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Saisunee Visonyanggoon

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Ph.D. degree in Linguistics



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PARALLELISM BETWEEN NOUN PHRASES AND CLAUSES IN THAI

By

Saisunee Visonyanggoon

A Dissertation

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

DOCTOR OF PHILOSOPHY

Department of Linguistics

2000

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ABSTRACT

PARALLELISM BETWEEN NOUN PHRASES AND CLAUSES IN THAI

By

Saisunee Visonyanggoon

This dissertation addresses some parallel characteristics of the syntax of noun phrases and clauses in Thai within the Principles and Parameters framework.

The research shows that Thai noun phrases and clauses are uniformly head-initial. Although the noun always appears before a classifier, which has been assumed in the literature to be equivalent to a D, the crucial evidence supporting the head-initial analysis of noun phrases comes from instances where nouns are modified by 'referential' adjectives or demonstratives, which the head-final approach fails to account for. Therefore, the apparent head-final structure of the noun phrase results from NP movement across the classifier. Similarly, although some modals and aspect markers occur post-verbally, the post-verbal modals are shown to be heads generated above VP with VP movement across them while the post-verbal aspect markers are analyzed as phrases right-adjoined to some AspPs above VP. The apparent mixed headedness of the clause is thus explainable. The analyses of clauses make use of the two tests: predicator and negation. The predicator test indicates the scope positions of auxiliaries relative to one another as well as their syntactic status as heads or phrases. The negator *may*₃, analyzed as a NegP generated in the specifier of a verbal projection, helps confirm the syntactic status of the auxiliaries under examination.

To my parents and my brother

I would like to express
my thanks to my advisor, Dr. and Cristina Schmitt for
guiding me through this journey. I am also grateful to Alan Munn, the major advisor,
for providing me with valuable
expertise, patience, encouragement,
and for not having been accompanied.

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completion of this work. My
various parts of the world and
while I was writing my dissertation,
my family, sends
support, which kept me going.
Also, I am lucky to have S.
The data whenever my interest.

Last but not least, I
thank MSU, who have ingrained
grateful to Alan Beretta for
considerably both from my
being a student in the Ling
my life.

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I can't not mention those who, in one way or another, have contributed to the completion of this work. My family, my boyfriend, my friends at MSU as well as in various parts of the world and my former students never failed to give me mental support while I was writing my dissertation. I am thankful to my younger sister, Ead, who, on behalf of my family, sends me daily e-mail messages to show their love, concern and support, which kept me continuing this work. I will never forget the generosity of John Halliwell who helped me with my TA work while I was busy finishing my dissertation. Also, I am lucky to have Sudawan Ariyasap here who is willing to check some of the Thai data whenever my intuition seems to go astray.

Last but not least, I am indebted to all the faculty in the Department of Linguistics at MSU, who have ingrained in me knowledge of various areas of linguistics. I am grateful to Alan Beretta for giving me the opportunity to be his TA. I have learned considerably both from my studies and from being a TA. All in all, I have to say that being a student in the Linguistics program at MSU is one of the memorable experiences in my life.

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AP
AspP
AuxP
B
BP
Cl
C-L
COMP
DEF
DemP
EXP
FocP
IMPF
ModP
NEG
PP
PRF
PROG
PRT
QP
RECP
TOP
TP

LIST OF ABBREVIATIONS

AP	Adjectival Phrase
AspP	Aspect Phrase
AuxP	Auxiliary Phrase
B	Boolean
BP	Boolean Phrase
Cl	Classifier
C-L	Classifier-like morpheme
COMP	Complementizer
DEF	Definite
DemP	Demonstrative Phrase
EXP	Experiential perfect
FocP	Focus Phrase
IMPF	Imperfective
ModP	Modal Phrase
NEG	Negative marker
PP	Preposition Phrase
PRF	Perfect/Perfective
PROG	Progressive
PRT	Particle
QP	Question particle
RECP	Reciprocal
TOP	Topic particle
TP	Tense Phrase

1 Consonants

	Bilabial	
Stops		
Vd.	b	
Vl. Unasp	p	
Vl. Asp.	ph	
Fricative		
Lateral		
Trill		
Nasal	m	
Glide	w	

2 Vowels

	Front
High	i
Mid	e
Low	æ

See diphthongs: /ia, iia, /

3 Tones

Tones are represented as

1	2
mid	low

DATA TRANSCRIPTION GUIDE

1 Consonants

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Stops						
Vd.	b		d			
VI. Unasp	p		t	c	k	ʔ
VI. Asp.	ph		th	ch	kh	
Fricative		f	s			h
Lateral			l			
Trill			r			
Nasal	m		n		ŋ	
Glide	w			y		

2 Vowels

	Front	Central	Back
High	i ii	ɨ ɨɨ	u uu
Mid	e ee	ə əə	o oo
Low	æ ææ	a aa	ɔ ɔɔ

Six diphthongs: /ia, iia, ia, ɨa, ua, uua/

3 Tones

Tones are represented as subscripted numbers after each syllable.

1	2	3	4	5
mid	low	falling	high	rising

1.1 Purpose and scope

As its title suggests,

phrases and clauses in Thai

is an SVO language containing

as follows:

(1) khaw, rak, dek
he love child
'He loves children'

(2) bon, ton, -may,
on tree
'on the tree'

(3) thii, khaw, rak
that he love
'that he loves children'

(4) baan, khoon,
house of
'his house'

Despite the prevalence

of structures in Thai which

are, while lacking

in determiners.

ought to be functional

CHAPTER 1

INTRODUCTION

1.1 Purpose and scope

As its title suggests, this dissertation explores syntactic similarities between noun phrases and clauses in Thai. Thai is always claimed to be strongly head-initial because it is an SVO language containing structures whose heads are always to the left as illustrated in (1)-(4) below.

- | | |
|---|-----------|
| (1) khaw ₃ rak ₄ dek ₂
he love child
'He loves children.' | VP = V NP |
| (2) bon ₁ ton ₃ -may ₄
on tree
'on the tree' | PP = P NP |
| (3) thii ₃ khaw ₃ rak ₄ dek ₂
that he love child
'that he loves children' | CP = C IP |
| (4) baan ₄ khooŋ ₅ khaw ₃
house of he
'his house' | NP = N PP |

Despite the prevalence of head-initial structures, however, there are some structures in Thai which appear at first sight to be head-final. Thai, like many East Asian languages, while lacking determiners, uses classifiers instead. Although classifiers are not identical to determiners, assuming the DP hypothesis (Abney 1987), they are generally thought to be functional heads which select NPs as complements. Classifiers in Thai,

however, appear to the right

whether Thai is head-final

(5) baan, laŋ, nii,
house Cl this
'this house'

(6) baan, saam, laŋ,
house three Cl
'those three houses'

In addition to the app

auxiliary-like elements also

the auxiliaries to the left of

linguistically. Examples (7)

appear pre-verbally while ot

(7) a. khaw, ton, ma
he must come
'He must come.'
b. khaw, maa,
he come
'He can come.'

(8) a. khaw, kam, laŋ
he PROG
'He is coming.'
b. khaw, maa,
he come
'He has already'

The post-verbal mod

operate as either non-auxil

Warotamasikkhadit 19

however, appear to the right of the noun as shown in (5) and (6). This raises the question of whether Thai is head-final in the DP functional structure.

(5) baan₃ lan₃ nii₄
house Cl this
'this house'

(6) baan₃ saam₃ lan₃ nan₄
house three Cl that
'those three houses'

In addition to the apparent head-final functional heads in the DP, some Thai auxiliary-like elements also appear to the right of the VP although Thai is predicted to have auxiliaries to the left of the main verb as is found in SVO languages cross-linguistically. Examples (7) and (8) show that some modals and aspect markers in Thai appear pre-verbally while others appear post-verbally.

(7) a. khaw₃ tɔŋ₃ maa₁
he must come
'He must come.'
b. khaw₃ maa₁ day₃
he come can
'He can come.'

(8) a. khaw₃ kam₁ lan₁ maa₁
he PROG come
'He is coming.'
b. khaw₃ maa₁ lææw₄
he come PRF
'He has already come.'

The post-verbal modals and aspect markers have been treated in the previous literature as either non-auxiliaries or verbs in series (Sreechareonsatit 1984, Thepkanjana 1986, Warotamasikkhadit 1996) or post-verbal auxiliaries (Panupong 1970, Sookgasem

1999). This seems to indicate

as non-auxiliaries or verbs-

suggested to be heads gener-

Thakijana 1986). Under t

Both initially and finally,

a post-verbal auxiliaries in

posed to the head of VP a

(9)

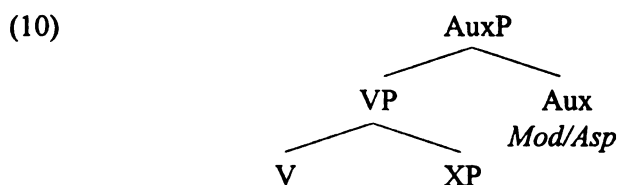
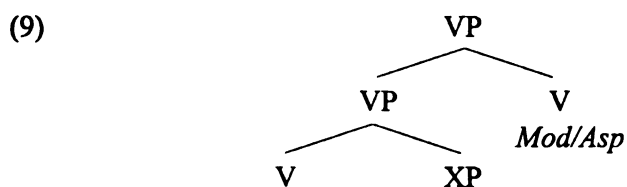
(10)

Although the structure
modals and aspect markers r
but being mixed-headed. A
languages with a uniform he
the constructions in Thai th
and final.

In what follows, I will

We claim that post-verbal m
is that serial verb const:

1990).¹ This seems to indicate that Thai clausal structure is mixed-headed. Treating them as non-auxiliaries or verbs-in-series, the post-verbal modals and aspect markers are suggested to be heads generated as VP adjuncts as in (9) (Sreechareonsatit 1984, Thepkanjana 1986). Under this analysis, Thai VP is assumed to be able to have the head V both initially and finally. Similarly, treating the post-verbal modals and aspect markers as post-verbal auxiliaries implies that they are heads of AuxPs generated to the right as opposed to the head of VP as illustrated in (10).



Although the structure in (10) can take care of the fixed positions of post-verbal modals and aspect markers relative to one another, it is not different from the structure in (9) in being mixed-headed. Although the possibility of mixed-headed languages exists, languages with a uniform head direction are much more common. The apparent head-final constructions in Thai therefore require careful scrutiny to see if they are, in fact, head-final.

In what follows, I will explore the possibility that Thai is a well-behaved language

¹ The claim that post-verbal modals and aspect markers in Thai are verbs-in-series from the fact that serial verb constructions are abundant in the language.

with noun phrases and clau

investigate whether Thai no

language despite the nouns

comparing the head-initial a

which analysis can better ac

whether the post-verbal mo

post-verbally.

If there is evidence t

clause in Thai, then the wor

I will argue that this is inde

elements. In fact, some elem

others will be argued to be

My dissertation thus

whether there is any paralle

1. Are Thai noun ph

language?

2. Are there instance

Thai?

3. Are noun phrases a

1.2 Theoretical framework

I adopt for this research

Chomsky (1986a, 1986b) as

with noun phrases and clauses being parallel in major respects. First of all, I will investigate whether Thai noun phrases are head-initial like all the other structures in the language despite the nouns always appearing initially in the phrases. I will do this by comparing the head-initial and the head-final analyses of Thai noun phrases to determine which analysis can better account for the relevant range of facts. Secondly, I will examine whether the post-verbal modals and aspect markers are base-generated pre-verbally or post-verbally.

If there is evidence that supports a head-initial analysis for either the DP or the clause in Thai, then the word order must be derived by NP or VP movement respectively. I will argue that this is indeed the case for some, but not all, post-nominal and post-verbal elements. In fact, some elements will be argued to be right-adjuncts to VP or NP while others will be argued to be heads around which the NP or VP moves.

My dissertation thus aims to answer the following research questions to discover whether there is any parallelism between noun phrases and clauses in Thai.

1. Are Thai noun phrases and clauses head-initial like other phrases in the language?
2. Are there instances where NP and VP movements operate in the syntax of Thai?
3. Are noun phrases and clauses alike in allowing right-adjuncts?

1.2 Theoretical framework

I adopt for this research the Principles and Parameters framework developed in Chomsky (1986a, 1986b) as well as some aspects of the Minimalist Program (Chomsky

1993, 1995) which is the c

introduce each theoretical

13 Organization

The dissertation is

phases while the second p

Chapter 2 discusse

Chinese. I will adopt some

show that their analysis is

evidence for DPs in Thai.

fractionality of Thai noun

compared throughout.

Chapter 3 consider

Saetananya 1989, Hudak

native verbs, but I will sho

and modifiers in Thai. na

terminal modifiers and sho

distinct positions.

Chapter 4 concerns

noun modifiers elaborat

head-initial, not head-final

re-analyzed in terms of N

1993, 1995) which is the continuation of the former approach to grammar. I will introduce each theoretical aspect I make use of in the section where it is adopted.

1.3 Organization

The dissertation is divided into two main parts. The first part deals with noun phrases while the second part deals with clauses. The dissertation is organized as follows.

Chapter 2 discusses Thai bare nouns. As Thai noun phrases are very similar to Chinese, I will adopt some proposals made by Cheng and Sybesma (1999), but I will show that their analysis is not sufficient to account for the Thai cases, and that there is evidence for DPs in Thai. To examine my research question regarding the head-directionality of Thai noun phrases, the head-initial and the head-final analyses will be compared throughout.

Chapter 3 considers adjectives in Thai. It is often claimed (Bandhumedha 1983, Savetamalya 1989, Hudak 1990, Warotamasikkhadit 1996) that Thai adjectives are stative verbs, but I will show that this is not the case. I will also discuss three types of noun modifiers in Thai, namely regular attributive adjectives, referential adjectives and nominal modifiers and show that the noun modifiers in Thai can be generated in two distinct positions.

Chapter 4 concerns the analyses of Thai noun phrases modified by the three types of noun modifiers elaborated in Chapter 3. I will show that noun phrases in Thai are head-initial, not head-final. I will argue that the word order facts in the noun phrase are best analyzed in terms of NP movement to the left of the classifier or determiner.

Chapter 5 presents a

system. Although Thai modals

for the post-verbal modals

in the assumption that cross

language. Therefore, as in

the syntax of Thai.

Chapter 6 deals with

either precede or follow V

markers are not generated

characteristics. I will suggest

Chapter 7 concludes

phrases and clauses in Thai

Chapter 5 presents the clausal structure of Thai with an introduction of the modal system. Although Thai modals can occur either pre-verbally or post-verbally, I will argue that the post-verbal modals in Thai are base-generated pre-verbally, thus giving support to the assumption that cross-linguistically auxiliaries precede main verbs in any SVO language. Therefore, as in the analysis of the DP, VP movement is shown to operate in the syntax of Thai.

Chapter 6 deals with Thai aspect markers. Although aspect markers in Thai can either precede or follow VP, like Thai modals, I will show that the post-verbal aspect markers are not generated pre-verbally like post-verbal modals due to their different characteristics. I will suggest that they are adjoined to functional projections above VP.

Chapter 7 concludes the dissertation by presenting the parallelism between noun phrases and clauses in Thai in the respects under investigation.

I will provide in the
proper names and pronouns
the indefinite one is NumP
analyzed as head-initial.

2.1 Introduction

Assuming the DP hypothesis
different from the other structures
Thai is an SVO language (i.e.
the noun as the first element

- (1) a. khaw₃ kin₁ pla₁
he eat fish
'He ate fish.'
b. tay₃ to?₃
under table
'under the table'

- (2) a. plaa₁ nii₄
fish this
'this fish'
b. to?₃ nan₄
table that
'that table'

As Thai and Chinese
have very similarly to Chinese

CHAPTER 2

THAI BARE NOUNS

I will provide in this chapter the analyses of Thai bare nouns: common nouns, proper names and pronouns. I will argue that the definite bare noun in Thai is DP whereas the indefinite one is NumP. Moreover, I will show that bare nouns in Thai are better analyzed as head-initial.

2.1 Introduction

Assuming the DP hypothesis (Abney 1987), Thai noun phrases seem to be different from the other structures in the language in head-directionality. That is, although Thai is an SVO language (1a) with prepositions (1b), the noun phrase in Thai always has the noun as the first element and the demonstrative last as in (2).

- (1) a. khaw₃ kin₁ plaa₁
 he eat fish
 ‘He ate fish.’
 b. tay₃ to?₃
 under table
 ‘under the table’

- (2) a. plaa₁ nii₄
 fish this
 ‘this fish’
 b. to?₃ nan₄
 table that
 ‘that table’

As Thai and Chinese are numeral-classifier languages and Thai noun phrases behave very similarly to Chinese noun phrases, the study by Cheng and Sybesma (1999)

Chinese bare nouns with

noun in Chinese is CIP wh

sufficient to account for the

thus propose that the Thai

This chapter is outli

classifiers in Thai. In section

1999) analyses of DPs. Se

bare nouns. The comparis

in section 5. The chapter i

2.2 Classifiers

Thai is an isolating

effect for number, neither

by Tsou (1976:1216) th

they are in complementa

a article system, a noun

noun without any conte

potential readings as i

(3) plaa, yuu, na

fish stay in

'(A The) fish

The noun phrase

ending with the noun b

regular or plural.

on Chinese bare nouns will be discussed. Although they suggest that the definite bare noun in Chinese is ClP whereas the indefinite one is NumP, I will show that ClP is not sufficient to account for the definite bare noun in Thai, particularly for pronouns. I will thus propose that the Thai definite bare noun is a DP.

This chapter is outlined as follows. I briefly discuss in section 2 the uses of classifiers in Thai. In section 3, I present Longobardi's (1994) and Cheng and Sybesma's (1999) analyses of DPs. Section 4 deals with the distribution and interpretation of Thai bare nouns. The comparison of the head-initial and the head-final analyses will be given in section 5. The chapter is concluded in section 6.

2.2 Classifiers

Thai is an isolating, non-inflecting language, and nouns in the language do not inflect for number, neither singular nor plural. This conforms with the suggestion made by T'sou (1976:1216) that a language may have either classifiers or plural morphemes or they are in complementary distribution if both exist in a language. Also, since Thai lacks an article system, a noun can be interpreted as definite or indefinite. Furthermore, a Thai noun without any context can be ambiguous between mass and count, and generic and existential readings as illustrated in (3).

- (3) *plaa₁ yuu₂ nay₁ nam₄*
fish stay in water
'(A/The) fish is/are in the water.'

The noun phrase *plaa*, 'fish' above can have either a generic or an existential reading with the noun being interpretable as mass or count, definite or indefinite, and singular or plural.

As the noun in such
denotation, not objects (H.
to 'concretize' the noun via
differentialization and relation
functions of classifiers which
only in few languages e.g. H.

In terms of individual
classifier languages is 'trans-
number. A classifier is thus
quantified. In short, "classi-
This assumption is not diffi-
[arg.-pred] language or a
these are mass. Consequently
generals cannot directly q-
regularize the nouns as ev

- (4) a. *plaa, saam,
fish three
b. *saam, plaa,
three fish
c. plaa, saam,
fish three
'three fish'

Regarding classifica-
to 'head nouns'. They do not

This characteristic applies
classified as a 'classifier which

As the noun in such a language as Thai is assumed to carry the conceptual denotation, not objects (Hundius and Kölver 1983, Bisang 1993), a classifier then serves to ‘concretize’ the noun via different operations - individualization, classification, referentialization and relationalization (Bisang 1993). The first two are the primary functions of classifiers while the third is the secondary one. The last operation occurs only in few languages e.g. Hmong so it is not mentioned here.

In terms of individualization, Bisang (1993) states that a noun in numeral classifier languages is ‘transnumeral’. Therefore, it cannot immediately combine with a number. A classifier is thus needed to individuate the head N before the latter can be quantified. In short, “classifiers make nouns countable” (Hundius and Kölver 1983:33). This assumption is not different from Chierchia’s (1998) proposal that in a NP [+arg, -pred] language or a language with a classifier system, all nouns refer to kinds and thus are mass. Consequently, bare nouns are allowed unconditionally as arguments and numerals cannot directly quantify head nouns. Classifiers are required to individuate and singularize the nouns as evidenced in (4) below.

- (4) a. *plaa₁ saam,
 fish three
 b. *saam₅ plaa₁
 three fish
 c. plaa₁ saam₅ tua₁
 fish three Cl
 ‘three fish’

Regarding classification, classifiers express the intrinsic properties or features of the head nouns¹. They do not add any information to the noun. They are used to

¹ This characteristic applies to only the type of classifiers called ‘unit classifier’ which is defined as a ‘classifier which has a special relationship with one or more concrete noun.’

categorize or denote some

etc. As a result, the nouns

For instance, the classifier

a necklace, chain, thread,

ring-shaped objects e.g. ring

leads to ungrammaticality a

(5) a. *soo?*, *saam*,

chain three

'three chains'

b. **soo?*, *saam*,

chain three

(6) a. *wææn*, *saam*,

ring three

'three rings'

b. **wææn*, *saam*,

ring three

Realizing this kind

linguists consider the

example, Tang (1990) has

for the classifier phrase (C

Ness 1964:105). The other
exactly a metric classifier
classifier do not have strict

categorize or denote some features of the nouns such as size, shape, dimension, function, etc. As a result, the nouns sharing the same features generally take the same classifier. For instance, the classifier *sen*₃ is used with nouns referring to long flexible objects such as necklace, chain, thread, rope, etc. and *won*₁ is used with nouns denoting round, hollow, ring-shaped objects e.g. ring, bracelet, etc. The misuse or wrong selection of classifiers leads to ungrammaticality as demonstrated in (5) and (6).

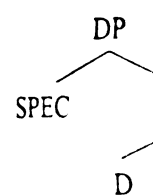
- (5) a. *soo*?₃ *saam*₅ *sen*₃
 chain three Cl
 'three chains'
 b. **soo*?₃ *saam*₅ *won*₁
 chain three Cl

- (6) a. *wææn*₅ *saam*₅ *won*₁
 ring three Cl
 'three rings'
 b. **wææn*₅ *saam*₅ *sen*₃
 ring three Cl

Realizing this kind of relationship between nouns and classifiers, many syntacticians consider them as having Spec-Head or Head-Complement relationship. For example, Tang (1990) has NP as the complement of the classifier (K), and Gao (1994) has the classifier phrase (CIP) in the specifier of NP as illustrated below.

(Noss 1964:105). The other three types of classifiers as categorized by Noss (1964); namely, a metric classifier or a measure word, a general classifier and an imitative classifier do not have strict relationship with the nouns.

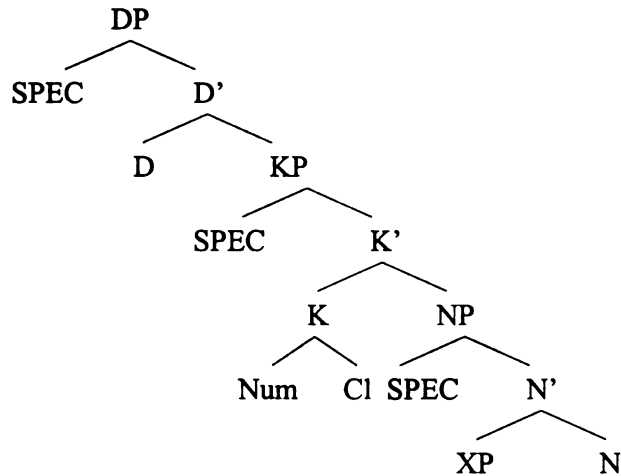
(7) Tang (1990)



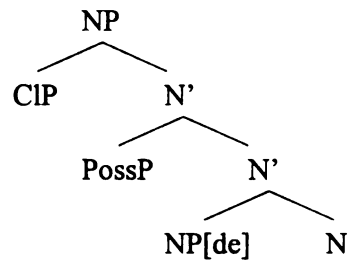
(8) Gao (1994)

Another important
feature definiteness of the
(1990). This is evidenced by
(1991) and that the occurrence
interpretation (Cheng and
function, but those in other
presence of a classifier in V
Chinese implies indefinite
(1991).

(7) Tang (1990)



(8) Gao (1994)



Another important function of classifiers is to identify a unique referent or to denote definiteness of the head noun (Hundius and Kölver 1983, Bisang 1993, Pacioni 1996). This is evidenced by the facts that classifiers never appear in proverbs (Goral 1987) and that the occurrence of the classifier usually suppresses the generic interpretation (Cheng and Sybesma 1999). Not only do Thai classifiers display this function, but those in other languages such as Vietnamese and Burmese do too. The presence of a classifier in Vietnamese indicates definite reference while its absence in Burmese implies indefinite one as exemplified in (9) and (10) respectively (Goral 1987: 14, 23).

(9) a. meo so ch-
 cat fear me
 'Cats are afraid'
 b. con meo so
 Cl cat fear
 'The cat is afraid'

(10) a. thaja: lou-j-
 sugar need-3
 'Do you want sugar?'
 b. hin-jou thaj-
 soup drink-3
 'Do you want soup?'

As will be discussed

essential. However, the pres

For instance, a quantified no

(11) a. mii, rom,
 have umbrella
 'There are three umbrellas'
 b. *duu, rom,
 look umbrella
 'Look at the three umbrellas'

In general, a quantified

accompanied by a demonstrative

also display the definite

(12) duu, rom,
 look umbrella
 'Look at these three umbrellas'

(13) duu, rom,
 look umbrella
 'Look at the three umbrellas'

Summing up, nouns

marked in their being argu-

- (9) a. meo so chuot (Vietnamese)
 cat fear mouse
 'Cats are afraid of mice.'
 b. con meo so chuot
 Cl cat fear mouse
 'The cat is afraid of mice.'

- (10) a. thaja: lou-jin-dhala: (Burmese)
 sugar need-want-actual mode-question marker
 'Do you want sugar?'
 b. hin:jou thau'hcin-dhala:
 soup drink-want-actual mode-question marker
 'Do you want some soup?'

As will be discussed, the 'referentialization' function of classifiers in Thai is very essential. However, the presence of a classifier does not guarantee the definite reading. For instance, a quantified noun phrase with a classifier is always indefinite.

