overt complement, while *-kah* without an overt complement can only have the inchoative reading. Secondly, the tone of *-kah* is 21q if it is followed by an overt complement; otherwise, *-kah* has the citation tone 4q. In chapter 3, I review previous analyses of the Taiwanese *kah* construction including H.-L. Lin (2003) and C.-A. Wang (2010). As for Lin (2003), I argue against the diverse approach by the problem of the scope of modification, the phrasal structure of Taiwanese, and the status of *-kah*. In terms of Wang (2010), I agree with the bi-clausal analysis, but I disagree that *-kah* is analyzed as a complementizer because of the categories of the complement, the clitic property of *-kah*, the CP coordination, and the essence of the head-initial complementizers in

Taiwanese. Chapter 4 focuses on the syntax of the Taiwanese *kah* construction and the nature of the emptiness following *-kah*. As for the structure of the construction, I propose a unified analysis of the construction based on C.-T. Huang (2006). The main verb is *-kah*, which expresses the main event, and V_1 which adjoins to *-kah* expresses the manner of the main event. The complement can be a CP, NP or proform occurring in the overt or covert form. As for the nature of the emptiness following *-kah*, I prove that it is only phonetically unrealized by the evidences of phrasal structure of adjunct, and the recoverability from the context. Further, I analyze the null complement as a Pro since (i) it should occur in a pragmatic oriented environment just like the empty anillogophor proposed by C.-S. Liu (2004), (ii) it has the arbitrary reading, and the anaphoric reading which refers to the context, (iii) it can cooccur with the overt *wh*-element, and (iv) it does not trigger the tone sandhi. In terms of the structure of the construction with a covert complement, *-kah* is the main verb which expresses the inchoative reading, and takes a CP Pro or NP Pro as its complement. V_1 is only an adjunct which specifies the manner of the main event. In Chapter 5, I provide the semantic interpretation of the extraordinary high tone sense denoted by the Taiwanese *kah* construction. In order to single out the very high degree sense from the various complements, an operator in the embedded CP or NP specifier unselectively binds the degree variable of scalar predicates or nouns, or the degree variable which is entailed by the exaggeration expression or metaphorical expression in the complement. Then, an operator with a high degree sense theta-identifies with the open *g*-position or *q*-position of V_1 (cf. Doetjes 1997), so the Taiwanese *kah* construction expresses an extraordinary high tone sense. Chapter 6 is about the theoretical consequences. One of the issues is about the licensing condition and identification convention of the null object. Pashto verbs have rich agreement with objects, and Italian verbs case-mark the null object Pro. Since Taiwanese does not have an agreement system and overt case

markers, the null complement cannot be licensed and identified through the two mechanisms above. Alternatively, the null object Pro is licensed by the verb *-kah* with lexical contents and co-indexed with the semantic features on it. The other issue is about the comparison of the Taiwanese *kah* construction and the Mandarin *de* construction. *-kah* in Taiwanese allows the complement to be phonetically unrealized but *-de* in Mandarin does not. I propose that *-kah* is a verb with lexical contents, and it has strong semantic features, which requires the complement to denote an extraordinary high tone sense, so it can license a null complement. Besides, because of the strict s-selection *-kah* imposes on the complement, *-kah* does not have c-selections with the complement. Therefore, *-kah* can take various types of complements, even a covert one. However, in the Mandarin *de* construction, *-de* is a verb with lighter lexical content, and it does not have any strong semantic feature. Hence, it does not specify the degree of the following complement, so it cannot license a null complement. In addition, without s-selections, *-de* has a strict c-selection, so it cannot take a null complement.

In this thesis, I propose a unified analysis of the Taiwanese *kah* construction, and pinpoint that the high degree sense is obligatory in the construction. More importantly, by exploring the Taiwanese *kah* construction, this thesis enriches the system of empty categories, which has been one of popular topics more than 30 years, by the categories of Pro, the licensing condition and the identification convention. As for the categories, the null object can be a CP Pro and a NP Pro. In terms of the licensing condition and the identification convention, in addition to the morphological and syntactic mechanism in Pashto and Italian (cf. Huang 1984; Rizzi 1986), I provide a semantic mechanism to license and identify the null object Pro, which can offer an explanation to the null object Pro in the languages without the rich agreement system and overt case marker. Moreover, following C.-S. Liu (2004), this thesis

provides another instance of the null complement Pro in the Taiwanese *kah* construction to support that the null object in Chinese can be an empty pronominal element in a pragmatic oriented environment.



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