- (11) a. mii₁ rom₃ saam₅ khan₁ yuu₂ bon₁ to?₄
 have umbrella three Cl stay on table
 'There are three umbrellas on the table.'
 b. *duu₁ rom₃ saam₅ khan₁ si₂ suay₅ can₁
 look umbrella three Cl PRT pretty very
 'Look at the three umbrellas. They are very pretty.'

In general, a quantified noun phrase exhibits the definite interpretation when it is accompanied by a demonstrative as in (12). A quantified noun phrase in Thai, however, can also display the definite reading when an adjective follows the classifier as in (13).

- (12) duu₁ rom₃ saam₅ khan₁ nii₄ si₂ suay₅ can₁
 look umbrella three Cl this PRT pretty very
 'Look at these three umbrellas. They are very pretty.'
 (13) duu₁ rom₃ saam₅ khan₁ khiaw₅ si₂ suay₅ can₁
 look umbrella three Cl green PRT pretty very
 'Look at the three green umbrellas. They are very pretty.'

Summing up, nouns in a classifier language like Thai are kinds which are not restricted in their being arguments. However, classifiers are needed to individualize them

when they are quantified.

thus giving them a definite

2.1 Previous studies

The two relevant studies

Spoerma's (1999). The former

languages whereas the latter

made in the same line as C

by Longobardi. Therefore,

2.1.1 Longobardi (1994)

Longobardi tries to

restricted (they can only a

receive an existential inter

He accounts for the

existential interpretation

in that (14a) below is un

'water' occurs in a non-le

which lacks a lexical elem

(14) a. *Acqua viene

water comes

b. Viene giù

comes down

c. Ho preso acqua

I took wa

when they are quantified, and in some instances to identify as well as referentialize them, thus giving them a definite interpretation.

2.3 Previous studies

The two relevant studies on bare nouns are Longobardi's (1994) and Cheng and Sybesma's (1999). The former concerns noun phrases in Romance and Germanic languages whereas the latter is about Chinese bare nouns. Although my analysis will be made in the same line as Cheng and Sybesma, they develop some of the ideas proposed by Longobardi. Therefore, both studies are to be introduced.

2.3.1 Longobardi (1994)

Longobardi tries to account for the fact that bare nouns in Italian are syntactically restricted (they can only appear in object position) and semantically restricted (they only receive an existential interpretation).

He accounts for these facts in the following way. DPs with empty heads receive an existential interpretation by default and empty heads must be lexically governed. The fact that (14a) below is ungrammatical, therefore, is because the noun phrase *acqua* 'water' occurs in a non-lexically governed position or in this case a pre-verbal position which lacks a lexical element that can function as the governor of the empty head D.

- (14) a. *Acqua viene giù dalle colline. (Italian)
 water comes down from the hills.
 b. Viene giù acqua dalle colline.
 comes down water from the hills.
 c. Ho preso acqua dalla sorgente.
 I took water from the spring.

Since proper name

provides the following Ital

D-movement as substitution

(15) a. Il mio Gi

The my Gi

b. *Mio Gianni

My Gianni

c. Gianni mio

Gianni my

The grammaticality

names are filled - by the de

raising past the genitive

represented in (16) and (17)

contains an empty D.

(16)

D

il

th

(17)

D

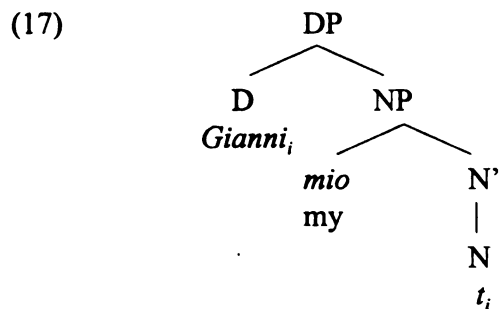
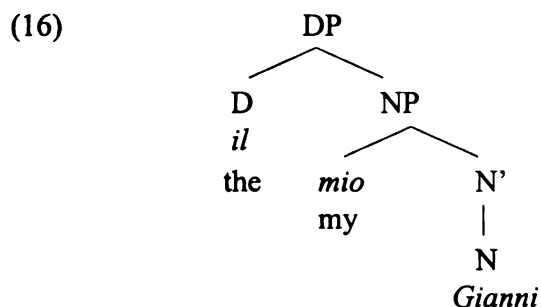
Gian

Since only proper na
son 1977), generic DPs

Since proper names are definite, the empty D is illegitimate. Longobardi then provides the following Italian examples to show that there occur instances of overt N-to-D movement as substitution in Italian.

- (15) a. *Il mio Gianni ha finalmente telefonato.* (Italian)
 The my Gianni finally called up.
 b. **Mio Gianni ha finalmente telefonato.*
 My Gianni finally called up.
 c. *Gianni mio ha finalmente telefonato.*
 Gianni my finally called up.

The grammaticality of (15a,c) is due to the fact that the D positions of both proper names are filled - by the definite article *il* in (15a) and by the noun *Gianni* in (15c) via N-to-D raising past the genitive which is assumed to be in the specifier position as represented in (16) and (17) respectively. Sentence (15b) is unacceptable because it contains an empty D.



Since only proper names can raise to D and generic DPs are names and kinds (Carlson 1977), generic DPs will require an overt definite article as in (18).

- (18) a. *Castori co
beavers b
b. I castori
the beavers

English bare plural

interpretation and distribu

- (19) a. Beavers bu
b. I found I lo

Longobardi sugg

Two facts follow from th

allowed and the distribut

Evidence that En

modified proper names

nominal as in (20).

- (20) a. Old John
b. *John old

3.2 Cheng and Sybes

Developing Lon

lead as well as the N-to

compare noun phrases i

together with interpreta

3.2.1 Bare common n

Cheng and Sybe

those with definite inte

having indefinite inte

- (18) a. *Castori costruiscono dighe (Italian)
 beavers build dams
 b. I castori di questo tipo non costruiscono mai dighe.
 the beavers of this sort never build dams

English bare plurals, in contrast to Romance bare plurals, are unrestricted in their interpretation and distribution as demonstrated in (19) below.

- (19) a. Beavers build dams.
 b. I found/I love good wine and fresh oranges.

Longobardi suggests that in languages like English, N-to-D raising occurs at LF. Two facts follow from this: both generic and existential readings of bare plurals will be allowed and the distribution of bare plurals will be syntactically unrestricted.

Evidence that English lacks overt N-to-D raising comes from the fact that modified proper names do not require a determiner and the adjective appears pre-nominally as in (20).

- (20) a. Old John came in.
 b. *John old came in.

2.3.2 Cheng and Sybesma (1999)

Developing Longobardi's ideas of the lexical government restriction of an empty head as well as the N-to-D movement for the definite interpretation, Cheng and Sybesma compare noun phrases in Mandarin and Cantonese, and account for their distribution together with interpretation in syntactic aspects as follows.

2.3.2.1 Bare common nouns

Cheng and Sybesma propose that bare nouns in Chinese are not simply NPs. Those with definite interpretations are Classifier Phrases (CIPs hereafter) while those receiving indefinite interpretations are Numeral Phrases (NumPs hereafter). They

compare the distribution and interpretations of bare nouns in Mandarin and Cantonese. Their finding regarding the differences between the two in terms of interpretations is shown in (21) (1999:528).

(21)	Mandarin		Cantonese	
	<u>Indefinite</u>	<u>Definite</u>	<u>Indefinite</u>	<u>Definite</u>
Bare noun	+	+	+	-
Cl + N	+	-	+	+
Numeral + Cl + N	+	-	+	-

Unlike Mandarin (22a), Cantonese cannot use bare nouns to express definiteness (22b).² The [Cl+N] construction must be used (22c).

- (22) a. gou yao guo malu
dog want cross road
‘The dog wants to cross the road.’

(Mandarin)
- b. *gao soeng gwo maalou
dog want cross road
‘The dog wants to cross the road.’

(Cantonese)
- c. zek gau gamjat dakbit tengwaa
Cl dog today special obedient
‘The dog is specially obedient today.’

Similar to D (Longobardi 1994), a classifier is claimed to have the deictic function of individualization and singularization (Bisang 1993, Croft 1994), which enables it to identify or pick out a single individual from what is described by an NP. The

² However, both Mandarin and Cantonese can use bare nouns to express generic readings as shown in (i) and (ii) respectively.

- (i) wo xihuan gou
I like dog
‘I like dogs.’

(Mandarin)
- (ii) ngo zung-ji gau
I like dog
‘I like dogs’

(Cantonese)

presence of CI is thus bel

therefore, suggest that the

reading (22c) is a CIP as

(23)

Bare nouns with

However, the two langua

Cantonese bare nouns ca

option i.e. the CI-insertio

and, can denote definite

The CI heads in Cantone

Consequently, unlike Ita

Mandarin are not restrict

subject and object positio

The quantified no

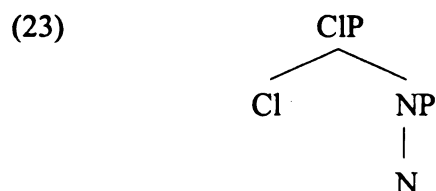
and can receive only an

about indefiniteness. It un

as Sybesma propose tha

GeneralPs as shown belo

presence of Cl is thus believed to yield definiteness in Cantonese. Cheng and Sybesma, therefore, suggest that the [Cl+N] construction in Cantonese which expresses a definite reading (22c) is a ClP as shown in (23).



Bare nouns with definite readings in Mandarin are also claimed to be ClPs.

However, the two languages use different operations to display definiteness. Since Cantonese bare nouns cannot carry a definite interpretation, the language uses the default option i.e. the Cl-insertion (= [Cl+N] construction). Mandarin bare nouns, on the other hand, can denote definiteness so the language makes use of the N-to-Cl movement at LF. The Cl heads in Cantonese and Mandarin are thus filled overtly and covertly respectively. Consequently, unlike Italian bare plurals, bare definite noun phrases in Cantonese and Mandarin are not restricted to only lexically-governed positions; they can occur both in subject and object positions.

The quantified noun phrase or the ‘numeral + Cl + N’ construction, on the other hand, can receive only an indefinite reading. Therefore, a numeral is assumed to bring about indefiniteness. It undoes the definiteness expressed by ClP. Accordingly, Cheng and Sybesma propose that indefinite noun phrases (N, [Cl+N], and [Num + Cl + N]) are NumeralPs as shown below:

A bare noun

empty Numeral head

only an empty Numeral

only as indefinite is

(528).

(25) The ind

of a Nu

Due to the en

cannot occur in the p

(26) a. gou y

dog w

'The c

NOT:

b. zek g

Cl d

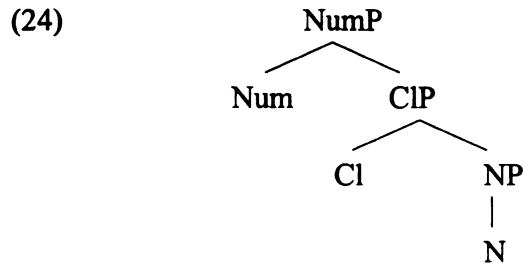
'The c

NOT:

In short, follo

argument only if its l

arguments only if



A bare noun with an indefinite reading thus contains an empty Cl head and an empty Numeral head. A [Cl+N] phrase with an indefinite reading, on the contrary, has only an empty Numeral head. The fact that Mandarin [Cl+N] phrases can be interpreted only as indefinite is accounted for by the language specific restriction stated as follows (p.528).

(25) The indefinite interpretation of nominals in Chinese is linked to the presence of a NumeralP (the head of which may be overt or nonovert).

Due to the empty Numeral head, indefinite bare nouns (N and [Cl+N]) in Chinese cannot occur in the preverbal position as illustrated below.

- (26) a. gou yao guo malu (Mandarin)
 dog want cross road
 'The dog wants to cross the road.'
 NOT: A dog wants to cross the road.
- b. zek gau zung-ji sek juk (Cantonese)
 Cl dog like eat meat
 'The dog likes to eat meat.'
 NOT: Dogs like to eat meat.

In short, following Longobardi's (1994) claim that a nominal expression can be an argument only if its D position is filled, definite and indefinite bare nouns in Chinese can be arguments only if Cl and Numeral are filled respectively.

13.2.2 Proper Names

Since proper names

as in (27), they are believed

base-generated in N, which

languages.

(27) a. guojing shi

Guojing shi

'Guojing shi

b. nei-ge hu

that-CL H

'That Hufu

An account of the

as Longobardi who p

languages. Cheng and Sy

by a moved N, the noun

in distribution.

Similar to German

operates at LF, the N-to-

where a proper name is p

(28) wo xihuan x

I like sr

'I like little

13.2.3 Pronouns

Cheng and Sybes

the N moves to Cl to re

function. Their assump

2.3.2.2 Proper Names

Since proper names in Chinese can take classifiers, numbers, and demonstratives as in (27), they are believed to be structurally like other common nouns. That is, they are base-generated in N, which is consistent with the claim for proper nouns in other languages.

- (27) a. guojing shuo ta kandao-le liang-ge hufei (Mandarin)
Guojing say he see-LE two-Cl Hufei
'Guojing said that he saw two Hufei's.'
b. nei-ge hufei zhen bu xianghua!
that-Cl Hufei truly not decent
'That Hufei is really unreasonable!'

An account of the definite interpretation of a proper name is given in the same line as Longobardi who proposes the N-to-D movement for the Romance and Germanic languages. Cheng and Sybesma, therefore, propose the N-to-Cl raising. When Cl is filled by a moved N, the noun phrase is definite in terms of interpretation and free with respect to distribution.

Similar to Germanic languages such as English in which the N-to-D raising operates at LF, the N-to-Cl movement in Chinese is covert as seen in the example below where a proper name is preceded by an adjectival modifier.

- (28) wo xihuan xiao Hufei
I like small Hufei
'I like little Hufei.'

2.3.2.3 Pronouns

Cheng and Sybesma assume that pronouns in Chinese are base-generated in N and then N moves to Cl to receive a definite interpretation and to be free of the distributional restriction. Their assumption is drawn from the fact that Chinese pronouns behave

similarly to proper names

numeral and or a demon

(29) cong nei-ge
from that-C
'From that n

Their analysis of

by many linguists that p

among others). Since th

plays the same role as D

generated in D. Howeve

to-occur.

Since Thai NPs

the same questions can

indefinite NPs and do p

2.4 Distribution and in

This section dea

bare nouns in Thai: com

them are restricted to le

interpretations to those i

2.4.1 Common nouns

I will discuss her

as the [N-CI] const

similarly to proper names; that is, they are definite and can be used with a classifier, a numeral and/or a demonstrative as demonstrated below:

- (29) cong nei-ge jing-zi, wo keyi kandao wu-ge wo (Mandarin)
from that-Cl mirror I can see five-Cl I
'From that mirror, I can see 5 copies of myself (five I's/me's).'

Their analysis of the pronoun is obviously contrary to what is generally claimed by many linguists that pronouns are base-generated in D (Postal 1969, Longobardi 1994, among others). Since they imply that D is not needed in classifier languages because Cl plays the same role as D, it would be inconsistent for them to suggest that a pronoun is generated in D. However, a pronoun cannot be generated in Cl either because the two can co-occur.

Since Thai NPs are also bare, and Thai and Chinese are similar in many respects, the same questions can be asked about NPs in Thai: are there syntactic restrictions on indefinite NPs and do pronouns behave like nouns in Thai?

2.4 Distribution and interpretation of Thai bare nouns

This section deals with the distribution and the interpretation of the three types of bare nouns in Thai: common nouns, proper names and pronouns. I will show that none of them are restricted to lexically-governed positions although they exhibit similar interpretations to those in Chinese.

2.4.1 Common nouns

I will discuss here bare nouns with the definite and the indefinite interpretations as well as the [N+Cl] construction in Thai which displays only an indefinite reading.

24.1.1 Bare common noun

Thai bare common

They can also occur pre-

(30) a. khaw₁ pay₁

he go

'He went to

b. khaw₁ cho₁

he like

'He likes to

(31) a. maa₁ cho₁

dog like

'Dogs like

b. maa₁ no₁

dog sleep

'The dog

c. maa₁ kat₁

dog bite

'A dog b

In brief, unlike C

are noun in Thai.

24.1.2 [N-CI] construc

The [N-CI] cons

That is, it can receive or

distribution is restricted

(32) a. kho₁

give (me)

'Can you

NOT: Can

b. *bu₁ ri₁

cigarette

'A cigare

2.4.1.1 Bare common nouns

Thai bare common nouns can be interpreted as definite, indefinite and generic.

They can also occur pre-verbally and post-verbally as demonstrated below.

(30) a. khaw₅ pay₁ sii₄ naŋ₅sii₅
he go buy book
'He went to buy a book/ books/ the book/ the books.'

b. khaw₅ chɔɔp₃ maa₅
he like dog
'He likes dogs.'

(31) a. maa₅ chɔɔp₃ kin₁ niiə₄
dog like eat meat
'Dogs like to eat meat.'

b. maa₅ nɔɔn₁ yuu₂ tay₃ to?₄
dog sleep IMPF under table
'The dog is sleeping under the table.'

c. maa₅ kat₂ dek₂
dog bite child
'A dog bit a child.'

In brief, unlike Chinese, there is no restriction in the distribution of an indefinite bare noun in Thai.

2.4.1.2 [N+Cl] construction

The [N+Cl] construction in Thai behaves exactly like Mandarin, not Cantonese.

That is, it can receive only an indefinite non-specific singular interpretation (32a) and its distribution is restricted to the post-verbal position (32b).

(32) a. khɔɔ₅ bu₂rii₂ muan₁
give (me) cigarette Cl
'Can you give me a cigarette?'
NOT: Can you give me the cigarette/ cigarettes?
b. *bu₂rii₂ muan₁ tok₂ caak₂ kra₁paw₅ khaw₅
cigarette Cl fall from pocket he
'A cigarette fell from his pocket.'

It must be mentioned

generally follows verbs

(33) a. (khoo_s)

(give let n

'May I ha

'Can you

b. (khoo_s)

(give let n

'May I sn

'Can you

24.2 Proper names

Like all languages

in their distribution. An

proper name interpretation

classifier, a number and

(34) a. wo zuoti

I yeste

'Yesterda

b. khruu, n

teacher n

'Teacher

(35) a. guojing s

Guojing

'Guojing

What is interesting is

mentioned by a verb as

(i) a. khoo_s

give (me) c

'Can you g

b. khoo_s

give (me) c

'Can you g

The phenomenon is sim

let though.

It must be mentioned that this type of construction is very limited in use. It generally follows verbs expressing or implying request as demonstrated below.³

- (33) a. (khoo₃) kin₁ som₃ luuk₃
 (give/let me)eat orange Cl
 'May I have an orange?' or
 'Can you give me an orange to eat?'
 b. (khoo₃) suup₂ bu₂rii₂ muan₁
 (give/let me) smoke cigarette Cl
 'May I smoke a cigarette?' or
 'Can you give me a cigarette to smoke?'

2.4.2 Proper names

Like all languages, Thai proper names are definite in their interpretation and free in their distribution. And similar to Chinese, some common nouns can be used with a proper name interpretation as in (34), and Thai proper names can be combined with a classifier, a number and/or a demonstrative as in (35)-(36).

- (34) a. wo zuotian peng-shang-le laoshi (Mandarin)
I yesterday bump-up-LE teacher
'Yesterday, I bumped into Teacher.'
b. khruu₁ may₃ maa₁ (Thai)
teacher not come
'Teacher didn't come.'
- (35) a. guojing shuo ta kandao-le liang-ge hufei (Mandarin)
Guojing say he see-LE two-Cl Hufei
'Guojing said that he saw two Hufei's.'

³ What is interesting is that the noun and the classifier in such a construction can be intervened by a verb as in the following examples.

- (i) a. khoo₅ som₃ kin₁ luuk₃
 give (me) orange eat Cl
 ‘Can you give me an orange to eat?’
 b. khoo₅ bu₂rii₂ suup₂ muan₁
 give (me) cigarette smoke Cl
 ‘Can you give me a cigarette to smoke?’

This phenomenon is similar to Japanese (Miyakawa 1988). I will not consider it here, though.

b. lek, book;
Lek tell C
'Lek said

(36) a. nei-ge hu
that-C1 Hu
'That Hufe
b. dam, khon,
Dam C1
'That Dam

When a proper na
indefinite despite the fact
accompanied by a demon

243 Pronouns

Pronouns in Thai
main social hierarchies in
choices of pronouns used
status, familiarity, senior
pronouns can be used to
e.g. Which one to be use
to make, however, I wil
conversation in the mos

The third person singu
an impersonal pronoun
(i) khaw, waa,
he say

b. lek₄ bɔɔk₂ waa₃ khaw₅ hen₅ dam₁ sɔŋ₅ khon₁ (Thai)
 Lek tell COMP he see Dam two Cl
 'Lek said that he saw two Dam's.'

(36) a. nei-ge hufei zhen bu xianghua! (Mandarin)
 that-Cl Hufei truly not decent
 'That Hufei is really unreasonable!'

b. dam₁ khon₁ nan₄ may₃ dii₁ (Thai)
 Dam Cl that not good
 'That Dam is not good.'

When a proper name co-occurs with a numeral and a classifier, the sole reading is indefinite despite the fact that a bare proper name is generally definite. A proper name accompanied by a demonstrative is specific.

2.4.3 Pronouns

Pronouns in Thai are classified into three major groups according to the three main social hierarchies in Thailand: the Royalty, Buddhist monks and commoners. The choices of pronouns used among the commoners also depend on such factors as social status, familiarity, seniority (in rank and age), and formality. For example, the following pronouns can be used to address the second person: *than₃*, *khun₁*, *thəə₁*, *raw₁*, *kææ₁*, *miŋ₁*, etc. Which one to be used depends on the factors above. To illustrate the point I am going to make, however, I will present a small set of pronouns used by commoners in everyday conversation in the most general situation as below.⁴

⁴ The third person singular pronoun *khaw₃* can have a plurality meaning when it is used as an impersonal pronoun as in (i).

(i) khaw₃ waa₃ kan₁ waa₃ thii₃ nan₃ naaw₅ maak₃
 he say RECP COMP place there cold much

(37)

1st person

2nd person

3rd person

As shown in (37),

collective noun *phuak*, 'group'

has a different form than the

singular.

Pronouns in Thai.

their ability to co-occur with

that leads Cheng and Sybesma

to then move to CI for

(38) a. *khaw₁ hen₂*

he see

'He saw us that'

b. *chan₁ may₂*

I not

'*I don't like'

'They said that i

The phrase *raw₁ saam₂ kh*

However, the phrase with a

while that with a definite re.

(37)	<u>Singular</u>	<u>Plural</u>
1 st person	phom ₅ (male)	raw ₁
	chan ₅ (female)	phuak ₃ -raw ₁
2 nd person	khun ₁ (male, female)	phuak ₃ -khun ₁
	thəə ₁ (male, female)	phuak ₃ -thəə ₁
3 rd person	khaw ₅ (male, female)	phuak ₃ -khaw ₅
	man ₁ (=it)	phuak ₃ -man ₁

As shown in (37), plural pronouns are usually formed by the addition of a collective noun *phuak*₃ ‘group’ to the singular forms. Since the first person plural pronoun has a different form than the singular counterpart, the addition of *phuak*₃ ‘group’ is optional.

Pronouns in Thai, as in Chinese, behave very similarly to proper names regarding their ability to co-occur with a classifier, a number and/or a demonstrative as in (38). This fact leads Cheng and Sybesma to the claim that in Chinese they are also base-generated in N, and then move to CI for the definite interpretation.

- (38) a. khaw₅ hen₅ raw₁ saam₃ khon₁
 he see we three CI
 ‘He saw us three/the three of us.’⁵
- b. chan₅ may₃ chəəp₃ khaw₅ khon₁ nan₄
 I not like he CI that
 ‘*I don’t like that him.’

‘They said that it was very cold there.’

⁵ The phrase *raw₁ saam₃ khon₁* ‘we three CI’ can also be interpreted as ‘three of us’. However, the phrase with a partial interpretation is pronounced with a comma intonation while that with a definite reading is not interrupted by a pause.

However, Thai p

as in (39) and (40) respec

(39a,b) or definite (39b.

(39) a. khon, tha

people TH

'Thai peo

b. khaw, ma

he no

'He did n

(40) a. dam, kha

Dam he

'Dam do

b. khun, ti

you hit

'Why did

A number of st

Bandhumedha 1983 ar

not correct. First, an in

two elements. If the tw

proper name is focuse

emphasis. Secondly, s

(40). Another chara

to topic particles suc

element (Ekniyom 19

(40) as shown in (42

idea that the first item

However, Thai pronouns can also co-occur with a common noun or a proper name as in (39) and (40) respectively. The interpretation of such a construction is either generic (39a,b) or definite (39b, 40).

- (39) a. *khon₁ thay₁ raw₁ chɔɔp₃ ?i₁sa₁ra₂*
 people Thai we like freedom
 'Thai people like freedom.'
 b. *khaw₅ may₃ ruu₄ waa₃ maa₅ man₁ du₂*
 he not know COMP dog it fierce
 'He did not know that the dog is fierce.'
- (40) a. *dam₁ khaw₅ may₃ yaak₂ maa₁*
 Dam he not want come
 'Dam does not want to come.'
 b. *khun₁ tii₁ dam₁ khaw₅ tham₁may₁*
 you hit Dam he why
 'Why did you hit Dam?'

A number of studies claim that such a phrase is a topic construction (Noss 1964, Bandhumedha 1983 among others). Nonetheless, there are reasons to believe that this is not correct. First, an intonation break or comma intonation does not occur between the two elements. If the two are pronounced with a break, the preceding common noun or proper name is focused. But the construction under discussion does not express focus or emphasis. Secondly, such a construction can occur both pre-verbally and post-verbally as in (40). Another characteristic of a topic construction, besides the intonation break, is that the topic particles such as *na₂*, *nan₄*, *rii₅*, and *nan₃rii₅*, can be inserted after the topic element (Eknaiyom 1977) as in (41). But the insertion of the topic particle in (39a) and (40b) as shown in (42a) and (42b) respectively yields ungrammaticality, supporting the idea that the first item is not topicalized or focused.

- (41) a. dam_i na_i
 Dam TOP
 'Dam, he c
 b. khaw_i may_i
 he not
 'He did not

- (42) a. *khon_i th
 people TH
 b. *khun_i tii
 you hit

More importantl

± (43). a fact that points

- (43) a. khon_i th
 people TH
 'We Thai
 b. khun_i tii
 you hit
 'It is Dam

It is also not like

appositive noun phrase

precedes a common noun

- (44) a. raw_i kho
 we peop
 'We Thai
 b. phuak_i th
 group-
 'You, stu
 c. thəə_i dam
 you Dam
 'You, Da

Last but not leas

preceding common noun

may not be of appositive

- (41) a. dam₁ na₂ khaw₅ may₃ yaak₂ maa₁
 Dam TOP he not want come
 'Dam, he does not want to come.'
 b. khaw₅ may₃ ruu₄ waa₃ maa₅ na₂ man₁ du₂
 he not know COMP dog TOP it fierce
 'He did not know that the dog is fierce.'
- (42) a. *khon₁ thay₁ na₂ raw₁ choop₃ ?i₁sa₁ra₂
 people Thai TOP we like freedom
 b. *khun₁ tii₁ dam₁ na₂ khaw₅ tham₁may₁
 you hit Dam TOP he why

More importantly, the topic particle can be inserted after the whole noun phrase as in (43), a fact that points to the idea that such a construction behaves as a unit.

- (43) a. khon₁ thay₁ raw₁ na₂ choop₃ ?i₁sa₁ra₂
 people Thai we TOP like freedom
 'We Thais like freedom.'
 b. khun₁ tii₁ dam₁ khaw₅ na₂ may₄ chay₃ khaaw₅
 you hit Dam he TOP not true Khaw
 'It is Dam that you hit, not Khaw.'

It is also not likely that the construction above is a kind of apposition because the appositive noun phrase in Thai displays a different word order; that is, a pronoun precedes a common noun or a proper name as in (44).

- (44) a. raw₁ khon₁ thay₁ rak₄ ?i₁sa₁ra₂
 we people Thai love freedom
 'We Thais love freedom.'
 b. phuak₃thəə₁ nak₄rian₁ tən₃ kha₁yan₅
 group-you student must diligent
 'You, students, must be diligent.'
 c. thəə₁ dam₁ tən₃ maa₁
 you Dam must come
 'You, Dam, must come.'

Last but not least, lack of number agreement between the pronoun and the preceding common noun or proper name as in (45) below indicates that such a structure may not be of appositive type.

(45) a. maa₃ man₃

dog it

'The dogs'

b. *maa₃ phu₃

dog group

This piece of evidence

a pronoun in Thai is not given

considering more data. We

spelled out.

2.5 Analysis of Thai nouns

Having outlined the

nouns in terms of distribution

nouns in this section. The

nouns in Thai free in dis

nouns in Thai?, and 3) and

the first elements in Thai

However, I will show that

syntactic operation, namely

while the head-final analysis

treating all structures in

2.5.1 Head-final analysis

In this section I will

common nouns, proper nouns

- (45) a. maa₅ man₁ nii₄ pay₁ lan₅caak₂ kat₂ kan₁ lææw₄
 dog it escape go after bite RECP PRF
 'The dogs ran away after fighting.'
- b. *maa₅ phuak₃-man₁ nii₄ pay₁ lan₅caak₂ kat₂ kan₁ lææw₄
 dog group-it escape go after bite RECP PRF

This piece of evidence will be used for my argument in the following section that a pronoun in Thai is not generated in N, but D. Chinese pronouns may also be the same, considering more data. What's more, the requirement of DP for Thai noun phrases will be spelled out.

2.5 Analysis of Thai bare nouns

Having outlined the similarities and differences between Thai and Chinese bare nouns in terms of distribution and interpretation, I will provide the analyses of Thai bare nouns in this section. The questions to be investigated are 1) why are indefinite bare nouns in Thai free in distribution? 2) is CIP adequate for the analysis of definite bare nouns in Thai?, and 3) are Thai NPs head-initial or head-final? Since nouns are always the first elements in Thai noun phrases, I will first discuss the head-final analysis. However, I will show that the head-initial analysis is preferred because it needs only one syntactic operation, namely NP movement, to account for all the cases to be investigated while the head-final analysis needs three. This finding gives conceptual support to treating all structures in Thai as head initial.

2.5.1 Head-final analysis

In this section I will show how the head-final analysis can handle the instances of common nouns, proper names and pronouns, but only by positing three distinct syntactic

operations: covert N-ra

via Num as right adjun

25.1.1 Bare common n

I will first discu

Chinese, and then the in

to the distribution restri

non-specific singular in

deal with.

(i) Definite bare comm

Following Chen,

Similar to Chinese, there

covertly move to C1 f

- (46) a. maa_i noon_i
dog sleep
'The dog i

b.

Indefinite bare comm

Indefinite bare co

of their unrestricted

in both pre-verbal a

operations: covert N raising, overt Cl-to-Num movement and overt Cl-to-D movement via Num as right adjunction.

2.5.1.1 Bare common nouns

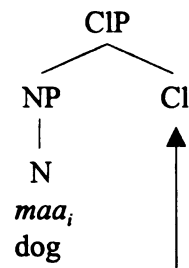
I will first discuss the Thai definite bare noun which behaves similarly to that in Chinese, and then the indefinite bare noun in Thai which, unlike in Chinese, is not subject to the distribution restriction. The [N+Cl] construction which can express only indefinite non-specific singular interpretation and is restricted to only post-verbal positions is also dealt with.

(1) Definite bare common nouns

Following Cheng and Sybesma, the definite bare noun is embedded in a CIP. Similar to Chinese, therefore, the Thai definite bare common noun *maa*, ‘dog’ in (46) has to covertly move to Cl for the definite interpretation and the unrestricted distribution.

- (46) a. *maa*₅ *nɔɔn*₁ *yuu*₂ *taay*₃ *toʔ*₄
 dog sleep IMPF under table
 ‘The dog is sleeping under the table.’

b.



(2) Indefinite bare common nouns

Indefinite bare common nouns in Thai are different from those in Chinese in terms of their unrestricted distribution. That is, Thai indefinite bare common nouns can occur in both pre-verbal and post-verbal positions. According to Cheng and Sybesma, the

indefinite bare noun

empty heads Num

in a subject position

indefinite bare noun

same line of argument

the indefinite bare

interpretation is new

'dog' in (47a) is possible

(47) a. maa,

dog

'A dog

b.

the [N-Cl] construction

Similar to Ma

indefinite non-specific

[N-Cl] construction in

can occur only in a position

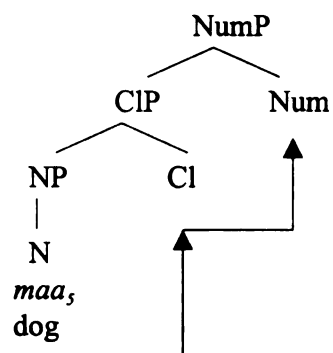
grammatical restriction

construction can carry

indefinite bare noun in Chinese is NumP containing the empty head Num ([Cl+N]) or the empty heads Num and Cl (bare noun), thus accounting for the fact that they cannot occur in a subject position due to the lack of lexical governor. The free distribution of the indefinite bare noun in Thai thus indicates that the head Num must be filled. Taking the same line of argument as the N-to-Cl movement, I suggest the N-to-Num movement for the indefinite bare noun in Thai. As the number is not explicitly present, the number interpretation is neutral. The syntactic representation of the indefinite bare noun *maa*, ‘dog’ in (47a) is portrayed in (47b).

- (47) a. *maa₁ kat₂ dek₂*
 dog bite child
 ‘A dog/dogs bit a child/children.’

b.



(3) [N+Cl] construction

Similar to Mandarin, Thai also utilizes the [N+Cl] construction to display an indefinite non-specific singular noun. But unlike indefinite bare nouns in Thai, the [N+Cl] construction is restricted in its distribution and the verbs it can be used with. As it can occur only in a post-verbal position, it seems to imply that it is subject to the lexical government restriction and the phrase itself must have an empty head. Since such a construction can carry only the indefinite reading, it should be embedded in NumP. The

head-final analysis can be

phrase *bu.ril, muan*, 'give

(48) a. *khoo*, 'to

give (me) 'Can you

'Can you

b.

ci

There is no need for

for that Num is empty ex

interpretation of the phras

Summarizing, the

consistent with Cheng and

over N-to-Cl movement

over N-to-Num raising i

3.1.2 Proper names

As suggested by L

names are generated in N

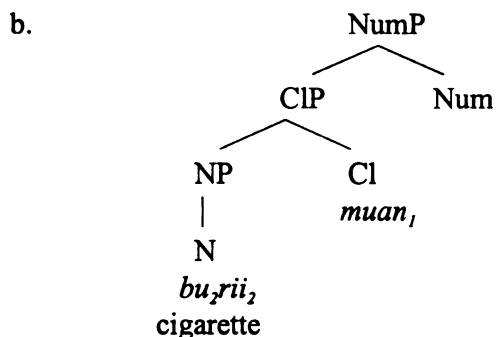
embedded in the CIP. The

Therefore, the proper nam

below.

head-final analysis can handle this phenomenon very well as shown in (48b) for the phrase *bu₂rii₂ muan₁*, ‘cigarette Cl’ in (48a).

- (48) a. *khoo₃ bu₂rii₂ muan₁*
 give (me) cigarette Cl
 ‘Can you give me a cigarette?’



There is no need for a movement in the head-final analysis as shown in (48b). The fact that Num is empty explains the restricted distribution and the non-specific interpretation of the phrase.

Summarizing, the head-final analysis of the definite bare noun in Thai is consistent with Cheng and Sybesma’s analysis of the Chinese definite bare noun; that is, covert N-to-Cl movement is needed. However, unlike the Chinese indefinite bare noun, covert N-to-Num raising is required for the analysis of the indefinite bare noun in Thai.

2.5.1.2 Proper names

As suggested by Longobardi (1994) and Cheng and Sybesma (1999), proper names are generated in N. Since the proper name generally denotes definiteness, it is embedded in the CIP. The definite reading is thus acquired when N raises to Cl.

Therefore, the proper name *dam₁*, ‘Dam’ is represented by the head-final analysis as in (49) below.

Howev

iam, son, khon

(50) lel

Le

'L

As the

assumed for su

requires an ove

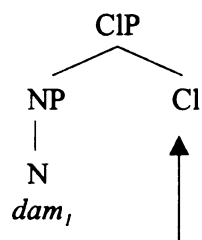
therefore struc

(51)

I am as

vice versa.

(49)



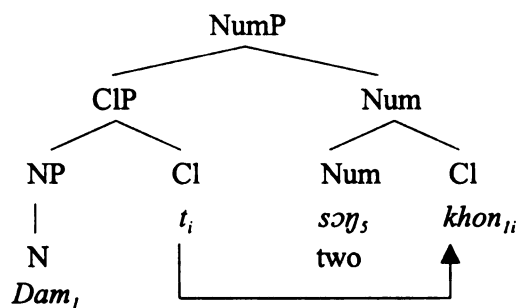
However, when a proper name is accompanied by a classifier and a number like

dam, sɔŋ, khon, ‘Dam two Cl’ in (50)(=35b), an additional movement is needed.

(50) *lek, boɔk, waa, khaw, hen, dam, sɔŋ, khon*
Lek tell COMP he see Dam two Cl
‘Lek said that he saw two Dam’s.’

As the presence of a numeral gives an indefinite interpretation, NumP is to be assumed for such a phrase. To capture the word order fact, the head-final analysis requires an overt raising of Cl to Num as right adjunction. The noun phrase in (50) is therefore structurally represented as below.

(51)



I am assuming here on semantic and syntactic grounds that Num selects CIP, not vice versa.

The Cl-to-Num

from the fact that a clas

level form a unit.⁶

In brief, to han

N-to-Cl raising like the

other hand, are capture

2.5.1.3 Pronouns

As discussed ea

names and common no

classifiers. Therefore, t

however, that Thai pro

generated in D.

First of all, wha

personalized pronoun can

common noun which e

⁶ A number of studies c
proposing that they are
(1991:403).

It is worth noting that
different word order tha
pronouns as in the exam

(i) cong nei-ge
from that-CL

'From that m
was told by Liou Yu-f
as a common noun, not
expression cannot be co
the above sentence in Th

The Cl-to-Num movement as adjunction in the head-final analysis may result from the fact that a classifier and a numeral are so closely related that they should at one level form a unit.⁶

In brief, to handle bare proper names in Thai, the head-final analysis needs covert N-to-Cl raising like the account of definite bare nouns. Quantified proper names, on the other hand, are captured by overt Cl-to-Num movement as right adjunction.

2.5.1.3 Pronouns

As discussed earlier, Cheng and Sybesma treated pronouns on a par with proper names and common nouns owing to their ability to co-occur with numerals and classifiers. Therefore, they claim that a pronoun is base-generated in N. I will argue, however, that Thai pronouns are like those in many other languages in that they are generated in D.

First of all, what Cheng and Sybesma seem to miss is that the interpretation of a quantified pronoun can also be definite as in (52)⁷, unlike the quantified proper name or common noun which expresses only indefinite reading as in (53).⁸

⁶ A number of studies consider the close relationship of a classifier and a numeral by proposing that they are one constituent (Croft 1994:151) or a dual head (Tang 1990:403).

⁷ It is worth noting that the definite quantified pronoun in Chinese in (52a) exhibits a different word order than the indefinite quantified proper names, common nouns and pronouns as in the example given by Cheng and Sybesma in (29), repeated below.

(i) cong nei-ge jing-zi, wo keyi kandao wu-ge wo
from that-CL mirror I can see five-CL I

‘From that mirror, I can see 5 copies of myself (five I’s/me’s).

I was told by Liou Yu-fen (p.c), though, that the pronoun ‘I’ in the example above is used as a common noun, not in the pronoun sense. This is not surprising, given that such an expression cannot be constructed in Thai with a pronoun. The equivalent translation of the above sentence in Thai is as below.

(52) a. wo-men
 we
 'the three
 b. raw, saa
 we thr
 'the three

(53) a. liang-ge
 two-CL
 'two Hu
 b. dam, saa
 Dam thr
 'three D

Two things that

phrases and pronouns a

our phrase is CIP, how

definite interpretation?

needed for the locus of

gives an indefinite read

responsible for definiteness

is insufficient to handle

Moreover, if a pronoun

has to move to D past C

presence of a quantified

definite noun phrases and

(ii) chan, hen, tua
 I see bo

The classifier *khon*, which
 other, indicating that wh
 myself.

- (52) a. wo-men san ge (Mandarin)
 we three Cl
 'the three of us'
 b. raw₁ saam₅ khon₁ (Thai)
 we three Cl
 'the three of us'
- (53) a. liang-ge hufei (Mandarin)
 two-Cl Hufei
 'two Hufei's'
 b. dam₁ saam₅ khon₁ (Thai)
 Dam three Cl
 'three Dam's'

Two things that need reconsidering are thus (1) the suggestion that definite noun phrases and pronouns are ClPs, and (2) the proposal that pronouns are Ns. If the definite noun phrase is ClP, how is it possible to account for the quantified pronoun with a definite interpretation? The quantified pronoun cannot simply be ClP because NumP is needed for the locus of the numeral. However, it cannot be NumP either because NumP gives an indefinite reading. Another maximal projection higher than NumP and responsible for definiteness is required. The most likely candidate is DP. Therefore, ClP is insufficient to handle the definite bare noun in classifier languages. DP is still needed. Moreover, if a pronoun is a N like a proper name, the pronoun in a quantified pronoun has to move to D past Cl and Num so that the definite interpretation is obtained. The instance of a quantified pronoun thus leads to the assumptions that DP is needed for definite noun phrases and that a pronoun is generated as a D.

-
- (ii) chan₅ hen₅ tua₁ chan₅ haa₅ tua₁ nay₁ kra₁cok₂

I see body-I five Cl in mirror.

The classifier *khon*, which is used with human beings cannot be used as the classifier here either, indicating that what is talked about is the image or the copy of myself, not me myself.

To a

a two-step m

illustrated in

(54)

b

The r

suggested to

classifier as

(55)

The quanti

demonstrati

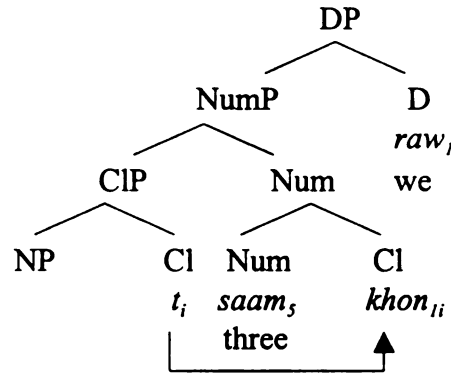
Due to the

(55) are a

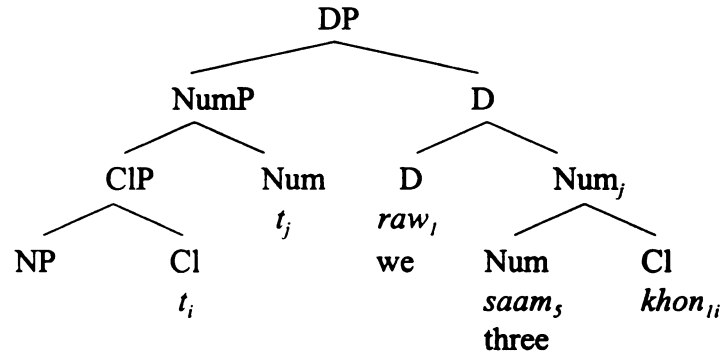
sed with th

To account for the quantified pronoun as in (52b), the head-final analysis requires a two-step movement as right adjunction, namely, Cl-to-Num, and [Cl+Num]-to-D as illustrated in (54).

(54) a.



b.



The movement of the complex head Num (Num+Cl) to D as in (54b) may be suggested to result from the feature checking of the pronoun and the number with the classifier as the incompatibility of the three leads to ungrammaticality as in (55).⁹

(55) a. *raw_i niŋ_j khon_i

we one Cl

b. *raw_i saam_j tua_i

we three Cl

* The quantified proper name expresses definiteness when accompanied by a demonstrative.

⁹ Due to the complex pronoun system in Thai as mentioned in section 2.4.3, the examples in (55) are acceptable if the pronoun *raw*, 'we' is used to mean 'I' and the classifier *tua*, is used with the contempt denotation.

Another

drawn from the

discussed in the

(56) a.

b.

As com

cross-ling

Therefore

Although CI is

needed, the fac

idea that the pro

final analysis de

(56b) as show

(57)

It should

the pronoun and

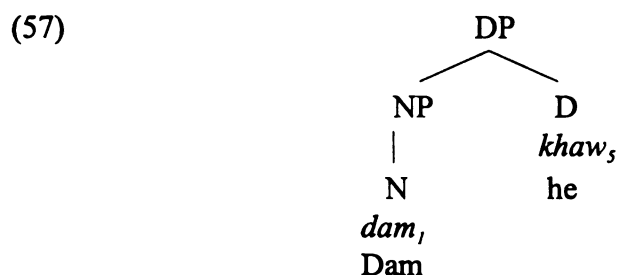
explained by the

reason seems no

Another piece of evidence supporting the idea that a pronoun is generated in D is drawn from the fact that pronouns can co-occur with common nouns or proper names as discussed in the previous section with some examples repeated in (56) below.

- (56) a. *khon₁ thay₁ raw₂ chɔɔp₃ ?i₁sa₁ra₂*
 people Thai we like freedom
 ‘Thai people like freedom.’
 b. *khun₁ tii₁ dam₁ khaw₅ tham₁may₁*
 you hit Dam he why
 ‘Why did you hit Dam?’

As common nouns and proper names are generally assumed to be base-generated in N cross-linguistically, pronouns cannot originate in such a position, considering these data. Therefore, the suggestion that a pronoun in Thai is D seems to be on the right track. Although Cl is claimed to perform the same function as D and the latter may not be needed, the fact that a pronoun can also co-occur with a classifier and a numeral bars the idea that the pronoun is base-generated in Cl. With the pronoun generated in D, the head-final analysis does not require any movement at all for the phrase *dam₁ khaw₅*, ‘Dam he’ in (56b) as shown in (57) below.



It should be noted here that the fact that the interpretation of the phrase consisting of a pronoun and a common noun or a proper noun is either generic or definite can be explained by the filled D. In these instances, however, the pronoun which occupies the D position seems not to really denote the deictic function of pronoun i.e. referring to an

entity or entities

phrase *khon, tha*

generic sense and

To sum u

evidence for the

That also needs a

noun and the def

definite bare noun

All in all,

movement to D f

as adjunction for

Num as adjunctio

25.2 Head-initia

In this sec

final analysis bec

under investigation

25.2.1 Bare com

Having ar

definite noun phr

(i) Definite bare c

I hypothesize th
they are limited to
may be the case th
finiteness.

entity or entities. Its function is pretty much like that of a determiner.¹⁰ That is why the phrase *khon, thay, raw*, ‘people Thai we’ in (56a) is interpreted as ‘Thai people’ in generic sense and the meaning of the pronoun ‘we’ is not really included.

To sum up, I have shown that Thai can provide another piece of supporting evidence for the claim that a pronoun is generated in D, and that a classifier language like Thai also needs a DP after all. To be consistent, I reanalyze the definite bare common noun and the definite proper name as DPs instead of CIPs. The movement of N in the definite bare noun is thus to D instead of Cl.

All in all, the head-final analysis requires three syntactic operations, namely N movement to D for definite bare nouns and to Num for indefinite ones, Cl-to-Num raising as adjunction for quantified common nouns and proper names, and Cl-to-D movement via Num as adjunction for quantified pronouns.

2.5.2 Head-initial analysis

In this section I will show that the head-initial analysis is preferable to the head-final analysis because it requires only one movement which captures all the instances under investigation.

2.5.2.1 Bare common nouns

Having argued in the previous section that CIP is inadequate for the account of the definite noun phrase in Thai, in what follows I will analyze the definite bare noun as DP.

(1) Definite bare common nouns

¹⁰ I hypothesize that the pronouns used in such constructions are determiner-like elements. They are limited to a small number (*raw*, ‘we’, *khaw*, ‘he, she’, *man*, ‘it’). Therefore, it may be the case that Thai also uses the insertion of a determiner-like pronoun to express definiteness.

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(46) maa, s

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(58)

Indefinite bare

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(47) maa, s

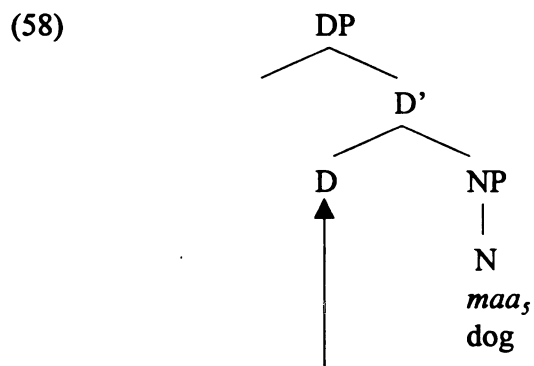
dog b

'A dog

I am assuming her

Like the head-final analysis, the head-initial analysis requires covert N-to-D movement in the case of definite bare nouns to account for the interpretation and the unrestricted distribution. The structural representation of Thai bare common noun *maa*, ‘dog’ in (46) according to the head-initial analysis is as in (58).¹¹

- (46) *maa*₃ *noon*₁ *yuu*₂ *taay*₃ *to?*₄
 dog sleep IMPF under table
 ‘The dog is sleeping under the table.’



(2) Indefinite bare common nouns

Recall that indefinite bare common nouns in Thai are free in distribution, which means that the head Num must be filled. Therefore, N-to-Num movement is also proposed for the head-initial analysis of Thai indefinite bare nouns as illustrated in (59) for (47), repeated below.

- (47) *maa*₃ *kat*₂ *dek*₂
 dog bite child
 ‘A dog/dogs bit a child/children.’

¹¹ I am assuming here that NumP and CIP are situated between DP and NP. But the

(i) [N-Cl] construction

The head-initial

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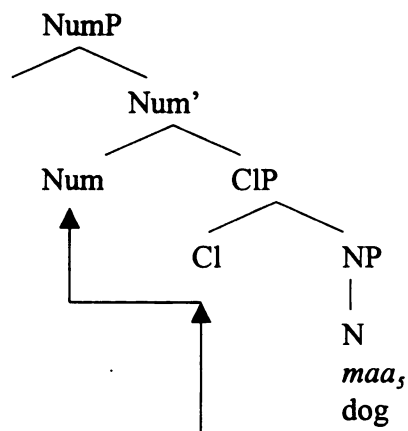
I suggest an NP move

(function) here owing t

use.

(i) khoo, bu-
give (me) ciga
'Can you give

(59)



(3) [N+Cl] construction

The head-initial analysis seems to face some problems dealing with the [N+Cl] construction which displays only an indefinite non-specific interpretation. Due to the indefinite interpretation, such a construction is embedded in NumP. N-to-Num movement does not seem to work here since the head Cl is on its way to a higher head, thus violating the Head Movement Constraint (Travis 1984) which requires that a moved head may not cross over another head in its cyclic movement. Moreover, N movement to Num is unlikely here owing to the distributional restriction of this construction which implies that the head Num should be empty. A way of coping with this problem is the suggestion that NP moves to the specifier of CIP, leaving Num empty.¹² The distribution and interpretation will thus be captured. Although this is not an elegant proposal, everything

structure given in (58) is for simplicity.

¹² I suggest an NP movement instead of an N movement (probably to Cl as left adjunction) here owing to the following example where the whole modified NP seems to raise.

- (i) *khoo₅ bu₂rii₂ tra_a phra₄can₁ muan₁*
 give (me) cigarette brand moon Cl
 'Can you give me a cigarette of the brand 'Moon'?''

seems to be well-

below, is structur

(48) khoo.

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(60)

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Alexiadou 1997).

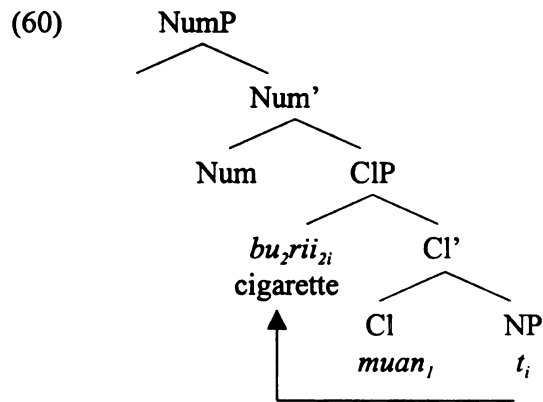
indefinite NPs in

empty, their spec

all the cases.

seems to be well-taken care of. The phrase *bu₂rii₂ muan₁* ‘cigarette Cl’ in (48), repeated below, is structurally represented as in (60).

- (48) *khoo₅ bu₂rii₂ muan₁*
 give (me) cigarette Cl
 ‘Can you give me a cigarette?’



If this analysis is on the right track, we can reanalyze the data for the definite and indefinite common nouns: instead of N raising, we can treat all instances of movement as NP raising to the specifier of the relevant functional head. NP moves to the specifier of DP in the definite bare common noun and to the specifier of NumP in the indefinite one. It is not uncommon that an empty head can be ‘strong’ enough to attract an element to either its head or its specifier as long as it has some semantic import (Huang 1988, Alexiadou 1997). We can thus account for the free distribution of the definite and indefinite NPs in Thai due to the fact that although the relevant functional heads are empty, their specifiers are filled. Moreover, I will suggest that NP movement is overt in all the cases.

Definite p

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(61)

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(62)

Structure

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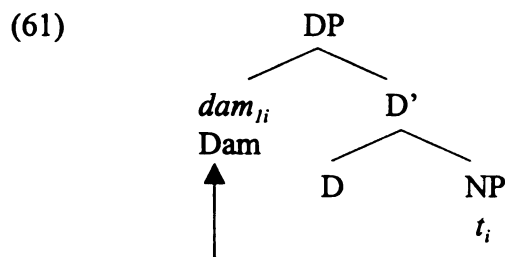
position for the n

movement as adj

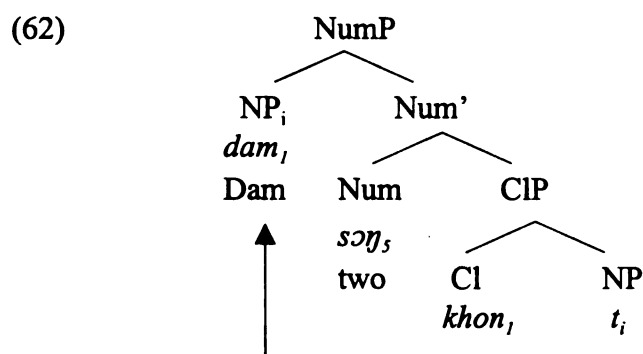
successively. The

2.5.2.2 Proper names

Definite proper names are like definite common nouns in that NP-to-DP movement is required, as portrayed by the syntactic representation of the proper name *dam*, ‘Dam’ in (61) .



Although the head-final analysis needs an additional Cl-to-Num raising for the account of quantified proper names which are indefinite, the head-initial analysis can handle the instance well with simply NP movement to [Spec, Num] as represented in (62) for the phrase *dam, sɔŋ, khon*, ‘two Dam’s’.



Structure (62) confirms the unlikelihood of a head-to-head movement in the head-initial analysis. This is because the heads of CIP and NumP are already occupied. The head N containing a proper name cannot move across these two heads to a higher head position for the movement will violate the Head Movement Constraint. If head-to-head movement as adjunction were to be assumed, N would have to adjoin to Cl and Num successively. The wrong word order **dam, khon, sɔŋ*, ‘Dam Cl two’ would be obtained if

left adjunction was per

sequence **soy, khon*

movement operates in t

specifier of ClP to assu

specifier of NumP for t

25.2.3 Pronouns

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pronoun as illustrated in

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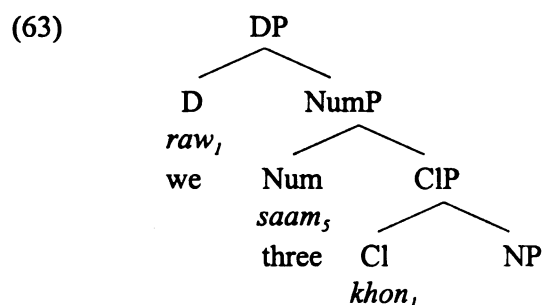
illustrated in (63) for the

(63)

left adjunction was performed. And right adjunction would also yield the incorrect sequence * *soŋ, khon, dam*, ‘two Cl Dam’. In sum, it is impossible that head-to-head movement operates in this case. NP may move in successive steps. First, it moves to the specifier of CIP to assure that the classifier agrees with the noun. Then, it raises to the specifier of NumP for the number purpose.

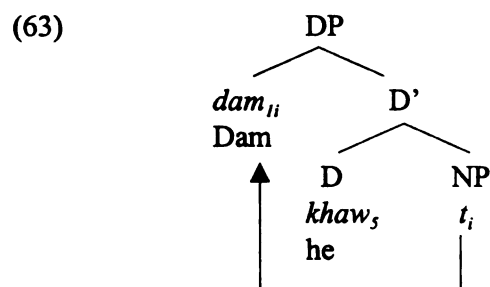
2.5.2.3 Pronouns

Since I have argued above that the pronoun in Thai is generated in D, the head-initial analysis does not need any movement at all when accounting for the quantified pronoun as illustrated in (63).



This makes the head-initial analysis preferable over the head-final analysis which requires the two-step movement as adjunction of Cl to D (via Num).

In the case of the noun phrase which contains a pronoun and a proper name or a common noun, the NP movement to [Spec, DP] can unproblematically handle it as illustrated in (63) for the phrase *dam, khaw*, ‘Dam he’.



Recall that the
requirement of movement
consistent throughout.

Comparing the
head-final one because
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2.6 Conclusion

In this chapter, I
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Such as singularization
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Adopting Cheng
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Alternatively, it can be f
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Recall that the head-final analysis can handle the latter case without the requirement of movement. However, the raising of NP in the head-initial analysis is consistent throughout.

Comparing the two analyses, the head-initial analysis is more attractive than the head-final one because only one syntactic operation, namely NP movement can capture all the instances of bare nouns under study.

2.6 Conclusion

In this chapter, I have shown that Thai also requires the DP despite the lack of articles in the language. Although CI is claimed to perform the similar deictic function to D such as singularization and individualization, I have argued that the analysis of a definite noun phrase as CIP is inadequate.

Adopting Cheng and Sybesma's (1999) analysis of Chinese, I suggest that indefinite bare nouns in Thai (N, [N+CI], [N+Num+CI]) are NumPs. However, the head Num is never syntactically empty. That is, it can be lexically filled by a numeral. Alternatively, it can be filled by a moved N at LF according to the head-final analysis or the movement of NP to [Spec, NumP] according to the head-initial analysis makes the head Num syntactically visible. This explains why the distribution of indefinite bare nouns in Thai is not restricted to lexically governed positions.

I further suggest that Thai definite bare nouns are embedded in DPs, not CIPs as proposed by Cheng and Sybesma. The major evidence is from the requirement of D as the base-generated position of a pronoun. The definite reading is acquired by the movement

of N to D in the head-final analysis whereas the head-initial analysis requires NP-to-DP movement.

Having compared the head-initial and the head-final analyses of Thai bare nouns, I can say that the former is more favorable than the latter because it requires only one syntactic operation of NP movement. The head-final analysis, on the other hand, needs three movements to do the same job. In Chapter 4 we will see more evidence that supports the head-initial analysis.

In this chapter I
two positions for adject
adjoined to NP and the
as another type of noun

3.1 Introduction

Because Thai w
phrase without a copula
adjectives (Bandhume
(1996)).

- (1) a. dam₁ su
Dam ta
'Dam is t
b. nitt₄ sua
Nit pre
'Nit is pr

The words that are co
generally used with a
(i) khaw₅ pen₁
he be
'He is a tea
(ii) khaw₅ khii
he be
'He is the P
(iii) khaw₅ cha
he be

CHAPTER 3

NOUN MODIFIERS IN THAI

In this chapter I will argue for the existence of Thai adjectives and that there are two positions for adjectives in Thai depending on their interpretations. One is right-adjoined to NP and the other is the specifier of ClP. Nominal modifiers will be introduced as another type of noun modifier, which are also right-adjoined to NP.

3.1 Introduction

Because Thai words equivalent to English adjectives can be predicated of a noun phrase without a copula as in (1), a number of studies question the existence of Thai adjectives (Bandhumedha 1983, Savetamalya 1989, Hudak 1990, Warotamasikkhadit 1996)¹.

- (1) a. *dam₁ suun₅*
 Dam tall
 'Dam is tall.'
 b. *nitt₄ suay₅*
 Nit pretty
 'Nit is pretty.'

¹ The words that are considered as Thai copulas are *pen₁*, *khii₁*, and *chay₃*. They are generally used with a nominal predicate as in the following examples.

- (i) *khaw₅ pen₁ khruu₁*
 he be teacher
 'He is a teacher.'
(ii) *khaw₅ khii₁ naa₁ yok₄ rat₄ tha₁ mon₁ trii₁*
 he be prime minister
 'He is the Prime Minister.'
(iii) *khaw₅ chay₃ phuu₃ chaay₁ khon₁ nan₄ nææ₃*
 he be man Cl that surely

Such words are thus suggested to be stative verbs, and adjectives are claimed to be non-existent in Thai. However, with thorough consideration I will argue that Thai does have a class of words called ‘adjectives’ as these words do not behave exactly the same as stative verbs. Therefore, they should not be grouped into the same category.

In terms of distribution, Thai adjectives are unexceptionally post-nominal as shown in (2). Pre-nominal adjectives bring about ungrammaticality as in (3).

- (2) a. *khaw₅ chɔɔp₃ phuu₃yɪŋ₅ suay₅*
 he like woman pretty
 ‘He likes a/the pretty woman/ pretty women.’
 b. *dek₂ ?uan₃ suk₂kha₁phaap₃ may₃ dii₁*
 child fat health not good
 ‘A/the fat child/ Fat children is/are not healthy.’
- (3) a. **khaw₅ chɔɔp₃ suay₅ phuu₃yɪŋ₅*
 he like pretty woman
 b. **?uan₃ dek₂ suk₂kha₁phaap₃ may₃ dii₁*
 fat child health not good

However, a few adjectives cannot appear right after nouns. Classifiers must be inserted between nouns and adjectives. Examples of such adjectives are *kɔn₂* ‘former’ and *diaw₁kan₁* ‘same’ as illustrated in (4)-(5) respectively.

- (4) a. **khaw₅ chɔɔp₃ naay₁ kɔn₂*
 he like boss former
 ‘He likes the former boss.’
 b. *khaw₅ chɔɔp₃ naay₁ khon₁ kɔn₂*
 he like boss Cl former
- (5) a. **raw₁ ?aan₂ naŋ₃sii₅ diaw₁kan₁*
 we read book same
 ‘We read the same book.’
 b. *raw₁ ?aan₂ naŋ₃sii₅ lem₃ diaw₁kan₁*
 we read book Cl same

‘He is surely that man.’

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As can be noticed, not only is there a difference in the distribution between the adjectives in (2)-(3) and those in (4)-(5), but the interpretation of the noun phrases containing them are also distinct. While the first group of adjectives makes the noun phrases ambiguous in terms of definiteness and number, the second group gives the noun phrases only the definite singular interpretation. Due to their differences, it is likely that they are generated in different places. Therefore, I will investigate their base-generated positions.

Besides adjectives, I will also discuss another type of noun modifiers which enables us to distinguish between ‘true’ classifiers (Cl) and classifier-like elements (C-L) as in (6) where (6a) contains a classifier *khon*, which is used with human beings while (6b) contains a classifier-like word *tua*, which means ‘body’.²

- (6) a. naay₁ khon₁ suuŋ₅
 boss Cl tall
 ‘the tall boss’
 b. naay₁ tua₁ suuŋ₅
 boss C-L tall
 ‘a/the tall boss(es)’

The interpretations of (6a) and (6b) are different. While (6a) denotes only definiteness and singularity like (4)-(5), (6b) can express either definiteness or

² The word *tua*₁ is considered a classifier-like word because it is homophonous with the classifier used with animals as in (i).

- (i) a. maa₅ saam₅ tua₁
 dog three Cl
 ‘three dogs’
 b. maa₅ tua₁ yay₂
 dog C-L big
 ‘a/the big dog(s)’

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3.2 Existence

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3.2.1 Previous

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indefiniteness without number specified like (2)-(3). Therefore, they will be treated differently.

The chapter is organized in the following way. In section 2 I will argue for the existence of adjectives in Thai and against some previous studies which have claimed that Thai has no adjectives. Section 3 presents some literature on adjectives. Section 4 is devoted to the discussion of the three types of noun modifiers together with their positions. The interpretation as well as the distribution of noun phrases containing each type of noun modifiers is spelled out in section 5. Section 6 provides the conclusion of the chapter.

3.2 Existence of Thai adjectives

I will first present the claims made by several linguists on the lack of adjectives in Thai and then argue for their existence.

3.2.1 Previous studies on the lack of Thai adjectives

Most of the studies that claim that Thai lacks adjectives consider mainly the fact that adjectives used as predicates do not need copula verbs. Hudak (1990:42), for instance, states that “ (Thai) words considered to be adjectives in English (*suay*, ‘beautiful’, *dii*, ‘good’, *yaaw*, ‘long’) may function as nominal attributes, verbal attributes or as predicates. Because these words behave syntactically as verbs without a copula, they are treated as verbs.” Warotamasikkhadit (1996) also puts words equivalent to English adjectives in the category of verbs. In other words, he does not give a separate category of adjectives when introducing parts of speech in Thai. Likewise, Bandhumedha (1983:29) classifies Thai verbs into five categories and includes adjectives in the category of stative

verbs. Their f

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(7) a.

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verbs. Their function is to modify nouns in various aspects such as size, color, quality and shape as demonstrated in (7).

- (7) a. mii₁ kra₁thaan₃ ma₁hi₂ma₁ tan₃ yuu₂ mum₁ hən₃
 exist vase huge stand stay corner room
 ‘There is a huge vase in the corner of the room.’
 b. khaw₃ chəp₃ suam₃ wææn₃ dam₁
 he like wear glasses black
 ‘He likes wearing black glasses.’
 c. khruu₁ chəp₃ nak₄rian₁ kha₁yan₄
 teacher like student diligent
 ‘Teachers like diligent students.’
 d. lən₂ suam₃ siə₃ khlum₁ tua₁ yaaw₁
 she wear clothes cover C-L long
 ‘She wears a long coat.’

It should be noted that stative verbs other than those which can be classified as adjectives do not normally directly modify nouns as shown in (8) below. A relative clause introduced by the complementizer (COMP) *thii*₃ is to be used as in (9).

- (8) a. *mii₁ phuu₃yin₃ soŋ₂say₃ nan₃ yuu₂ mum₁ hən₃
 exist woman doubt sit IMPF corner room
 b. *khruu₁ chəp₃ nak₄rian₁ khaw₃cay₁
 teacher like student understand
 (9) a. mii₁ phuu₃yin₃ thii₃ soŋ₂say₃ nan₃ yuu₂ mum₁ hən₃
 exist woman COMP doubt sit stay corner room
 ‘There is a woman who is in doubt sitting in the corner of the room.’
 b. khruu₁ chəp₃ nak₄rian₁ thii₃ khaw₃cay₁
 teacher like student COMP understand
 ‘Teachers like students who easily understand.’

Another study which argues against the existence of Thai descriptive adjectives is Savetamalya (1989). Utilizing the lexicase analysis which aims to discover and describe the relationships between and among pairs of lexical items or words in constructions with each other, Savetamalya assumes that Thai words translatable as descriptive adjectives in

English are in fact a sub-
category of adjectives, and
they do not fit the definition
of an adjective phrase, and
and Reid 1997: 230, call them
predicational. She further
notes that relative clauses whose
function is to modify nouns
words which can be called
dependents of nouns
cannot be modified by an
adjective phrase nor be modified by an

However, some
adjectives, such as *former*, *same*,
and *other*, are not
reduced relative clauses.
Thai adjectives do not

To sum up, the
difference between
adjectives in Thai and
English is that
however, argue against
the view that
words translatable as
adjectives are
fact different from
Thai also possesses

11.2 Arguments for

The argument
is that the type of words being
compared in the
comparison and that

English are in fact a subclass of verbs (so-called stative verbs). The major reason is that they do not fit the definition of 'adjective' defined in the lexicase analysis as "the head of an adjective phrase, an endocentric, non-predicational attribute of a noun," (Savetamalya and Reid 1997: 230, citing Starosta 1988: 51) because such words in Thai are all predicational. She further argues that this kind of words exhibits the same structure as relative clauses whose subjects are omitted or so-called reduced relative clauses. The only words which can be considered adjectives in Thai are numerals because they can only be dependents of nouns without the ability to "function as the sole constituent of a noun phrase nor be modified by determiners or relative clauses." (Savetamalya 1989:155)

However, some Thai words which are equivalent to adjectives in other languages such as *former*, *same*, *only*, etc. cannot be used predicatively and thus cannot be claimed to be reduced relative clauses, as will be elaborated later. Therefore, the assumption that Thai adjectives do not exist seems not to be right.

To sum up, the studies presented above claim that descriptive adjectives are missing in Thai and the words equivalent to English adjectives are stative verbs. I will, however, argue against their claim in the following section, by showing that the Thai words translatable as English adjectives do not completely behave as verbs. They are, in fact, different from stative verbs in many respects. The arguments evidently suggest that Thai also possesses adjectives.

3.2.2 Arguments for the existence of Thai adjectives

The arguments I will provide for the claim that Thai also has adjectives are that this type of words behaves very much like adjectives in other languages in terms of comparison and that they have their own characteristics not shared by other kinds of

words. Stative v

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(1) Comparison

Thai wo

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(10) a.

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thii, *-sut*, *'-est*

respectively.

(11) a.

b.

words. Stative verbs which Thai adjectives are claimed to be do not behave in the same way as this kind of words. The arguments to be made are as follows.

(1) Comparison

Thai words that are translatable as adjectives in other languages can be assumed to belong to the adjective category, not verb. The main justification is the fact that they can be directly modified by the comparative morpheme *kwaa*₂ and the superlative morpheme *thii*₃-*sut*₂ whereas the verbs cannot.

- (10) a. *dam*₁ *suun*₅ *kwaa*₂ *khaaw*₅
 *Dam*₁ tall -er/more *Khaaw*₅
 'Dam is taller than Khaaw.'
- b. *dam*₁ *suun*₅ *thii*₃-*sut*₂
 *Dam*₁ tall -est/ most
 'Dam is the tallest.'
- c. **dam*₁ *ruu*₄/*khaw*₃*chay*₁/*khit*₄ *kwaa*₂ *khaaw*₅
 *Dam*₁ know/understand/think -er/more *Khaaw*₅
 'Dam knows/understands/thinks more than Khaaw.'
- d. **dam*₁ *ruu*₄/*khaw*₃*chay*₁/*khit*₄ *thii*₃-*sut*₂
 *Dam*₁ know/understand/think -est/ most
 'Dam knows/understands/thinks the most.'

The degree word *maak*₃ 'much' must be introduced before *kwaa*₂ '-er/more' and *thii*₃-*sut*₂ '-est/most' to indicate the comparative and superlative degrees for Thai verbs respectively.

- (11) a. *dam*₁ *ruu*₄/*khaw*₃*chay*₁/*khit*₄ *maak*₃ *kwaa*₂ *Khaaw*₅
 *Dam*₁ know/understand/think much -er/more *Khaaw*₅
 'Dam knows/understands/thinks more than Khaaw.'
- b. *dam*₁ *ruu*₄/*khaw*₃*chay*₁/*khit*₄ *maak*₃ *thii*₃-*sut*₂
 *Dam*₁ know/understand/think much -est/most
 'Dam knows/understands/thinks the most.'

(2) Introduction

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(12) a

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word, not a cl.

(2) Introduction of classifiers in front of adjectives

The second argument is that a classifier can be inserted right in front of this type of words. The noun phrase which contains an adjective preceded by a classifier is always definite, which is consistent with the claim made by Hundius and Kölver (1983:177) that, “in a noun-classifier-adjective sequence in Thai, a classifier will be understood as a marker of definiteness.”

(12) a. dek₂ phoom₅ khii₃rook₃
child thin sickly
‘A/The thin child is sickly.’

b. dek₂ khon₁ phoom₅ khii₃rook₃
child Cl thin sickly
‘The thin child is sickly.’

(13) a. baan₃ yay₂ naa₃sa₁baay₁ khwaa₂ baan₃ lek₄
house big comfortable -er/more house small
‘A/The big house/ Big houses is/are more comfortable than a/the small one/ small ones.’

b. baan₃ lan₅ yay₂ naa₃sa₁baay₁ khwaa₂ baan₃ lan₅ lek₄
house Cl big comfortable -er/more house Cl small
‘The big house is more comfortable than the small one.’³

Without a classifier as in (12a) and (13a), the nominal expressions bear an indefinite or a definite interpretation without number specified. On the contrary, the phrases in (12b) and (13b) which contain classifiers can only be definite and singular.

A stative verb, on the other hand, can be preceded by a classifier only when it is embedded in a relative clause as in (14) below.

(14) a. *khaw₅ choop₃ phuu₃yin₅ khon₁ ruu₄/khaw₃chay₁
he like woman Cl know/understand

³ (13b) can also be interpreted as (13a). In that case, *lan*₅ is treated as a classifier-like word, not a classifier. This will be discussed in what follows.

b. khaw₃ ch
he li
'He likes'

3) Reduplication

A Thai adjective

diminutive meaning 'wh

stative verbs to behave

(15) and of stative verb

(15) a. khaw₃ m
he lo
'He looks
b. phuu₃ cha
men
'It is hard

(16) a. *mii₁ kh
have pers
'Is there
b. *khaw₃ ch
he li
'He likes

Warotamasikkha

under them the function

he thinks this is the only

Therefore, he insists on

4) Nominalization

Thai utilizes two

nominalization process.

as follows:

- b. khaw₅ chɔɔp₃ phuu₃yɪŋ₅ khon₁ thii₄ ruu₄/khaw₃chay₁
 he like woman Cl COMP know/understand
 'He likes the woman who knows/understands.'

(3) Reduplication

A Thai adjective can reduplicate its base without any change to express the diminutive meaning which is equivalent to 'fairly' or 'somewhat'. It is impossible for stative verbs to behave in the same way, as shown by the reduplication of adjectives in (15) and of stative verbs in (16) below.

- (15) a. khaw₅ mɔɔŋ₁ tææ₂ phuu₃yɪŋ₅ suay₅-suay₅
 he look only woman pretty-pretty
 'He looks only at fairly pretty women.'

- b. phuu₃chaay₁ dii₁-dii₁ haa₅ yaak₃
 men good-good find hard
 'It is hard to find fairly nice men.'

- (16) a. *mii₁ khon₁ ruu₄-ruu₄ sin₁thæk₂ may₄
 have person know-know syntax QP
 'Is there someone who somewhat knows syntax?'

- b. *khaw₅ chɔɔp₃ phuu₃yɪŋ₅ khaw₃chay₁-khaw₃chay₁ ŋaay₃
 he like woman understand-understand easy
 'He likes women who rather easily understand.'

Warotamasikkkhadit (1996:76-77) realizes that the reduplication of such words render them the function of noun modification which is a characteristic of adjectives. Yet, he thinks this is the only difference between this type of words and stative verbs. Therefore, he insists on putting them in the same category.

(4) Nominalization

Thai utilizes two morphemes *kaan*₁- and *khwaam*₁- as prefixes in the nominalization process. The difference between the two is captured by Hudak (1990:38) as follows:

1. *kaan*₁ - 'th
verbs and so
'city', *kaan*₁
2. *khwaam*₁ -
quality or st.

It happens that

they generally denote a

be used with *kaan*₁ - wh

- (17) a. *khaw*₅ P
he
'He talk
- b. **khaw*₅
he

- (18) a. *khaw*₅
he
'He tall
- b. *khaw*₅
he
'He tal

*A very limited num
when it follows the c

- (i) *pen*₁ *kaan*₁
be NOM-
'It is good
- (ii) *pen*₁ *kaan*₁
be NOM-
'It is hard

This type of structure
express the sentences

- (iii) *dii*₁ *thii*₃
good COM
'It is good
- (iv) *yaak*₃ *thii*₃
hard COM
'It is hard

1. *kaan*₁- 'the act of, affairs of, matter of' forms abstract nouns from verbs and some nouns: e.g. *len*₃ 'to play', *kaan*₁*len*₃ 'playing'; *miəŋ*₁ 'city', *kaan*₁*miəŋ*₁ 'politics'.
2. *khwaam*₁- 'the condition of' forms abstract nouns that express a quality or state e.g. *ruu*₄*sik*₂ 'to feel', *khwaam*₁*ruu*₄*sik*₂ 'feeling'.

It happens that Thai adjectives can only be prefixed by *khwaam*₁-, not *kaan*₁-, as they generally denote a quality or state⁴. The stative verb, on the contrary, can sometimes be used with *kaan*₁- when an act is the required interpretation.

- (17) a. *khaw*₅ *phuut*₃ *thiŋ*₅ *khwaam*₁*dii*₅
 he talk about NOM-good
 'He talks about goodness.'
- b. **khaw*₅ *phuut*₃ *thiŋ*₅ *kaan*₁*dii*₅
 he talk about NOM-good
- (18) a. *khaw*₅ *phuut*₃ *thiŋ*₅ *khwaam*₁-*khaw*₃*chay*₁
 he talk about NOM-understand
 'He talks about comprehension.'
- b. *khaw*₅ *phuut*₃ *thiŋ*₅ *kaan*₁-*khaw*₃*chay*₁
 he talk about NOM-understand
 'He talks about (the act of) understanding.'

⁴ A very limited number of Thai adjectives can be preceded by the prefix *kaan*₁-, but only when it follows the copula *pen*₁ in such a structure as below:

- (i) *pen*₁ *kaan*₁-*dii*₁ *thii*₃ *khaw*₅ *maa*₁
 be NOM-good COMP he come
 'It is good that he comes.'
- (ii) *pen*₁ *kaan*₁-*yaak*₃ *thii*₃ *raw*₁ *ca?*₂ *phop*₄ *kan*₁
 be NOM-hard COMP we will meet RECP
 'It is hard that we will meet.'

This type of structure, however, is borrowed from English. The natural way to express the sentences above is as in (iii)-(iv).

- (iii) *dii*₁ *thii*₃ *khaw*₅ *maa*₁
 good COMP he come
 'It is good that he comes.'
- (iv) *yaak*₃ *thii*₃ *raw*₁ *ca?*₂ *phop*₄ *kan*₁
 hard COMP we will meet RECP
 'It is hard that we will meet.'

The arguments

different from stative

3.3 Previous literature

Having given t

that Thai adjectives are

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first one is Sproat and

categories: direct and

seems to be only partial

syntactic classes of adj

Thai adjectives are seen

classifier by a 'mere-ty

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such a phenomenon wi

3.3.1 Sproat and Shih

Sproat and Shih

modification' when co

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> size > shape > color

The arguments above seem to sufficiently prove that this type of words is different from stative verbs. Therefore, they should be considered as adjectives in Thai.

3.3 Previous literature

Having given the arguments for the existence of adjectives in Thai, I will suggest that Thai adjectives are of two different types and they are generated in two distinct positions. To argue for my suggestions, three studies on adjectives will be presented. The first one is Sproat and Shih (1988) which claims that Thai adjectives fall into two categories: direct and indirect modifiers. Unfortunately, their account of Thai adjectives seems to be only partially right. The second one is Bernstein (1993) which proposes two syntactic classes of adjectives: regular attributive adjectives and *mere*-type adjectives. Thai adjectives are seemingly classifiable in the same way. But the requirement of a classifier by a '*mere*-type adjective' in Thai is reminiscent of the 'double definiteness' instance in Mainland Scandinavian languages. Therefore, the study by Kester (1996) on such a phenomenon will also be introduced.

3.3.1 Sproat and Shih (1988)

Sproat and Shih make a distinction between 'direct modification' and 'indirect modification' when considering English and Mandarin adjectival orderings. They suggest that the location of an adjective is cognitively-based; that is, the more comparisons or computations are involved, the further away from the head noun the adjective is. The orderings of various types of adjectives considered as 'direct modifiers' are thus 'quality > size > shape > color > material > provenance.' English adjectives are 'direct modifiers'

because they are subject

violation of such an o

(19) a. large r

b. *round

c. *large

The direct mod

restrictions as illustrat

(20) a. hao

good

b. *hong

red

(21) a. xiao

small

b. *yuan

roun

Unlike Eng

by 'de-adjective' c

order-free and has

they are not subject

(22) a. hao

goo

'nic

b. yua

rou

Concernin

that de-modifiers

Moreover, such a

this cannot appe

(24).

because they are subject to ordering restrictions above as demonstrated in (19) where the violation of such an ordering (19b,c) leads to ungrammaticality (p.469).

- (19) a. large round red apple
b. *round large red apple
c. *large red round apple

The direct modifiers or ‘*de*-less adjectives’ in Chinese display the same ordering restrictions as illustrated in (20) and (21) below (p.471).

- (20) a. hao hong pan-zi
good red plate
b. *hong hao pan-zi
red good plate
- (21) a. xiao yuan pan-zi
small round plate
b. *yuan xiao pan-zi
round small plate

Unlike English, however, Chinese also possesses ‘indirect modifiers’ represented by ‘*de*-adjective’ constructions. According to Sproat and Shih, this type of modifier is order-free and has the structure of relative clauses. The examples in (22) below show that they are not subject to ordering restrictions. (p.465).

- (22) a. hao-de yuan-de pan-zi
good-DE round-DE plate
‘nice round plate’
b. yuan-de hao-de pan-zi
round-DE good-DE plate

Concerning their similarity in structure to relative clauses, Sproat and Shih argue that *de*-modifiers use the same particle *de* as the relative clause as shown in (23). Moreover, such an adjective as *former* which never occurs in the predicate position, and thus cannot appear in relative clauses, is unable to function as indirect modification as in (24).

(23) Wo xi-hu
I like-
'the book

(24) a. *jei-ge
this-Cl
'*This
b. *qian-d
former
c. qian
former

They also claim

(simple modifiers) and

adjective or the word

modifiers do observe

indirect modifiers do

Shih (pp.483-484).

(25) a. maa_s
dog
'big b
b. *maa_s
dog

(26) a. maa_s
dog
'a big
b. maa_s
dog
'a big

The phrase in (26a)
'big', 'a dog whose c
argue in section 3.4.3
'like' word whereas th
The phrase in (26b)
reading is 'a dog who

(23) Wo xi-huan-de shu
 I like-DE book
 'the book which I like'

(24) a. *jei-ge zongtong qian
 this-Cl president former
 '*This president is former.'
 b. *qian-de zongtong
 former-DE president
 c. qian zongtong
 former president

They also claim that Thai, like Chinese, has two types of modification - direct (simple modifiers) and indirect (complex modifiers comprising a classifier and an adjective or the word *sii*, 'color' before a color adjective). Their reason is that direct modifiers do observe the ordering restrictions like other languages as shown in (25) while indirect modifiers do not as in (26). The examples (and judgments) are from Sproat and Shih (pp.483-484).

(25) a. maa₅ dam₁ yay₂
 dog black big
 'big black dog'
 b. *maa₅ yay₂ dam₁
 dog big black

(26) a. maa₅ sii₅-dam₁ tua₁ yay₂
 dog color-black Cl big
 'a big black dog'⁵
 b. maa₅ tua₁ yay₂ sii₅-dam₁
 dog Cl big color-black
 'a big black dog'⁶

⁵ The phrase in (26a) is ambiguous. Its interpretation can be either 'A/The black dog is big.', 'a dog whose color is black and whose body is big' or 'the big [black dog].' I will argue in section 3.4.3 that the first two readings result from *tua*, acting as a 'classifier-like' word whereas the third one is caused by *tua*, functioning as a classifier.

⁶ The phrase in (26b) is ambiguous between a phrasal and a sentential readings. The first reading is 'a dog whose body is big and whose color is black' and the second is 'The big

As earlier stated

That possesses 'indirect'

will argue that they do

That do not seem to be

(25b) above does not

confirm this.

(27) a. phuu₃-y

woman

'tall wh

b. phuu₃-y

woman

As is generally

order usually results

closer an adjective is

each other. That is w

adjacent adjective as

(28) a. maa₃

dog

'a big

b. maa

dog

'a b

In short, d

complex modifier

behavior with res

dog is black.' A
classifier respec

As earlier stated, Sproat and Shih's analysis is not completely right. I agree that Thai possesses 'indirect modifiers' as in (26) which I will term 'nominal modifiers'. But I will argue that they do not consist of a classifier and an adjective. Moreover, adjectives in Thai do not seem to observe the ordering restrictions as they claim in (25). To my ears, (25b) above does not sound bad. A similar example to (25) as demonstrated in (27) can confirm this.

- (27) a. phuu₃-yin₅ suuŋ₅ khaaw₅
 woman tall white
 'tall white woman'
 b. phuu₃-yin₅ khaaw₅ suuŋ₅
 woman white tall

As is generally known, variation in adjective order may occur. An alternation of order usually results from the relationship between a noun and an adjective, that is, the closer an adjective is to a noun, the closer semantic relationship they have with respect to each other. That is why a compound reading is normally derived from the noun and the adjacent adjective as shown in (28).

- (28) a. maa₅ dam₁ yay₂
 dog black big
 'a big dog of the black breed'
 b. maa₅ yay₂ dam₁
 dog big black
 'a black dog of the big breed'

In short, direct modification (simple adjective) and indirect modification (complex modifiers) in Thai as termed by Sproat and Shih seem to display the same behavior with regard to free ordering. I will show in what follows that these two types of

dog is black.' Again, the fact that *tua*, functioning as a 'classifier-like' word and a classifier respectively can account for the ambiguity.

modifications share s

they are generated in

adjectives which beh.

as called by Bernstein

3.2 Bernstein (199

Bernstein prop

NP and XPs above N

position generally cor

Adjectives in

small class of adjectiv

(30). In addition, ther

terminally but with d

(29) el libro

the book

'the red

(30) a. un n

a n

'a n

b.*un

a

(31) a. el

a

'a

b. e

a

Bernst

adjectives. B

modifications share several other characteristics, which makes it eligible to assume that they are generated in the same position. However, Thai possesses another group of adjectives which behave differently and which are fairly similar to ‘*mere*-type adjectives’ as called by Bernstein (1993) whose study is presented below.

3.3.2 Bernstein (1993)

Bernstein proposes two positions for adjectives in Romance - one is adjunction to NP and XPs above NP, and the other is the head of AP above NumP. The difference in position generally correlates with a difference in interpretation.

Adjectives in Romance are post-nominal in the unmarked case (29). However, a small class of adjectives such as *mere*, *other*, etc. are required to appear pre-nominally (30). In addition, there are cases where adjectives can occur either pre-nominally or post-nominally but with different interpretations (31).

(29) el libro rojo	(Spanish)
the book red	
‘the red book’	

(30) a. un mero accidente	(Spanish)
a mere accident	
‘a mere accident’	
b. *un accidente mero	
a accident mere	

(31) a. el simple hombre	(Spanish)
a simple man	
‘a simple/mere man’	
b. el hombre simple	
a man simple	
‘a simple-minded man’	

Bernstein accounts for the examples above by proposing two syntactic types of adjectives. Based on the similarity of adjectives to adverbs which are modifiers adjoined

to VP or XPs within
attributive adjectives
nominal domain. The
above NumP because
a regular attributive a

- (32) a. El libr
the boo
'The bo
b. *El acc
the acc
'*The

- (33) a. el lib
the bo
'the v
b. *un m
a ve
'a ver

Given the pr
assumption that a N
distribution of the a
(35) respectively.

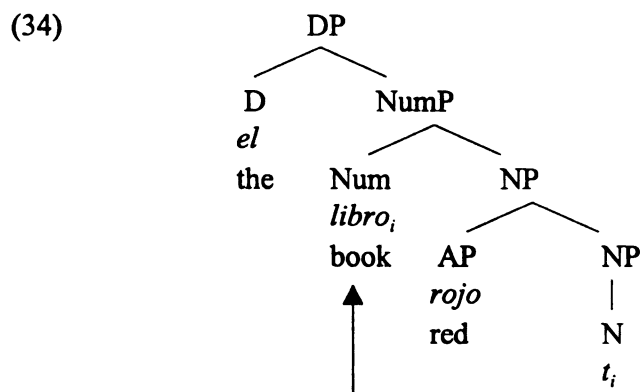
(34)

to VP or XPs within the verbal domain (Belletti 1990, Chomsky 1991), the regular attributive adjectives as in (29) are suggested to be APs adjoined to NP or XPs within the nominal domain. The *mere*-type adjective (30), on the other hand, is the head of AP above NumP because it cannot be used predicatively (32b) nor be modified (33b), unlike a regular attributive adjective, as shown below.

- (32) a. El libro es rojo. (Spanish)
 the book is red
 ‘The book is red.’
 b. *El accidente es mere
 the accident is mere
 ‘*The accident is mere.’

- (33) a. el libro muy rojo (Spanish)
 the book very red
 ‘the very red book’
 b. *un muy mere accidente
 a very mere accident
 ‘a very mere accident’

Given the proposal of two distinct positions of adjectives together with the assumption that a N in Romance has to move to Num to pick up number, the different distribution of the adjectives in (29) and (30) is explained by the structures in (34) and (35) respectively.



(35)

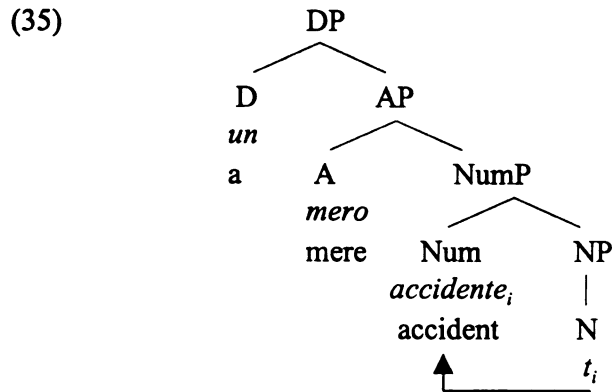
The adjective
different interpretation
generated in different
them as shown below

- (36) a. El h
 'The
 b. el h
 the
 'the
 c.*el
 the
 '*

When the
(36a) and be mo
AP adjunct (37a)
(36a) nor be mo
AP above Num

- (37) a. [
 b. [

Thai app
of Thai adjective



The adjective in (31) which can occur either pre-nominally or post-nominally with different interpretations is thus handled by the suggestion that the adjective is base-generated in different positions. Predication and modification can be used to distinguish them as shown below.

- (36) a. El hombre es simple. (Spanish)
 ‘The man is simple-minded.’ (cf. *‘The man is mere.’)
 b. el hombre muy simple
 the man very simple-minded
 ‘the very simple-minded man’
 c. *el muy simple hombre
 the very mere man
 *‘the very mere man’

When the adjective *simple* means ‘simple-minded’, it can be used predicatively (36a) and be modified (36b). Therefore, it is a regular attributive adjective generated as NP adjunct (37a). When *simple* means ‘mere’, it cannot be used in a predicate context (36a) nor be modified (36c). Thus, it is a *mere*-type adjective, generated as the head of AP above NumP (37b).

- (37) a. [_{DP} el [_{NumP} hombre_i [_{NP} simple t_i]]]
 b. [_{DP} el [_{AP} simple [_{NumP} hombre_i [_{NP} t_i]]]]

Thai appears to have the two types of adjectives as classified by Bernstein. Most of Thai adjectives can be used predicatively and be modified; hence, they should be

considered as regular

hand, behave like the

predicative context as

(38) *naay, k

boss for

*The b

However, the

That is, unlike other

inserted before them

definite, as shown b

(39) a. *naa

bos

'the

b. naa

bos

'th

This phen

Scandinavian lan

333 Kester (19

Indefinite

that the definite

an enclitic to the

(40) a. en

a

'a

that does not h

on 'former' wh

considered as regular attributive adjectives. A small number of adjectives, on the other hand, behave like the *mere*-type adjectives. For example, they cannot be used in a predicative context as shown in (38).⁷

- (38) *naay₁ kɔn₂
 boss former
 ‘*The boss is former.’

However, the *mere*-type adjectives in Thai display some different characteristics. That is, unlike other adjectives that can directly modify nouns, classifiers must be inserted before them. Plus, noun phrases containing such adjectives must be interpreted as definite, as shown below.

- (39) a. *naay₁ kɔn₂
 boss former
 ‘the former boss’
 b. naay₁ khon₁ kɔn₂
 boss Cl former
 ‘the former boss’ (‘*a former boss’)

This phenomenon is somewhat like the ‘double definiteness’ instance in Mainland Scandinavian languages, as discussed by Kester (1996).

3.3.3 Kester (1996)

Indefinite and definite noun phrases in Scandinavian languages are different in that the definite article which is morphologically similar to the indefinite one surfaces as an enclitic to the noun as shown below.

- (40) a. en bil (Swedish)
 a car
 ‘a car’

⁷ Thai does not have a word equivalent to the adjective *mere*; therefore, I use the word *kɔn₂*, ‘former’ which belongs to the same type to represent the *mere*-type adjectives.

- b. bilen
- car-the
- 'the car

However, when

another definite article

- (41) a. den stol
- the big
- b. *stora
- big.DF

The above phe

instance, Kester reana

carrying the feature [-

that the enclitic *en* is a

examples where the a

presence excludes the

- (42) a. Den p
- the p
- 'The p
- b. Den sj
- the se
- 'There

Moreover, the

(43) as illustrated in

'ference' as in (44).

[potentiality] and/or

Adjectives in Mainl.
Indefiniteness. How
is only one definite m
gender.

- b. bilen
car-the
'the car'

However, when the definite noun phrase is modified by a definite adjective, another definite article must be inserted before the adjective as in (41).⁸

- (41) a. den stora bilen (Swedish)
the big.DEF car-the
- b. *stora bilen
big.DEF car-the

The above phenomenon has been called 'double definiteness'. To account for this instance, Kester reanalyzes the enclitic article *en* as the head of a functional projection carrying the feature [+familiar] or [+referential]. The assumption is drawn from the fact that the enclitic *en* is associated with a specific reading as shown in the following examples where the absence of *en* gives preference to a non-specific reading (42a) and its presence excludes the generic reading (42b).

- (42) a. Den pilot_ som ska köra vårt plan måste vara erfaren (Swedish)
the pilot who will drive our plane must be experienced
'The pilot who is to drive our plane must be experienced.'
- b. Den sjuårige pojke (*n) som klarar detta finns inte
the seven-year-old boy (*the) who manages this exists not
'There is no seven-year-old boy who can manage this.'

Moreover, the enclitic article *en* is claimed to have 'deictic reference' (Delsing 1993) as illustrated in (43) where the definite article may be omitted, and also 'anaphoric reference' as in (44). Kester thus assumes that the enclitic article *en* has the feature [+referentiality] and/or [+familiarity].

⁸ Adjectives in Mainland Scandinavian languages are inflected for number, gender and (in)definiteness. However, the 'definite' paradigm is morphologically poor. That is, there is only one definite morpheme in these languages and it does not reflect either number or gender.

(43) a. (den) fr
(the) Fr
'the Fr
b. (den) tr
(the) th
'the th

(44) John köpt
John boug

With the propo

[-familiar], Kester ex

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definite adjective unde

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(45)

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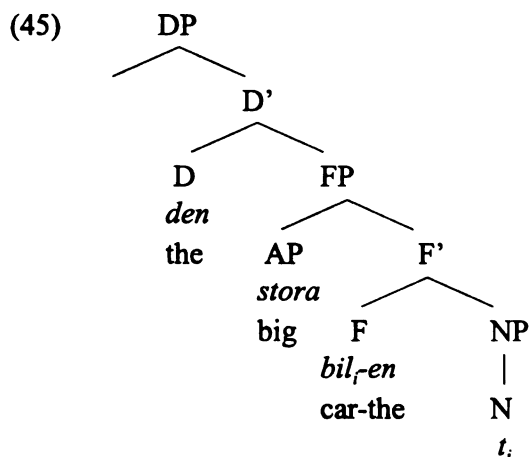
the

The insertion of
'core-binding' as prop

- (43) a. (den) franska revolutionen
 (the) French revolution-the
 'the French revolution'
 b. (den) tredje gången
 (the) third time-the
 'the third time'

- (44) John köpte ett vitt hus. Det vita huset var mycket stort
 John bought a white house. The white house-the was very big.

With the proposal that the enclitic *en* is the head of FP with [+referential] or [+familiar], Kester explains the 'double definiteness' phenomenon as follows. The adjective which is inflected with the definite morpheme *a* is assumed to be base-generated in the specifier of the FP, assuming Cinque's (1993) proposal of the generation of adjectives as specifiers of various FPs between DP and NP. The noun with either [+familiar] or [+referential] feature moves to the head of FP as left adjunction for feature checking with the head FP under head-head relation and for feature checking with the definite adjective under spec-head agreement. The structural representation of (41a) is as portrayed in (45) below.



The insertion of another definite article is explained by 'theta-identification' and 'theta-binding' as proposed by Higginbotham (1985) who suggests that nouns and

adjectives have theta

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Kester. Moreover, the

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3.4 Types and position

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3.4.1 Regular attributive

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are regular attributive

adjectives discussed b

adjuncts.

adjectives have theta-roles to be discharged. According to ‘theta-identification’, the open positions of the noun and the adjective must be identified and Kester proposes that the identification takes place via a Spec-head relation. This is why N moves to F to be in a Spec-head configuration with the adjective. ‘Theta-binding’, on the other hand, requires that the open position of the noun be bound by the determiner. Therefore, a definite article is inserted in the D position.

As previously mentioned, the *mere*-type adjectives in Thai are always present with an introduction of classifiers and always give the nominal expressions the definite reading. Such adjectives may, therefore, have the feature [+referential] as claimed by Kester. Moreover, the enclitic article *en* seems to have similar properties to the classifier. I will explore this issue in detail in the following section.

3.4 Types and positions of noun modifiers

I will discuss the three types of noun modifiers in this section. Adjectives will be classified into two types: regular attributive adjectives and ‘referential’ adjectives (derived from *mere*-type adjectives (Bernstein 1993) and definite adjectives (Kester 1996)). The ‘indirect modification’ as claimed by Sproat and Shih is another type of noun modifier called ‘nominal modifiers’. Their positions will also be spelled out.

3.4.1 Regular attributive adjectives

I assume that adjectives appearing right after nouns in Thai nominal expressions are regular attributive adjectives. They behave in the same way as the attributive adjectives discussed by Bernstein (1993) and therefore they are suggested to be NP adjuncts.

3.4.1.1 Characteristics

Taking into consideration the characteristics of adjectives can be used in the following ways, as elaborated below.

(1) Post-copular position

As mentioned above, the ambiguity between the copula and the adjective stands alone without the noun.

- (46) a. nak₁-ri₁
student
'a the d
'A The
b. maa₁
dog
'a the f
'A The

The only difference between the two sentences is that a pause is required between the copula and the adjective in the first sentence, while no pause is required in the second sentence.

(2) Modification

This type of modification is shown in (47) below.

- (47) a. phuu₃y₃
woman
'a very
b. baan₃
house
'a house

3.4.1.1 Characteristics of regular attributive adjectives

Taking into consideration Sproat and Shih (1988) and Bernstein (1993), regular adjectives can be used predicatively, be modified and behave like relative clauses as elaborated below.

(1) Post-copular position

As mentioned earlier, Thai does not use the copula before an adjective. Therefore, the ambiguity between a sentence and a noun phrase generally arises when an expression stands alone without the context as shown in (46) below.

- (46) a. nak₄-rian₁ kha₁-yan₅
 student diligent
 ‘a/the diligent student(s)’
 ‘A/The student(s) is/are diligent.’
 b. maa₅ ?uan₃
 dog fat
 ‘a/the fat dog’
 ‘A/The dog(s) is/are fat.’

The only difference between the nominal and the clausal interpretations is that a pause is required between the noun phrase and the adjective when the sentential reading is targeted.

(2) Modification

This type of adjective can also be modified by an intensifier and a complement as shown in (47) below.

- (47) a. phuu₃yiŋ₃ suay₂ cat₂
 woman pretty very
 ‘a very pretty woman’
 b. baan₃ yay₂ miiən₃ wan₁
 house big like palace
 ‘a house big as a palace’

(3) Similarity to relative

As expected,

be used in a relative

clauses as in (48).

(48) a. nak₄-ri

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b. maa₃ t

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§4.1.2 Position of res

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(49) a. baan₃

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(3) Similarity to relative clauses

As expected, the ability to be used predicatively is compatible with the ability to be used in a relative clause. Therefore, the examples in (46) can be turned into relative clauses as in (48).

- (48) a. nak₄-rian₁ thii₃ kha₁-yan₅
student COMP diligent
'a/the student(s) who is/are diligent'
b. maa₅ thii₃ ?uan₃
dog COMP fat
'a/the dog(s) which is/are fat'

Having been shown to behave like regular attributive adjectives according to Bernstein's criteria, they will be argued below to be NP adjuncts.

3.4.1.2 Position of regular attributive adjectives

Because of the lack of ordering restrictions (49), I will propose that Thai adjectives are all adjoined to NP.

- (49) a. baan₃ yay₂ khaaw₅ than₁sa₁may₅
house big white modern
'a modern big white house'
b. baan₃ khaaw₅ yay₂ than₁sa₁may₅
house white big modern
c. baan₃ than₁sa₁may₅ yay₂ khaaw₅
house modern big white

The free ordering indicates that Thai adjectives are adjoined to only one maximal projection which is NP in this case. The switching around of adjuncts of an XP is acceptable. Furthermore, I will assume that they are base-generated as NP right-adjuncts. Left adjunction is excluded here because N movement is to be assumed without motivation other than for the word order fact.

To sum up, the

represented in (50).

(50)

3.4.2 Referential adjectives

This type of adjective

mere-type adjective in

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and yields a definite n

3.4.2.1 Characteristics

Such Thai adjectives

exactly the same as the

post-copular position

(51) a. *naay₁

boss

'*The

b. *luuk₃

child

'*The

c. *phuu₃

woman

'*The

(52) a. *naay₁

boss

'*the b

b. *luuk₃ t

child

'*the c

To sum up, the syntactic position of a regular attributive adjective is as represented in (50).



3.4.2 Referential adjectives

This type of adjective behaves differently from a regular adjective. It is like a *mere*-type adjective in that it cannot be used predicatively nor be modified. However, I term them ‘referential’ owing to the fact that its presence always introduces a classifier and yields a definite reading.

3.4.2.1 Characteristics of referential adjectives

Such Thai adjectives as *kɔn*₂ ‘former’, *diaw*₁ ‘only’ and *diaw,kan*₁ ‘same’ behave exactly the same as the *mere*-type adjectives; namely, they cannot be in the predicate or post-copular position (51) and therefore they cannot be in the relative clause (52).

- (51) a. *naay₁ kɔn₂
 boss former
 ‘*The boss is former.’
 b. *luuk₃ diaw₁
 child only
 ‘*The child is only.’
 c. *phuu₃yɪŋ₅ diaw₁kan₁
 woman same
 ‘*The woman is same.’

- (52) a. *naay₁ thii₃ kɔn₂
 boss COMP former
 ‘*the boss who is former.’
 b. *luuk₃ thii₃ diaw₁
 child COMP only
 ‘*the child who is only.’

c.*phu
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the definite reading

(53) a. naay₁
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(54) a. nit₁ p
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Nit v

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An only child' is

- c. *phuu₃yiŋ₅ thii₃ diaw₁kan₁
 woman COMP same
 ‘*the woman who is same.’

However, this type of adjective in Thai is always preceded by a classifier and take the definite reading as demonstrated in (53)-(55).

- (53) a. naay₁ khon₁ kɔn₂ cay₁-dii₁
 boss Cl former heart-good
 ‘The former boss is kind.’⁹

- b. *naay₁ kɔn₂ cay₁-dii₁
 boss former heart-good

- (54) a. nit₄ pen₁ luuk₃ khon₁ diaw₁
 Nit be child Cl only
 ‘Nit is the only child.’¹⁰

- b. *nit₄ pen₁ luuk₃ diaw₁
 Nit be child only

- (55) a. nit₄ kap₂ but₄sa₁ba₁ khii₁ phuu₃yiŋ₅ khon₁ diaw₁kan₁
 Nit with Busaba be woman Cl same
 ‘Nit and Busaba are the same woman.’

- b. *nit₄ kap₂ but₄sa₁ba₁ khii₁ phuu₃yiŋ₅ diaw₁kan₁
 Nit with Busaba be woman same

More importantly, regular attributive adjectives can occur in such a position too, as shown in (56). As referential adjectives must occur in that position whereas attributive adjectives may occur there and are interpreted referentially, I will call adjectives that appear after the classifier ‘referential’ adjectives.

- (56) a. phuu₃yiŋ₅ khon₁ suuŋ₁
 woman Cl tall
 ‘the tall woman’

⁹ Although ‘former’ can occur in an indefinite noun phrase in English e.g. a former boss, in Thai the noun phrase containing this adjective must be definite. The indefinite reading of ‘former’ is expressed by different words such as *khaw₂* ‘old’ or *nay₁?a₁dii₂* ‘in the past’.

¹⁰ ‘An only child’ is expressed by a compound noun ‘*luuk₃toon₁*’.

b. naay
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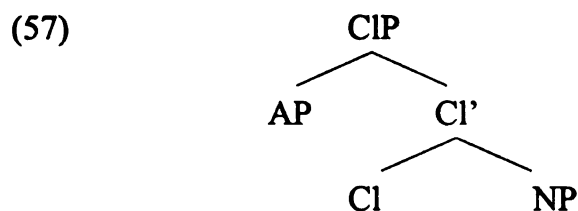
head-initial and the

b. naay₁ khon₁ ?uan₁
 boss Cl fat
 'the fat boss'

Therefore, what matters here is the notion of definiteness or referentiality which is associated with an adjective rather than the type of an adjective. I thus hypothesize that such an adjective carries the feature [+referential]. Hence, I will call them 'referential' adjectives for simplicity. Their position will be justified below.

3.4.2.2 Position of referential adjectives

Recall the phenomenon of 'double definiteness' discussed by Kester (1996). The definite adjective is assumed to be in the specifier of an FP headed by the enclitic article *en* which has the feature [+referential] or [+familiar]. As discussed in Chapter 2, one function of a classifier is referentialization. The presence of a classifier triggers the specific reading (Bisang 1993, Pacioni 1996) and blocks the generic reading (Cheng and Sybesma 1999). (See section 2.2.) The classifier thus seems to have the same property as the enclitic *en*. I will therefore propose that a referential adjective in Thai is generated in the specifier of ClP. The fact that a referential adjective cannot directly modify the head noun is because the noun in a classifier language is a kind. A classifier is thus needed to individualize and referentialize the noun to make it compatible with the referential adjective. The structural representations of a referential adjective in Thai according to the head-initial and the head-final analyses are portrayed as in (57) and (58) respectively.



(58)

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3.4.3 Nominal mo

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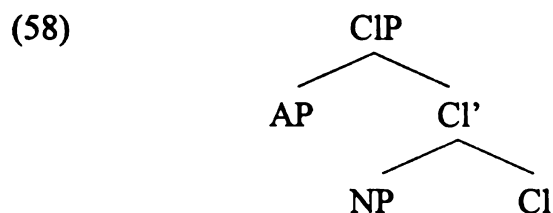
1983, Hudak 1990

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Sproat and Shih a
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yields merely defin
classifier and an ad



Another piece of evidence supporting my proposal comes from the following instance in which two opposite adjectives can co-occur.

- (59) *kluay₃ lek₄ luuk₃ yay₂*
 banana small Cl big
 'the big [small banana]'

Sentence (59) can be accounted for as follows. The adjective *lek₄* 'small' is a regular adjective generated as NP adjunct so the constituent *kluay₃ lek₄* 'banana small' behaves like a compound and denotes a kind (of small bananas). The classifier then picks out of the set of bananas denoted by NP an individual banana with the property as expressed by the referential adjective *yay₂* 'big'.

In short, it seems that the proposal of a referential adjective being generated in the specifier of CIP is not unreasonable.

3.4.3 Nominal modifiers

Thai noun phrases have been claimed to be able to contain more than one classifier, especially when the noun is modified by an adjective (Hundius and Kölver 1983, Hudak 1990) as in the following examples.¹¹

- (60) a. *chan₃ hen₃ maa₃ tua₁ yay₂ saam₃ tua₁*
 I see dog Cl big three Cl
 'I saw three big dogs'

¹¹ Sproat and Shih also consider this instance as [Cl + Adj]. But as I argued in the last section, an adjective after a 'true' classifier is a referential adjective and its presence yields merely definiteness. This type of construction therefore is not formed by a classifier and an adjective, but a classifier-like word and a regular adjective.

b. luuk
ballo
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together with the fo

words 'classifier-like

3.4.3.1 Characterist

The nominal

'classifier-like' mor

modifies the head n

expressions below:

- (61) a. a hard
- b. a blue
- c. a white

As earlier m

which can be a noun

Consider (62) below

- (62) phuu₃yi
- woman
- 'a tall w

Since tua₁ is

denoting the meanin

'body' causes unacce

b. luuk₃-poon₂ luuk₃ lek₄ saam₅ luuk₃ haay₅ pay₁
 balloon Cl big three Cl lose go
 'Three small balloons were lost.'

I will show that this is not the fact. The true classifier is the one after the numeral in the above cases. The word which is homophonous with the classifier is a noun which, together with the following adjective, modifies the head noun. I will call this type of words 'classifier-like' morphemes (C-L) and this type of modifiers 'nominal modifiers'

3.4.3.1 Characteristics of nominal modifiers

The nominal modifiers I will talk about here are constructed from a noun or a 'classifier-like' morpheme (C-L) modified by an adjective and the whole unit in turn modifies the head noun. They have the similar construction to English nominal expressions below:

- (61) a. a hard-cover book
 b. a blue-collar job
 c. a white-tie affair

As earlier mentioned, some words are homophonous with classifiers such as *tua*, which can be a noun meaning 'body' or a classifier for inanimate objects and animals.

Consider (62) below.

- (62) phuu₃yiŋ₅ tua₁ suuŋ₅
 woman body tall
 'a tall woman'

Since *tua*₁ is not the classifier for human beings, it is used in (62) as a noun denoting the meaning of 'body'. Therefore, an adjective which is incompatible with 'body' causes unacceptability as in (63).

(63) *phuu₃yɪŋ₅ tua₁ cha₁laa₂
 woman body smart
 'a smart woman'

If the 'true' classifier *khon*₁, which is used with human beings is employed, both adjectives in (62)-(63) are acceptable as in (64).

(64) a. phuu₃yɪŋ₅ khon₁ suuŋ₅
 woman Cl tall
 'the tall woman'
 b. phuu₃yɪŋ₅ khon₁ cha₁laa₂
 woman Cl smart
 'the smart woman'

Another difference between the classifier and the classifier-like word is that only the 'true' classifier (i.e. *khon*₁) can be used with a numeral (65a) whereas the classifier-like element (i.e. *tua*₁) cannot (65b).

(65) a. phuu₃yɪŋ₅ tua₁ suuŋ₅ saam₅ khon₁
 woman body tall three Cl
 'three tall women'
 b. *phuu₃yɪŋ₅ tua₁ suuŋ₅ saam₅ tua₁
 woman body tall three body

Consequently, a noun phrase may be ambiguous between definiteness and indefiniteness when a word that can be either a classifier or a classifier-like morpheme such as *tua*₁ shows up. For instance, the noun phrase in (66) is definite when *tua*₁ is used as a classifier. On the other hand, it may be definite or indefinite when *tua*₁ is used as a noun or a classifier-like word.

(66) khun₁ khəəy₁ hen₅ maa₅ tua₁ dam₁ may₄
 you EXP see dog Cl/C-L black QP
 'Have you ever seen a/the black dog?'

As stated e.g.

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(1) Post-copular po

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(67) a. phu

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As stated earlier, nominal modifiers are similar to regular adjectives in many respects as shown below.

(1) Post-copular position

Like regular attributive adjectives, nominal modifiers can be used predicatively as shown in (67).

- (67) a. phuu₃yiŋ₅ khon₁ nan₄ tua₁-suuŋ₅
 woman Cl that body-tall
 ‘That woman is tall.’
 b. luuk₃poon₂ bay₁ nii₄ luuk₃-too₁
 balloon Cl this C-L-big
 ‘This balloon is big.’

(2) Similarity to relative clauses

Nominal modifiers can also be put into relative clauses without any change in meaning as demonstrated below.

- (68) a. chan₅ ruu₄chak₂ phuu₃yiŋ₅ tua₁-suuŋ₅
 I know woman body-tall
 ‘I know a/the tall woman.’
 b. chan₅ ruu₄chak₂ phuu₃yiŋ₅ thii₃ tua₁-suuŋ₅
 I know woman COMP body-tall
 ‘I know a/the woman who is tall and sexy.’

(3) Free-ordering

Nominal modifiers can recur unlimitedly as shown in (69) below and their orders can be switched around.

- (69) a. phuu₃yiŋ₅ tua₁-suuŋ₅ phiw₅-khaaw₅ hun₂-dii₁
 woman body-tall complexion-white figure-good
 phom₅-sii₅-blon₁ khon₁ nan₄
 hair-color-blond Cl that
 ‘that sexy, tall, white, blond woman’
 b. luuk₃poon₂ sii₅-khaaw₅ luuk₃-too₁ son₁-klom₁
 balloon color-white C-L-big shape-round

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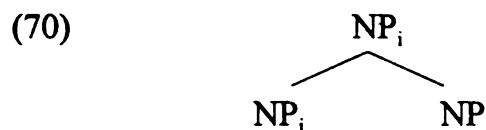
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bay₁-kaw₂ bay₁ nan₄
 C-L-old Cl that
 'that big round old white balloon'

It is clear from (69b) that two different morphemes *luuk*₃ and *bay*₁ which can both function as the classifiers of *luuk*₃*poon*₂ 'balloon' because they denote round objects can occur together within a phrase. They can, moreover, appear anywhere after the head noun, i.e. close to it or be separated from it by some other nominal modifiers. This proves that they are in the class of nominal modifiers. And a nominal expression in Thai can have only one classifier.

3.4.3.2 Position of nominal modifiers

Since nominal modifiers are similar to regular attributive adjectives in all respects concerned, I will assume that they are base-generated in the same position i.e. NP right-adjuncts as illustrated below.



3.5 Distribution and interpretation of modified noun phrases in Thai

Having provided arguments for the three types of noun modifiers together with their positions, I will discuss the distribution and interpretation of noun phrases containing each of them.

3.5.1 Noun phrases containing regular attributive adjectives

A nominal expression containing a regular adjective has free distribution and can express indefiniteness (71) and definiteness (72) without number specified as well as generic reading (73) as demonstrated below.

- (71) a. mii₁ rom₃ khiiaw₅ yuu₂ bon₁ to?₄
 have umbrella green stay on table
 'There is/are a green umbrella/ green umbrellas on the table.'
- b. chaam₁ lek₄ may₃ pɔɔ₁ say₂ kææŋ₁ rɔk₂
 bowl small not enough put curry PRT
 'A small bowl cannot hold the curry.'
- (72) a. chan₅ tham₁ rom₃ hay₅ sɔŋ₅ khan₁ lææw₄
 I make umbrella lose two Cl PRF
 'I have lost two umbrellas.'
- chan₅ rak₄ rom₃ khiiaw₅ maak₃ sa₄-duay₃
 I love umbrella green much PRT
 'I love the green one very much.'
- b. chaam₁ hok₂ bay₁ thii₃ chan₅ sii₄ maa₁ mii₁ sɔŋ₅ kha₁naat₂
 bowl six Cl COMP I buy come have two size
 'The six bowls I bought is of two sizes.'
- chaam₁ lek₄ chay₄ say₂ khaaw₃ chaam₁ yay₂ chay₄ say₂ kææŋ₁ ciit₂
 bowl small use put rice bowl big use put soup
 'The small ones are for rice and the big ones for soup.'
- (73) a. chan₅ choɔp₃ chaa₁ khiiaw₅
 I like tea green
 'I like green tea.'
- b. chaam₁ yay₂ cu?₂ maak₂ kwaa₂ chaam₁ lek₄
 bowl big hold much -er bowl small
 'The big bowl has more capacity than the small bowl.'

Only the introduction of a numeral can make the number explicit. And as stated in the previous section, a quantified noun phrase normally displays an indefinite reading as shown in (74).

- (74) a. mii₁ rom₃ khiiaw₅ niŋ₂ khan₁ yuu₂ bon₁ to?₄
 have umbrella green one Cl stay on table
 'There is one green umbrella on the table.'
- b. mii₁ chaam₃ yay₂ saam₅ bay₁ yuu₂ bon₁ to?₄
 have bowl big three Cl stay on table
 'There are three big bowls on the table.'

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Similar to a quantified bare noun, it is impossible for a quantified noun phrase with a regular attributive adjective to carry a definite interpretation as demonstrated by the ungrammaticality of the example below.

- (75)*duu₁ rom₃ khiiaw₃ saam₃ khan₁ si₂ suay₃ can₁
 look umbrella green three Cl PRT pretty very
 ‘Look at the three green umbrellas. They are very pretty.’

In the following section, I will show that the assumption that nominal modifiers and regular attributive adjectives in Thai are syntactically equivalent is further supported by the interpretation.

3.5.2 Noun phrases containing nominal modifiers

Since nominal modifiers are syntactically similar to regular attributive adjectives, they behave in the same way in terms of interpretation and distribution. That is, they are distributionally free and they can exhibit an indefinite (76) and a definite reading (77) without number specified as well as generic (78).

- (76) a. mii₁ phuu₃yin₃ tua₁-suun₃ maa₁ haa₃ khun₁
 have woman C-L tall come see you
 ‘There is/are a tall woman/tall women coming to see you.’
 b. maa₃ tua₁ yay₂ kat₂ dek₂
 dog C-L big bite child
 ‘A big dog bit a child.’

- (77) a. mii₁ phuu₃yin₃ maa₁ sam₃phaat₃ n₃aan₃ son₃ khon₁
 have woman come interview job two Cl
 ‘Two women came for job interviews.’
 phuu₃yin₃ tua₁ suun₃ duu₁ cha₁laat₂
 woman C-L tall look smart
 ‘The tall woman looks smart.’
 b. maa₃ haa₃ tua₁ kat₂ kan₁ naa₃ baan₃
 dog five Cl bite RECP front house
 ‘Five dogs fought in front of the house.’

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maa₅ tua₁ yay₂ suu₃ maa₅ tua₁ lek₄ may₃ day₃
 dog C-L big fight dog C-L small not can
 'The big dogs lost to the small ones.'

- (78) a. chan₅ choop₃ phuu₃yiŋ₅ tua₁ suuŋ₅
 I like woman C-L tall
 'I like tall women.'
 b. maa₅ tua₁ yay₂ mak₄ duu₂
 dog C-L big usually fierce
 'The big dog is usually fierce.'

When a noun phrase with a nominal modifier is quantified, the phrase gets an indefinite reading as in (79).

- (79) a. *duu₁ phuu₃yiŋ₅ tua₁-suuŋ₅ saam₅ khon₁ si₂
 look woman C-L tall three Cl PRT
 'Look at the three tall women.'
 b. mii₁ phuu₃yiŋ₅ tua₁-suuŋ₅ saam₅ khon₁ yuu₂ nay₁ ban₃
 have woman C-L tall three Cl stay in house
 'There are three tall women in the house.'

To sum up, noun phrases containing nominal modifiers are like noun phrases with regular adjectives in both interpretation and distribution.

3.5.3 Noun phrases containing referential adjectives

Recall that a noun phrase containing a referential adjective can take only a definite, specific reading. That is why it usually occurs as an answer to the question *NP Cl which* 'which N' as illustrated below.

- (80) A: chan₅ yaak₂ day₃ muak₂ saam₅ bay₁
 I want get hat three Cl
 'I want three hats.'
 B: saam₅ bay₁ nay₅
 three Cl which
 'Which three?'
 A: saam₅ bay₁ lek₄
 three Cl small
 'The three small ones.'

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A's answer to B *saam, bay, lek*, 'the three small ones' implies that there are only three small hats in that place.

Not surprisingly, a noun phrase containing a referential adjective cannot display an indefinite or a generic reading as demonstrated below.

- (81) a. **mii₁ rom₃ khan₁ khiaw₅ yuu₂ bon₁ to?₄*
 have umbrella Cl green stay on table
 '*There is the green umbrella on the table.'
 b. **phuu₃ chaay₁ khon₁ ?uan₃ may₃ naa₃ duu₁*
 man Cl fat not good-looking
 'Fat men are not good-looking.'

Concerning number, such a noun phrase always denotes singularity. This fact can explain why (82) is unacceptable.

- (82) **naay₁ khon₁ kɔn₂ saam₅ khon₁*
 boss Cl former three Cl

Since *naay, khon, kɔn*, 'the former boss' carries a definite singular reading, the attachment of *saam, khon*, 'three Cl' causes contradiction.

To quantify such a construction, a number has to be inserted in front of the classifier as in (83). Unlike other quantified noun phrases, however, the quantified noun phrases with referential adjectives are definite.

- (83) a. *rom₃ saam₅ khan₁ khiiaw₅ suay₅ thii₃ sut₂*
 umbrella three Cl green pretty -est
 'The three green umbrellas are the prettiest.'
 b. *chan₅ may₃ choɔp₃ naay₁ saam₅ khon₁ khɔn₂*
 I not like boss three Cl former
 'I don't like the three former bosses.'

And as seen in (83), a noun phrase with a referential adjective is free in distribution like definite bare nouns.

In brief, the noun phrase with a referential adjective carries only a definite interpretation. When the numeral is absent, the singularity is the sole reading available. Generic interpretation is impossible for such a construction.

3.6 Conclusion

I have shown that Thai possesses a word class of adjectives which are generated in two different positions. Moreover, I have also argued for a third type of noun modifier which has been claimed in the previous literature to be a classifier. I suggest that they are, in fact, a type of noun called ‘classifier-like’ words. These words together with their modifying adjectives modify the head nouns of the phrases. They behave very similarly to regular adjectives in various respects.

The two types of adjectives in Thai are classified according to their interpretation and distribution. Regular attributive adjectives can express either a definite or an indefinite reading and they appear right after nouns. Referential adjectives, on the other hand, render noun phrases containing them the definite reading and have to be preceded by a classifier. I, therefore, propose a different position for each type. Regular attributive adjectives are generated as NP right-adjuncts but may also appear as the specifier of CIP whereas referential adjectives must be generated as the specifier of CIP. Since nominal modifiers are similar to regular adjectives in all aspects, they are assumed to be NP right-adjuncts.

Modified noun phrases in Thai, like bare nouns, are not restricted in distribution. Their differences in interpretation are summarized in the table below.

	Definite		Indefinite		Generic
	Singular	Plural	Singular	Plural	
N + Regular APs	+	+	+	+	+
N + Nominal modifier	+	+	+	+	+
N + Referential APs	+	+	-	-	-

Table 1: Summary of interpretations expressed by noun phrases containing
different types of noun modifiers.

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CHAPTER 4

MODIFIED NOUN PHRASES

In this chapter I will provide the analyses of noun phrases modified by the three types of noun modifiers mentioned in the previous chapter and show that the head-final analysis is to be discarded because it fails to account for noun phrases containing referential adjectives and demonstratives. This strongly supports the idea that the noun phrase in Thai is strictly head-initial.

4.1 Introduction

In Chapter 2 I argued that the head-initial analysis is more attractive than the head-final analysis because it requires only NP movement to account for all the relevant cases. The head-final analysis, on the other hand, needed three distinct syntactic operations.

I will explore in this chapter Thai noun phrases containing the noun modifiers elaborated in Chapter 3. As discussed there, noun phrases containing regular attributive adjectives and nominal modifiers display the same interpretation and distribution. They will, therefore, be discussed together. Noun phrases containing referential adjectives, on the other hand, exhibit different behaviors than the other two; that is, they can take only a definite reading. I will show that the latter type of modified noun phrases causes problems for the head-final approach.

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Besides the three types of noun modifiers, demonstratives will also be discussed.

As mentioned earlier, the demonstrative in Thai is the terminal element in the noun phrase as illustrated below.

- (1) a. phuu₃yiŋ₅ tua₁-suuŋ₅ khon₁ nan₄
woman body-tall Cl that
'that tall woman'
b. rom₃ khiaw₅ khan₁ nii₄
umbrella green Cl this
'this green umbrella'

I will show that Thai demonstratives display the same distribution and interpretation as referential adjectives in some cases but not in others.

The outline of the chapter is as follows. Section 2 concerns the analyses of noun phrases containing each of the three types of noun modifiers mentioned in Chapter 3. Section 3 deals with Thai demonstratives in terms of their distribution, interpretation and suggested syntactic position, and an analysis is given in section 4. Section 5 concludes the chapter.

4.2 Analyses of modified noun phrases in Thai

Because the interpretations and distributions of noun phrases containing regular attributive adjectives and those containing nominal modifiers are the same, they will be discussed together. I will show that they can be successfully analyzed by both the head-initial and the head-final approaches. Noun phrases containing referential adjectives, on the contrary, require additional operations. I will show that the head-final approach encounters problems when dealing with these cases.

4.2.1 A noun phrase with a regular attributive adjective/a nominal modifier

Recall that a regular attributive adjective and a nominal modifier are suggested to be generated as NP right-adjuncts. Noun phrases containing either of them have the same distribution and interpretation as bare nouns. Therefore, it is not surprising that the similar analyses can be provided.

4.2.1.1 Modified noun phrases without explicit numerals

As discussed in Chapter 3, noun phrases containing regular adjectives or nominal modifiers can express indefinite (2), indefinite (3) and generic (4) readings. They can be singular or plural unless a numeral is lexically present (which disambiguates the number interpretation and forces an indefinite interpretation). They are also free in terms of distribution. The examples are from Chapter 3, repeated below.

- (2) a. mii₁ rom₃ khiiaw₅ yuu₂ bon₁ to?₄
have umbrella green stay on table
'There is/are a green umbrella/ green umbrellas on the table.'

- b. mii₁ phuu₃yin₅ tua₁-suun₅ maa₁ haa₅ khun₁
have woman C-L tall come see you
'There is/are a tall woman/tall women coming to see you.'

- (3) a. chan₅ tham₁ rom₃ hay₅ sɔŋ₅ khan₁ lææw₄
I make umbrella lose two Cl PRF
'I have lost two umbrellas.'

- chan₅ rak₄ rom₃ khiiaw₅ maak₃ sa₄-duay₃
I love umbrella green much PRT
'I love the green one very much.'

- b. mii₁ phuu₃yin₅ maa₁ sam₃phaat₃ ɲaan₃ sɔŋ₅ khon₁
have woman come interview job two Cl
'Two women came for job interviews.'

- phuu₃yin₅ tua₁ suun₅ duu₁ cha₁laat₂
woman C-L tall look smart
'The tall woman looks smart.'

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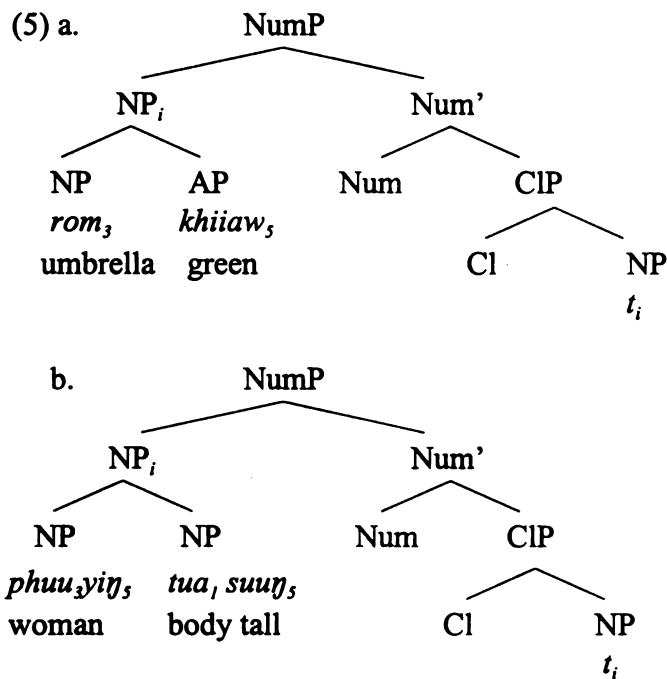
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- (4) a. *chan₅ chɔɔp₃ rom₃ khiiaw₅*
 I like umbrella green
 'I like green umbrellas.'
- b. *chan₅ chɔɔp₃ phuu₃yɪŋ₅ tua₁ suuŋ₅*
 I like woman C-L tall
 'I like tall women.'

I will propose along the same line as the analysis of bare nouns that such phrases with the indefinite reading are NumPs while the ones with the definite or generic interpretation are DPs. Following the previous analysis, to account for the free distribution as well as the indefinite and the definite readings, the head-initial approach needs overt NP movement to [Spec, NumP] and [Spec, DP] respectively. The structural representations of (2) and (3-4) are illustrated in (5) and (6) respectively.



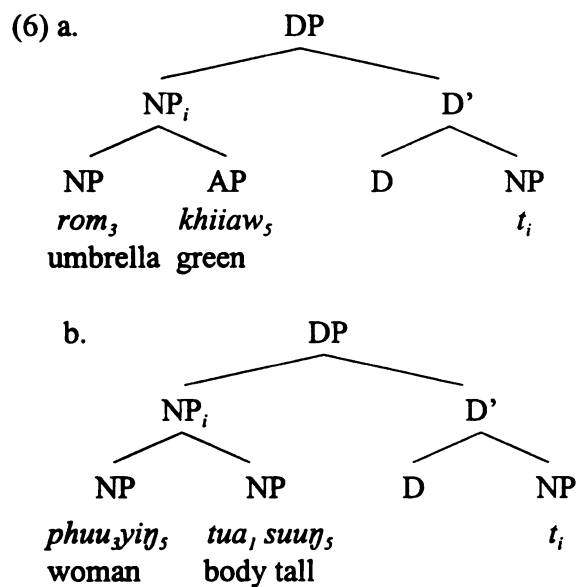
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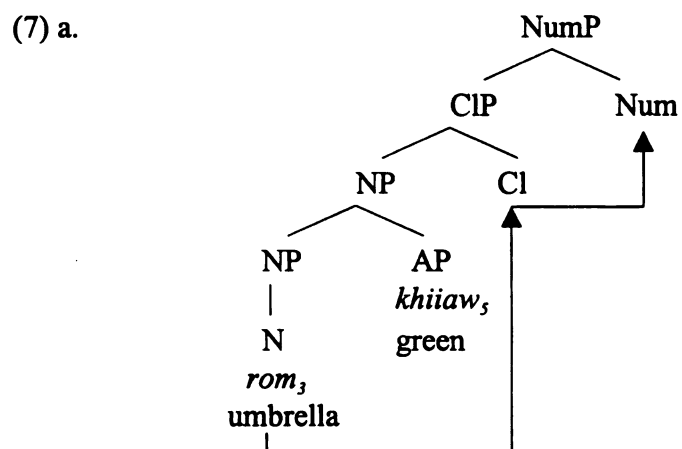
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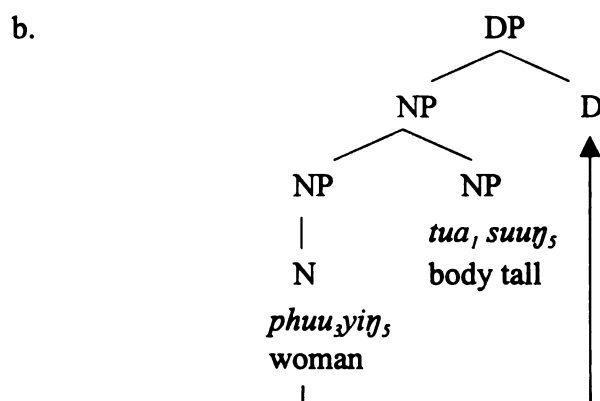
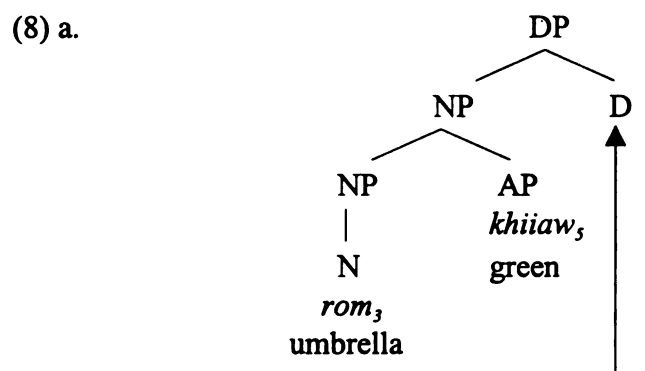
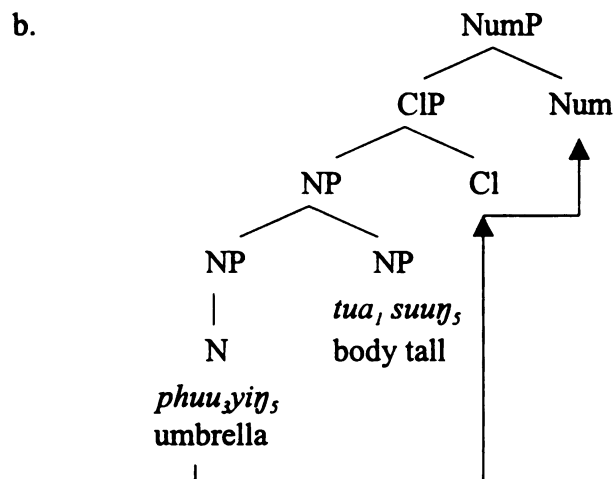
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The head-final approach to (2)-(4) is also the same as the head-final analysis of bare nouns; that is, it requires N movement to Num and D at LF respectively. (7) and (8) are thus the structural representations of (2) and (3-4) respectively.¹





In sum, both approaches do not face any problems dealing with these instances because they behave exactly like bare nouns.

¹ Again although I assume that the internal structure of (8) consists of NumP and CIP, the structure given is a simplified one.

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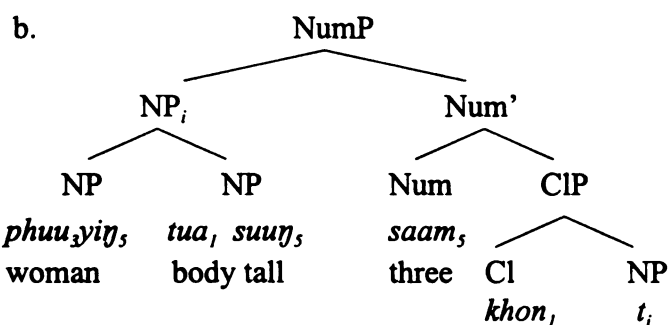
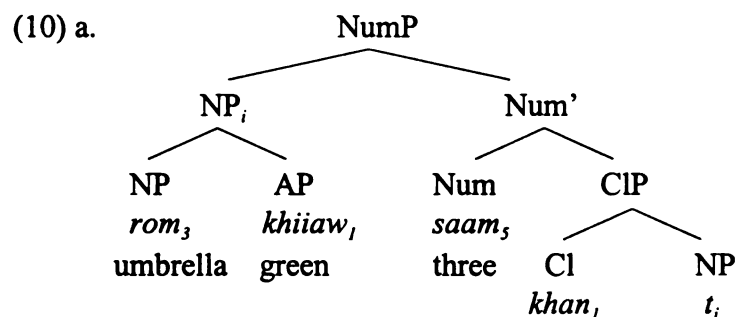
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4.2.1.2 Quantified modified noun phrases

Similar to quantified bare nouns, quantified noun phrases with regular adjectives or nominal modifiers can denote only indefiniteness and they are not restricted to lexically-governed positions as shown in (9) below. Therefore, the NP is embedded in NumP with the head Num lexically filled with a numeral.

- (9) a. *rom₃ khiiaw₅ saam₅ khan₁ yuu₂ bon₁ to?₄*
 umbrella green three Cl stay on table
 'Three green umbrellas are on the table.'
- b. *chan₅ hen₅ phuu₃yih₅ tua₁ suuη₅ saam₅ khon₁*
 I see woman body tall three Cl
 'I saw three tall women.'

The noun phrases in (9a, b) are structurally represented according to the head-initial approach as in (10a, b) respectively. As in the other cases, the overt raising of NP is needed. The target of the moved NP in this case is the specifier of NumP.



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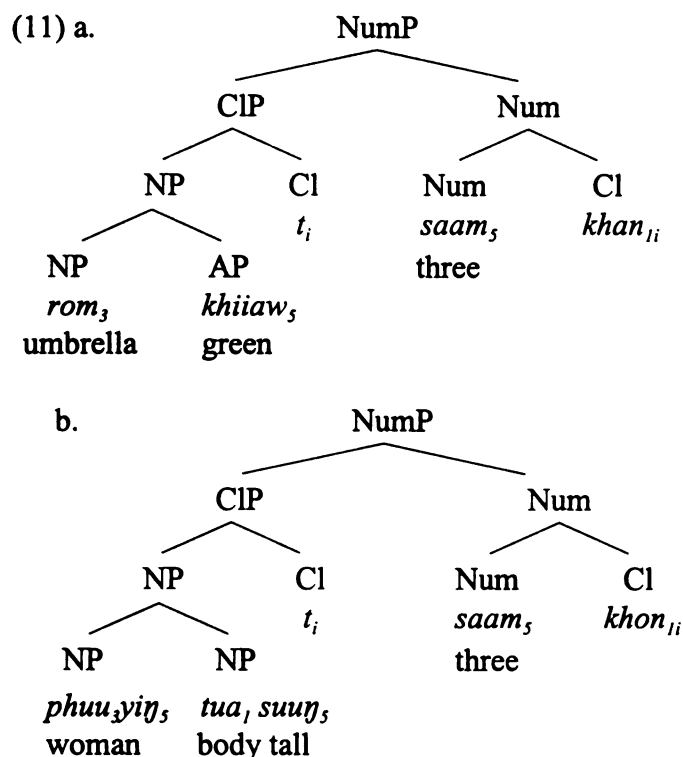
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Similarly, the head-final approach requires the overt raising of Cl to Num like the account of quantified bare nouns as illustrated below.



Summarizing, it is apparent that both approaches are able to handle modified noun phrases containing regular attributive adjectives and nominal modifiers. However, the final-headedness of Thai noun phrases is to be rejected when noun phrases containing referential adjectives are discussed.

4.2.2 A noun phrase with a referential adjective

As claimed in the previous chapter, a referential adjective is generated in [Spec, CIP] and its presence always gives a noun phrase a definite interpretation. Therefore, a noun phrase containing a referential adjective is always a DP. I will present in this section that besides overt NP raising, the head-initial approach also involves overt Cl-to-Num movement. However, an additional syntactic operation does not hurt the head-initial

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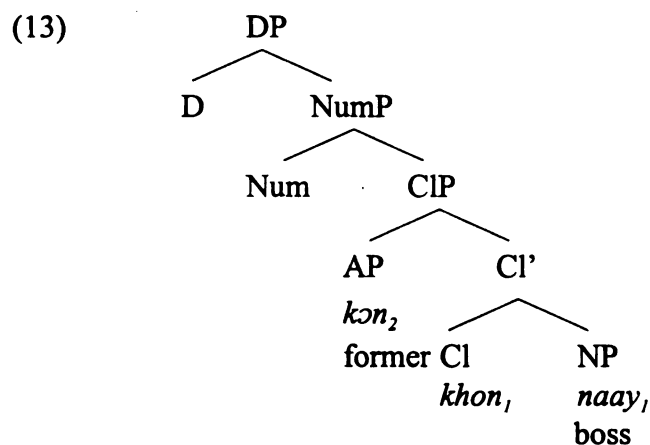
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approach. On the contrary, it can ultimately be concluded that the headedness of Thai noun phrases is initial because the head-final approach fails to account for a noun phrase modified by a referential adjective.

4.2.2.1 Modified noun phrases without explicit numerals

Since a noun phrase containing a referential adjective can have only a definite reading, the phrase is embedded in DP. Given that the referential adjective is in [Spec, CIP], the phrase *naay₁ khon₁ kɔn₂* ‘the former boss’ in (12) has the underlying structure as in (13), according to the head-initial approach.

- (12) *naay₁ khon₁ kɔn₂ cay₁dii₁*
 boss Cl former heart-good
 ‘The former boss is kind.’



Like all other definite noun phrases, NP-to-DP movement is required by the head-initial approach for the definite interpretation and the free distribution. However, I will propose an additional movement of Cl to Num as adjunction in the syntax of Thai in this case to account for the specific singular reading. As it is widely believed that a classifier and a numeral form a constituent (Tang 1990, Gao 1994, Croft 1994) and that a CIP has a role in expressing grammatical Number (Cheng and Sybesma 1999), the idea of

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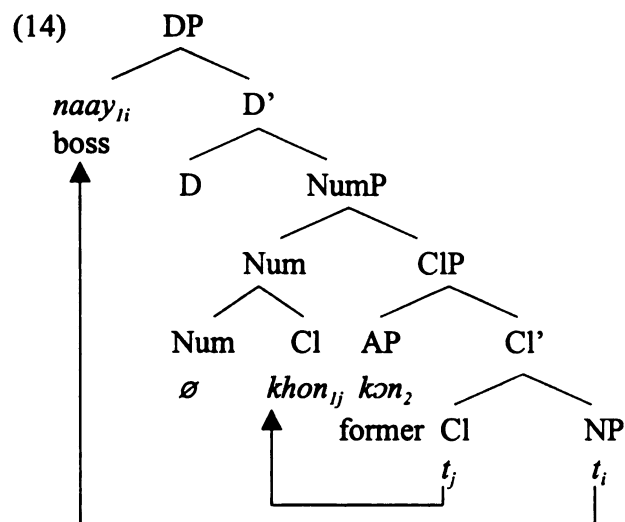
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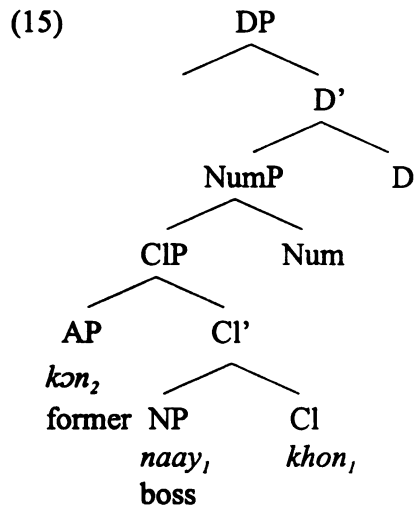
Cl-to-Num movement is not unusual. Without an overt number, the sole interpretation is singular. Hence, I would hypothesize that when Cl is present without a non-lexically filled Num, the default ‘one’ interpretation is taken. In other words, the singularizing function of a classifier takes full effect when Num is not lexically explicit. I suggest that the movement of Cl to Num suppresses the non-specific numeral reading. Recall that the [N + Cl] construction is always indefinite non-specific singular. The non-specific reading is due to the absence of Cl-to-Num movement as proposed in Chapter 2, section 2.5. As well, the presence of the classifier prevents a noun phrase from taking a generic reading (Cheng and Sybesma 1999).

The noun phrase in (12) is thus structurally represented in (14) below.

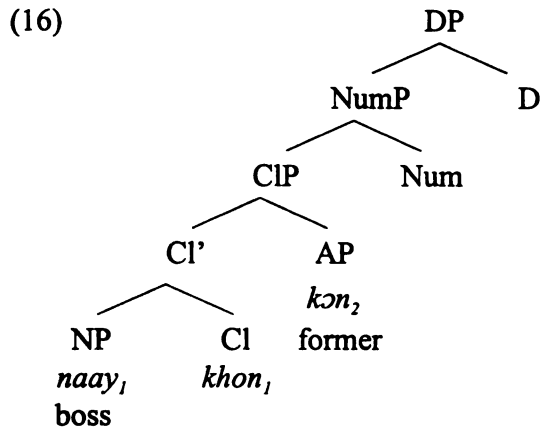


Turning to the head-final analysis, a problem arises, because the word order facts

of the noun phrase containing a referential adjective cannot be accounted for. Let me clarify the point. Taking the noun phrase in (12) into account, its underlying structural representation according to the head-final approach is as in (15).



Given that Cl-to-Num raising is generally required by the head-final approach when a numeral is present, the movement is suggested to take place here due to the default ‘one’ interpretation of the null Num as well as the specific numeral reading. The unrestricted distribution and the definite interpretation are taken care of by the covert movement of N to D as in other cases of definite noun phrases. However, this analysis fails to get the word order right: instead of *naay_i khon_i kon_i* ‘boss Cl former’, it predicts *kon_i naay_i khon_i* ‘former boss Cl’. Even overt NP-to-DP movement (which could, in these cases, replace covert N-to-D raising to capture the interpretation and distribution) cannot save the analysis because then the derived word order would be *naay_i kon_i khon_i* ‘boss former Cl’. Since adjectives are not subject to general movement processes (Bernstein 1993:32), should we discard the head-final account of Thai noun phrases from this moment? Is there a way to rescue the approach? We might save the head-final analysis in this particular case by allowing specifiers to the right of XP in the Thai noun phrase. Therefore, the syntactic representation of (12) with the rightward specifier might be as in (16).



Although the structure in (16) represents the correct word order, it does so at the expense of allowing right-hand specifiers which are to my knowledge unattested in any language. The head-final approach still requires at LF Cl-to-Num movement for the specific singular reading and N-to-D movement for the definite interpretation and the free distribution. Although covert movement is less costly than overt movement, the head-final approach becomes inconsistent because it requires covert movement in some cases and overt movement in others. That is, Cl has to overtly move to adjoin to Num whenever a numeral is lexically present while the covert raising is required in this particular case where a noun phrase is modified by a referential adjective without an explicit numeral. Moreover, we will see below that the head-final approach cannot still be saved in spite of the rightward specifier when a noun phrase containing a referential adjective is quantified.

4.2.2.2 Quantified modified noun phrases

Unlike the other quantified noun phrases, a quantified noun phrase modified by a referential adjective carries a definite interpretation as illustrated in (17) below.

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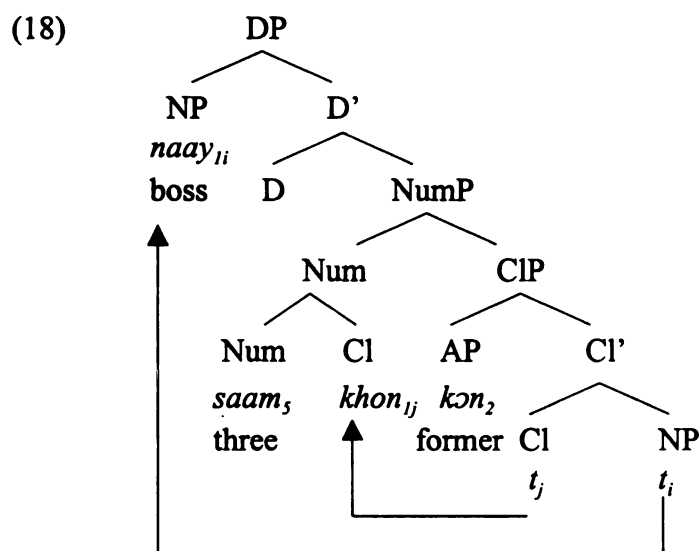
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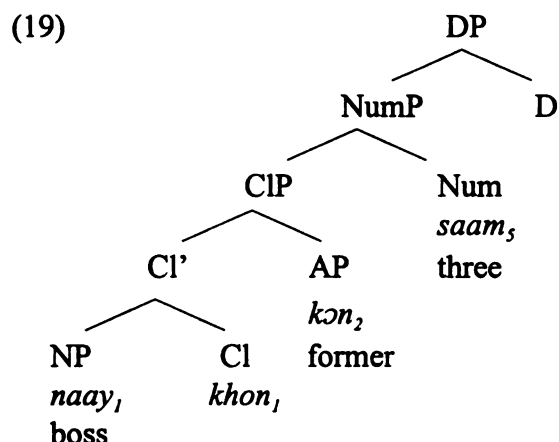
as in (19).

- (17) *naay₁ khon₁ may₂ may₃ miən₃ naay₁ saam₃ khon₁ kən₂*
 boss Cl new not like boss three Cl former
 ‘The new boss is not like the three former ones.’

Because the phrase is definite, it is embedded in a DP. According to the head-initial approach, the NP-to-DP raising together with Cl-to-Num movement as proposed for the non-quantified construction is sufficient to capture the distributional and interpretational facts as well as the word order as shown in (18) below.



Adopting the assumption that the specifier of XP in Thai is on the right according to the head-final analysis, the underlying syntactic representation of the phrase in (17) is as in (19).



Recall that the head-final approach accounts for a noun phrase with a referential adjective without an explicit number by covert Cl-to-Num and N-to-D movements. The same operations should have taken place in the analysis of the quantified noun phrases due to the same interpretation and distribution. However, the word order cannot be handled.

To conclude, the head-final analysis fails to handle noun phrases containing referential adjectives. I will discard it from this point on.

4.2.3 A noun phrase with a regular attributive adjective/ a nominal modifier and a referential adjective

I have argued that APs are allowed in two different positions in Thai. This analysis can provide an explanation for instances such as (20) where two adjectives with contradictory meanings can co-occur without causing ungrammaticality or contradiction.

- (20) a. phuu,yin₅ suuŋ₅ khon₁ tiia₃ naa₃rak₄ caŋ₁
 woman tall Cl short cute very
 ‘The [short [tall woman]] is very cute.’
 b. chan₅ yaak₂ day₃ luuk₃poon₂ luuk₃ too₁ bay₁ lek₄
 I want get balloon C-L big Cl small
 ‘I want the [small [big balloon]].’

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I will show that the lack of contradiction is due to the fact that the phrases consist of noun modifiers generated in two different positions.

4.2.3.1 Modified noun phrases without explicit numerals

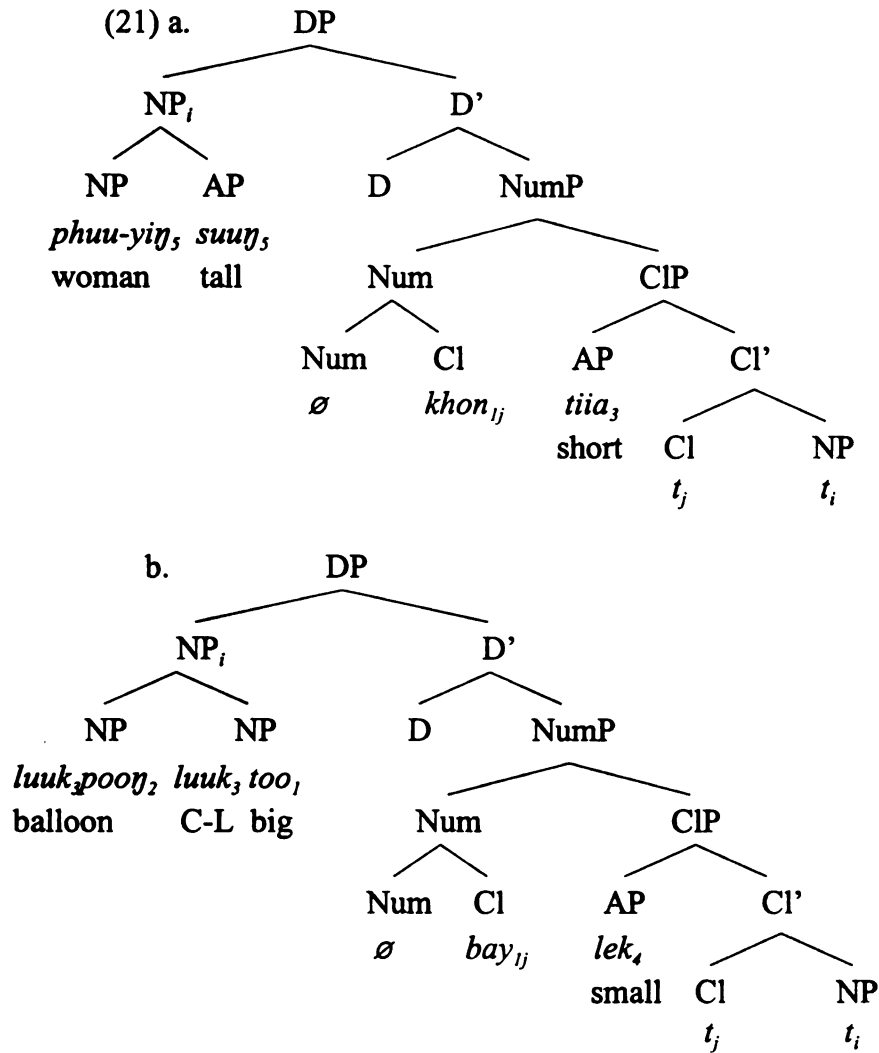
The phrases in (20) are interpreted as definite and singular. That two contradictory adjectives can co-occur without ungrammaticality results from the fact that an NP including an adjoined AP (regular adjective) or NP (nominal modifier) in this particular case seems to denote a kind or concept or a set of entities and the classifier picks out an individual from the kind denoted by NP. The picked individual must have the property as denoted by the referential adjective. That is, the meanings of the noun phrases in (20a, b) are roughly equivalent to ‘out of the set of all tall women the short one is picked’, and ‘out of the set of all big balloons the small one is picked’ respectively. This indicates that the noun phrases in (20) contain modifiers generated in two different positions- one is an NP adjunct (regular AP/ nominal modifier) and the other is the specifier of CIP (referential AP). It is the latter type of adjective together with the classifier that gives the noun phrase a definite interpretation. And as I have claimed, the mere presence of a classifier without an explicit numeral yields a singular reading; Cl-to-Num movement bans the non-specific numeral reading. The syntactic representations of the above phrases are, therefore, as shown in (21).

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It is likely that the analysis is on the right track as the reverse order of adjectives of differently base-generated positions is impossible as shown below.

- (22) a. *phuu₃yiη₅ khon₁ tiia₃ suuη₅
 woman Cl short tall
 b. *phuu₃yiη₅ khon₁ tiia₃ tua suuη₅
 woman Cl short C-L tall

It should be noted that (22a,b) cannot be interpreted as phrases, but can be sentences. Their meaning, however, is 'The short woman is tall.' which is contradictory. These examples also support the proposal of NP movement in Thai. That is, the whole NP including its adjunct has to move together. Assuming that the noun phrases in (22)

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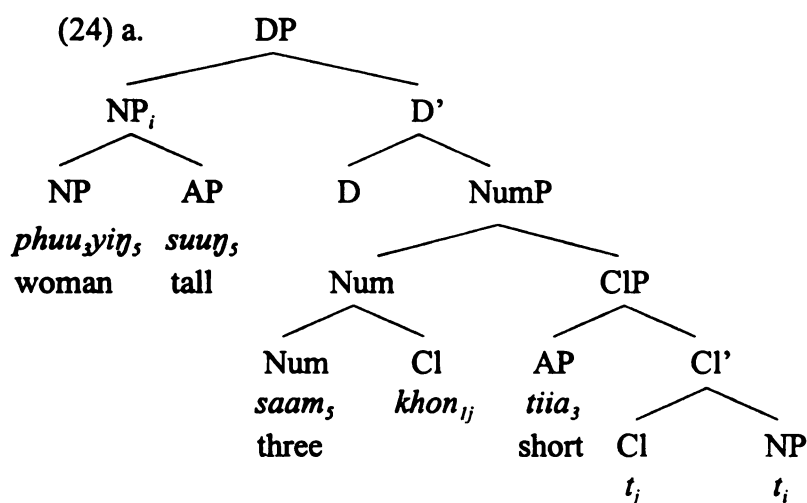
contain NP adjuncts *suuŋ*₅ ‘tall’ and *tua suuŋ*₅ ‘C-L tall’, the movement of NP without its adjunct i.e. *phuu₃yiŋ*₅ ‘woman’, instead of *phuu₃yiŋ*₅*suuŋ*₅ or *phuu₃yiŋ*₅*tua suuŋ*₅ ‘tall woman’ leads to unacceptability.

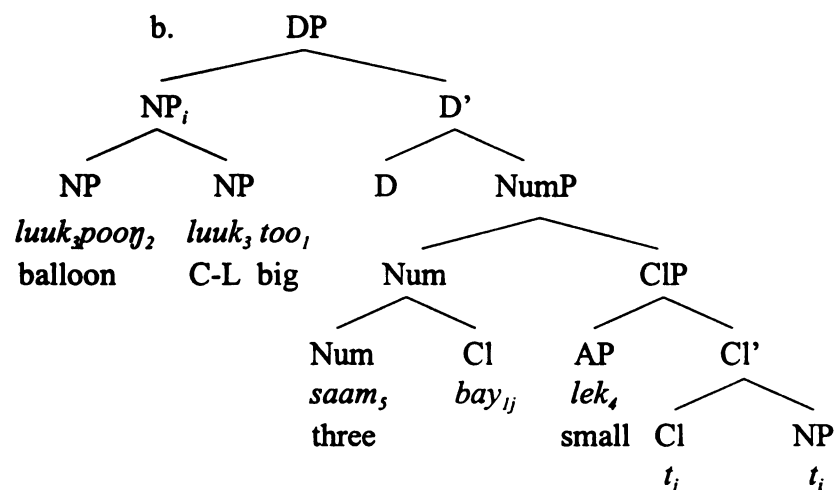
4.2.3.2 Quantified modified noun phrases

Like quantified noun phrases with referential adjectives, the nominal expressions containing modifiers of two positions with explicit numerals always express definiteness as demonstrated in (23).

- (23) a. *phuu₃yiŋ*₅ *suuŋ*₅ *saam*₅ *khon*₁ *tiia*₃ *naa₃rak*₄ *caŋ*₁
 woman tall three Cl short cute very
 ‘The three [short [tall women]] are very cute.’
 b. *chan*₅ *yaak*₂ *day*₃ *luuk₃poon*₂ *luuk*₃ *too*₁ *saam*₅ *bay*₁ *lek*₄
 I want get balloon C-L big three Cl small
 ‘I want the three [small [big balloons]].’

Similar to the discussion given for quantified noun phrases containing referential adjectives, the head-initial analysis manages to account for this particular case with NP movement and Cl-to- Num raising as in (24).





In short, it is conclusive by now that Thai noun phrases are head-initial for the following reasons. First of all, the head-initial analysis requires only two syntactic operations to deal with all the cases under examination, namely, NP movement and Cl-to-Num raising with the consistency holding throughout. More importantly, it can handle all the cases without any problem whereas the head-final analysis completely fails to account for noun phrases containing referential adjectives.

4.3 Demonstratives

Having considered noun phrases modified by different types of noun modifiers, I will discuss noun phrases accompanied by demonstratives in Thai. I will first outline the characteristics of Thai demonstratives. Then I will present the study by Bernstein (1996) which argues that DemP is in the specifier of an FP between DP and NP. I will suggest that the Thai demonstrative is generated in the specifier of CIP.

4.3.1 Thai demonstratives

Thai has four demonstratives *nii*, 'this/here', *nan*, 'that/there', *noon*, 'yonder' and *nuun*, 'far yonder'². They differ in the degree of distance from the speaker.

In terms of distribution, a demonstrative is the last element in a Thai noun phrase. The following examples, which differ only in the positions of the demonstratives exhibit a noun phrase and a clause respectively.

(25) a. *baan₃ yay₂ laŋ₅ nii₄*
house big Cl this
'this big house'

b. *baan₃ laŋ₅ nii₄ yay₂*
house Cl this big
'This house is big.'

The demonstrative in Thai is usually preceded by a classifier. It is also the case that the presence of a demonstrative with a classifier normally brings about definiteness. For example, a quantified noun phrase which is generally indefinite becomes definite

² The demonstrative pronouns in Thai are different from the demonstrative adjectives only in tones. They consist of *nii*, 'this/here', *nan*, 'that/there', *noon*, 'yonder' and *nuun*, 'far yonder'. This set of words can also be used as locative adverbials. The examples of these two types of words are provided below.

(i) a. *nii₃ khii₁ khruu₁ chan₅*
this be teacher I
'This is my teacher.'

b. *nan₃ ?a₁ ray₁*
that what
'What is that?'

(ii) a. *maa₁ nii₃*
come here
'Come here.'

b. *khaw₅ yuu₂ nan₃*
he stay there
'He is there.'

when it is accompanied by a demonstrative as illustrated in (26) below. This is reminiscent of the quantified noun phrase with a referential adjective.

- (26) a. *chan₅ soon₅ dek₂ saam₅ khon₁*
 I teach kid three Cl
 ‘I teach three kids.’
 b. *chan₅ soon₅ dek₂ saam₅ khon₁ nan₄*
 I teach kid three Cl that
 ‘I teach those three kids.’

Nonetheless, there are cases where a demonstrative is present without a classifier as in (27) where the interpretations of the noun phrases are definite specific with either singular or plural reading (27a) and generic (27b), depending on the context.

- (27) a. *chan₅ hen₅ dam₁ sii₄ nan₅sii₅ nii₄ mii₃waan₁*
 I see Dam buy book this yesterday
 ‘I saw Dam buy this/these book(s) yesterday.’
 b. *nok₄ nan₄ mak₄ mii₁ khon₅ dam₁*
 bird that usually have feature black
 ‘That (kind of) bird usually has black features.’

The interpretation of *nan₅sii₅, nii₄* ‘this/these book(s)’ in (27a) can be either ‘a copy of this particular book’, ‘copies of this particular book’ or ‘copies of these particular books’ (say ‘a copy of Knowledge of Language’, ‘copies of Knowledge of Language’ or ‘a copy of Knowledge of Language and a copy of Minimalist Program’) whereas the phrase *nok₄ nan₄* ‘that bird’ in (27b) is better interpreted as ‘the bird of that particular kind’ (say ‘crows’ or ‘starlings’). Before investigating where the Thai demonstrative is generated, I will present the study on the status and locus of the demonstrative by Bernstein (1996) below.

4.3.2 Bernstein (1996)

Bernstein regards DemP as a functional phrase separated from DP since there exist some languages where an article and a demonstrative can co-occur (e.g. Spanish, Romanian, Hungarian and Javanese (examples from Bernstein 1996:7, citing Delsing 1988)).

(28) ez a ház (Hungarian)
this the house
'this house'

(29) ika n anak (Javanese)
 this the child
 'this child'

In the Romance and Germanic languages, in which definite articles and demonstratives are in complementary distribution, Dem must move as substitution to D. But in English and some other languages, demonstratives can have two interpretations: deictic (30a) or indefinite specific (30b) (examples from Bernstein 1996:10).

(30) a. this woman (right here)
= this woman
b. this woman (from Paris)
= a woman

Bernstein (1996) claims that the difference in meaning is due to the presence or absence of overt movement of Dem to D. The deictic interpretation results from the raising of a demonstrative with the [+definite] feature to D before Spell-out whereas the indefinite specific interpretation does not require a demonstrative containing the [-definite] feature to raise up to D.

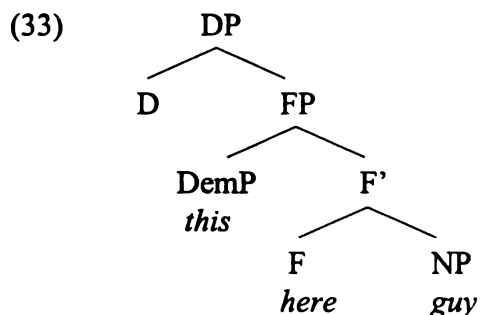
Having considered some languages which possess such demonstrative reinforcers as *here* and *there* like English in (31) and French in (32), she further suggests that DemP

is in the specifier position of a functional phrase headed by a reinforcer (whether or not such reinforcers are present in the language) and the FP is immediately below DP.

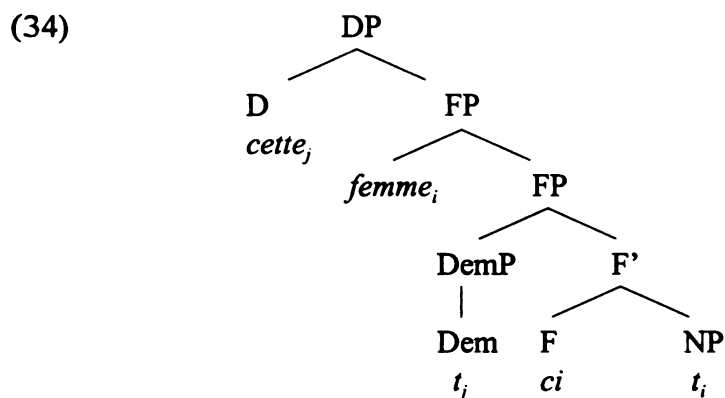
(31) this here guy

(32) *cette femme-ci*
 this woman-here
 'this woman'

The structure for (31) is illustrated in (33) below. One interpretation or the other (i.e. deictic or indefinite specific) is caused by the overt or covert movement of Dem to **D**, which does not affect the surface word order in English.



Similarly, Dem-to-D movement takes place in syntax in French. In addition, the **noun** has to move and adjoin to FP. This can account for the word order of (32) where a **noun** is in between the demonstrative and the reinforcer as demonstrated in the structural representation below:



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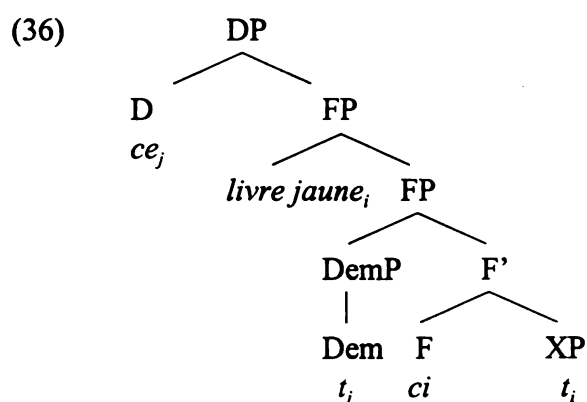
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In French, the only interpretation available is deictic. Therefore, Dem obligatorily raises and substitutes for D. But it is NP, not the head N, that moves up leftwards and adjoins to FP. The evidence is from a noun phrase comprising a head noun and an adjectival modifier that appears between a demonstrative and a reinforcer as in (35) (Bernstein's:15). Its syntactic representation which shows that the NP moves up and adjoins to FP is given in (36).

(35) *ce livre jaune ci*
 this book yellow here
 'this yellow book'



Bernstein suggests that a 'strong' feature of the head F in Romance languages **forces** the movement of XP containing NP to its specifier.

I will take the proposal made by Bernstein that DemP is in the specifier of a FP **situated** between DP and NP. However, I will suggest that Thai demonstratives are in the **specifier** of ClP like referential adjectives.

4.3.3 Position of Thai demonstratives

I will argue in what follows that Thai demonstratives are generated in the specifier of ClP. The difference in number interpretation is caused by the presence or absence of the **classifier**.

4.3.3.1 A demonstrative with a classifier

There are a number of similarities between demonstratives and referential adjectives which suggest that they are generated in the same positions.

(1) Demonstratives and referential adjectives are usually accompanied by the classifier as in (37) and therefore rendering the noun phrase definiteness even when the noun phrase is quantified as in (38).

- (37) a. naay₁ khon₁ kɔn₂
 boss Cl former
 'the former boss'
 b. naay₁ khon₁ nan₄
 boss Cl that
 'that former boss'

- (38) a. naay₁ saam₃ khon₁ kɔn₂
 boss three Cl former
 'the three former bosses'
 b. naay₁ saam₃ khon₁ nan₄
 boss three Cl that
 'those three former boss'

Apart from the interpretation, their distributions are found to be exactly the same too.

(2) Like referential adjectives, Thai demonstratives may not take a classifier-like word. They can only be preceded by a 'true' classifier³.

- (39) a. *naay₁ tua₁ kɔn₂
 boss C-L former
 b. *naay₁ tua₁ nan₄
 boss C-L that

³ As the selection of Thai classifiers is determined by the social status, degrees of formality, degrees of respect, etc., tua₁ can be used as a classifier for a human being only when that person is treated as much inferior or with contempt.

(3) The co-occurrence of a demonstrative and a referential adjective leads to ungrammaticality as in the following examples.

- (40) a. *naay₁ khon₁ kɔn₂ nan₄
 boss Cl former that
 ≠that former boss
 b. *phuu₃-yiŋ₅ khon₁ suuŋ₅ nan₄
 woman Cl tall that
 ≠that tall woman

It should be noted that (40a,b) are fine if nan₄ is regarded as a topic element as shown in (41). The word nan₄ does not function as a demonstrative in this case.

- (41) a. naay₁ khon₁ kɔn₂ nan₄ chan₅ ruu₄ waa₃ cay₁-dii₁
 boss Cl former TOP I know COMP heart-good
 'The former boss, I know is kind.'
 b. phuu₃yiŋ₅ khon₁ suuŋ₅ nan₄ chan₅ khit₃ waa₃ khaw₅ chɔɔp₁
 woman Cl tall TOP I think COMP he like
 'The tall woman, I think he likes.'

To express the concepts of 'that former boss' and 'that tall woman', however, the phrases in (42a,b) must be used respectively.⁴

I consider (i) and (ii) below which contain two classifiers and a possible co-occurrence of a referential adjective and a demonstrative as two separate phrases due to the requirement of an intonation break and their similar usage to appositive.

- (i) naay₁ khon₁ kɔn₂ // khon₁ nan₄
 boss Cl former Cl that
 (ii) phuu₃yiŋ₅ khon₁ suuŋ₅ // khon₁ nan₄
 woman Cl tall Cl that

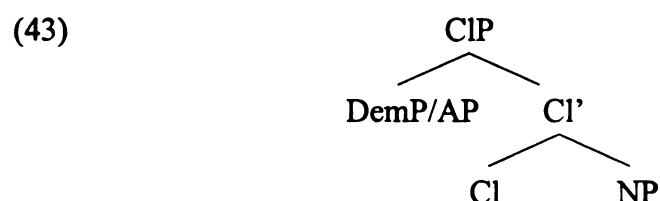
The **full** interpretations of the above are somewhat like the following.

- (iii) naay₁ khon₁ kɔn₂ siŋ₃ khii₁ naay₁ khon₁ nan₄
 boss Cl former COMP be boss Cl that
 'the former boss who is that one'
 (iv) phuu₃yiŋ₅ khon₁ suuŋ₅ siŋ₃ khii₁ phuu₃yiŋ₅ khon₁ nan₄
 woman Cl tall COMP be woman Cl that
 'the tall woman who is that one'

That is why this type of construction always carries an emphatic sense.

- (42) a. naay₁ khon₁ nan₄ thii₃ yuu₂ maa₁ kɔn₂
 boss Cl that COMP stay come before
 'that boss who was here before (this one)'
 b. phuu₃-yiŋ₅ suuŋ₅ khon₁ nan₄
 woman tall Cl that

These facts clearly show that the locus of Thai DemP is the same as that of referential adjectives, namely the specifier of ClP as represented in (43).



4.3.3.2 A demonstrative without a classifier

As mentioned earlier, a noun phrase containing a demonstrative without a classifier displays a variety of interpretations depending on the context, such as definite specific without number specified (44a) and generic (44b).

- (44) a. chan₅ sii₄ naŋ₅sii₅ nii₄ maa₁ khææ₃ rɔy₄ baat₂
 I buy book this come only 100 Baht
 'I bought this/these book(s) for only 100 Baht.'
 b. naŋ₅sii₅ nii₄ mak₄ naa₃biiə₂
 book this usually boring
 'This (kind of) book is usually boring.'

The first impression may be that a demonstrative used in such an instance is like a **regular** attributive adjective. However, it happens that these two types of noun modifier do **not** possess the same characteristics as presented below.

(1) Demonstratives cannot be used in a predicative context as in (45).

- (45)* naŋ₅sii₅ nii₄
 book this
 'The book is here.'

(2) Unlike regular attributive adjectives, demonstratives cannot be modified.

- (46) * naŋ₅sii₅ nii₄ pe?₄
book this right
'the book right here.'

(3) The position of demonstratives seems to be fixed. That is, demonstratives always follow regular adjectives or nominal modifiers. The reverse order brings about a sentential reading as shown below.

- (47) a. maa₅ yay₂ nii₄
dog big this
'this big dog'

- b. maa₅ nii₄ yay₂
dog this big
'This dog is big.'

- (48) a. naŋ₅sii₅ sii₅ dææŋ₅ nii₄
book color red this
'this red book'

- b. naŋ₅sii₅ nii₄ sii₅ dææŋ₅
book this color red
'This book is red.'

The data above shows that Thai demonstratives should not be generated as NP adjuncts like regular adjectives or nominal modifiers. This amounts to saying that they **must** always appear in [Spec, CLP] and do not have the option of appearing adjoined to NP. **The** differences in interpretation are due to the presence or absence of a classifier. **Owing** to its singularizing or individualizing function, the presence of a classifier always **yields** the number interpretation i.e. either default 'one' or plurality as specified by a **numeral** (Hundius and Kölver 1983). A noun phrase without a classifier is thus **ambiguous** between singularity and plurality. This proposal may seem inconsistent with **the earlier** claim about referential adjectives which always require classifiers. An

explanation can be given by the remark made by Hundius and Kölver (1983:176) that ‘demonstratives by themselves always serve the very function of referential identification, thus there is no need to employ classifiers in any referential function.’ Adjectives, on the contrary, ‘are referentially neutral; their combination with a classifier may serve to compensate this deficiency and thus bring about a definite interpretation of the phrase.’ An alternative way of thinking is that when a modified noun phrase takes a definite reading with number unspecified, the noun modifier which has been assumed to be generated as NP adjunct is in fact generated in the specifier of ClP with the empty Cl. It should also be noted here that the question of whether Thai demonstratives are adjectival is left open.

4.4 Analysis of noun phrases with demonstratives

In this last section I will give further evidence supporting the proposal that DemP in Thai is generated in ClP.

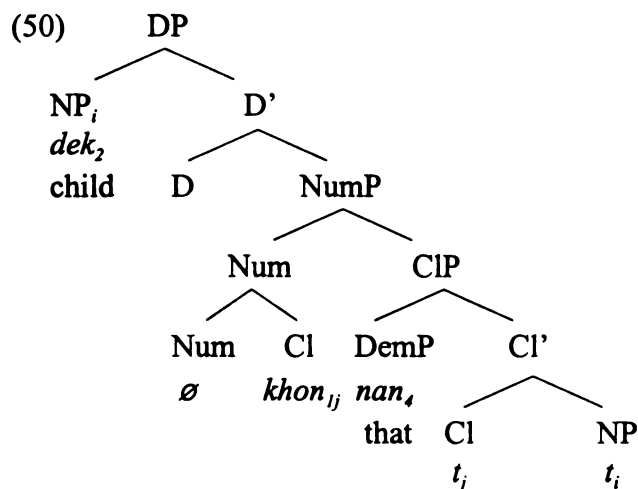
4.4.1 A noun phrase with a demonstrative and a classifier

Like a noun phrase with a referential adjective, a noun phrase with a demonstrative preceded by a classifier can take only a specific definite singular reading. According to the assumption made earlier, the presence of a classifier without a lexical numeral renders the noun phrase a singular interpretation due to the singularizing function of Cl, and the movement of Cl to Num suppresses the non-specific numeral reading.

As the phrase is always definite, it is assumed to be embedded in DP. To account for the free distribution as well as the definite interpretation, NP-to-DP raising must

operate. An additional Cl-to-Num movement takes place in order to acquire the number ‘one’ interpretation. The syntactic representations of the phrase *dek₂ khon₁ nan₄* ‘that kid/ the kid there’ in (49) is as in (50).

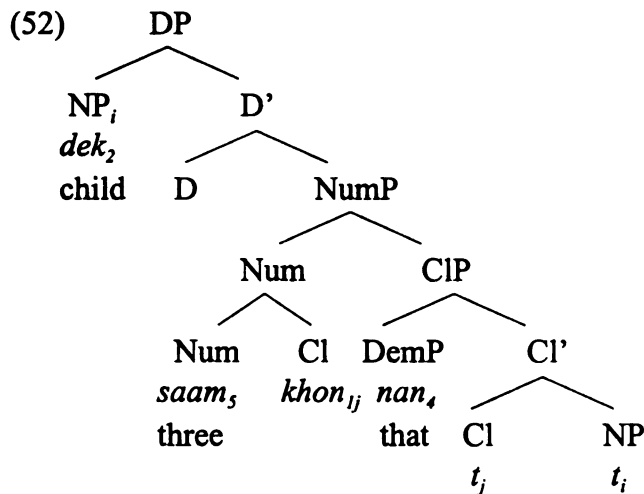
(49) *chan₅ ruu₄cak₂ dek₂ khon₁ nan₄*
 I know child Cl that
 ‘I know that kid/ the kid there.’



4.4.2 A quantified noun phrase with a demonstrative and a classifier

Although a quantified noun phrase is always indefinite, the presence of a **demonstrative** accompanied by a classifier in a quantified noun phrase yields definiteness. **The phrase** under discussion is thus a DP. Again, Cl has to adjoin to Num for the number **interpretation**. The syntactic representation of *dek₂ saam₅ khon₁ nan₄* ‘those three children’ in (51) is as in (52) below.

(51) *chan₅ ruu₄cak₂ dek₂ saam₅ khon₁ nan₄*
 I know child three Cl that
 ‘I know those three children/ the three children there.’



So far, the analysis of a noun phrase with a demonstrative and a classifier is exactly the same as that of a noun phrase containing a referential adjective.

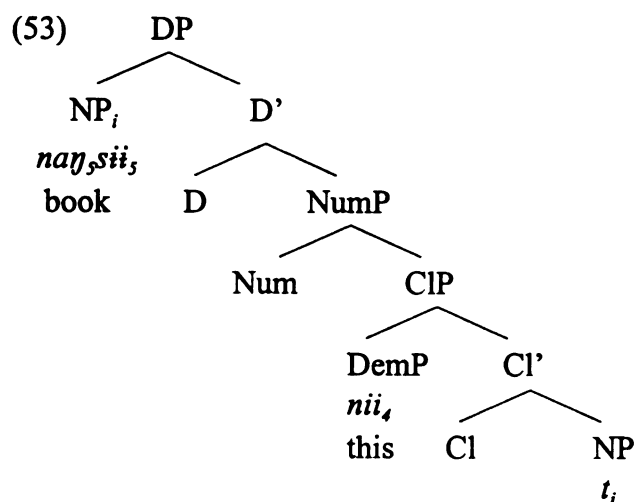
4.4.3 A noun phrase with a demonstrative without a classifier

As earlier stated, when a demonstrative is not accompanied by a classifier, the interpretation of a noun phrase containing it is either definite with the ambiguity between singularity and plurality, or generic as shown in (44), repeated below.

- (44) a. chan₅ sih₄ nan₅sih₅ nii₄ maa₁ khææ₃ røy₄ baat₂
 I buy book this come only 100 Baht
 'I bought this/these book(s) for only 100 Baht.'
- b. nan₅sih₅ nii₄ mak₄ naa₃bhiə₂
 book this usually boring
 'This (kind of) book is usually boring.'

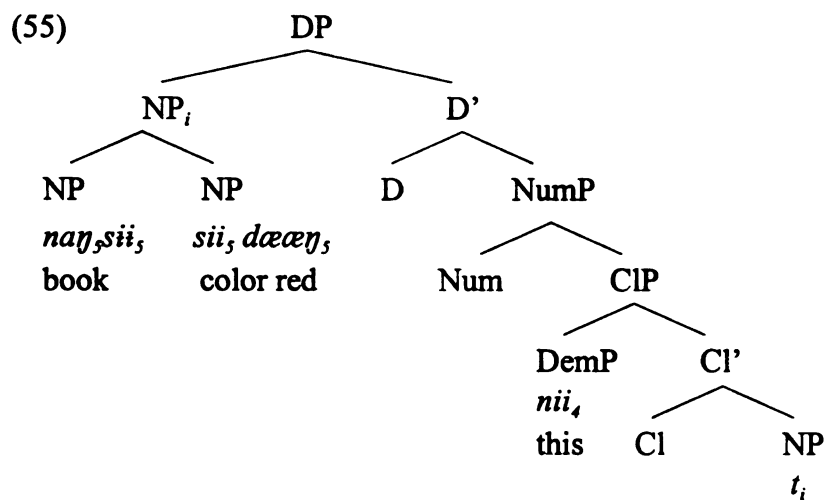
According to the assumption that demonstratives used in these cases are generated in the specifier of CIP with an empty Cl, the structural representation of (44) is as in (53).⁵ The absence of a classifier and a numeral renders the noun phrase ambiguity in terms of number.

⁵ It seems to me that the definite and the generic readings are expressed by the NP which moves to [Spec, DP] whereas DemP functions as a locative indexical expression. The phrases in (44) are thus better interpreted as 'the book(s) here'.



When a demonstrative co-occurs with a regular attributive adjective or a nominal modifier as in (54), the whole NP including an adjunct raises to the specifier of DP as in (55). Like the previous cases, a singular or a plural reading is possible when a classifier and a numeral are not present.

- (54) *naη,sii,s* *sii,s* *dææη,s* *nii,s* *naa,kliiat,s*
 book color red this ugly
 'This/These red book(s) is/are ugly.'



Summarizing, Thai demonstratives are suggested to be generated in the specifier of CIP whose head can be either filled or empty. A noun phrase containing a

demonstrative is ambiguous between singularity and plurality when the classifier is not present.

4.5 Conclusion

I have shown in this chapter that the head-initial analysis should be adopted for the analysis of Thai noun phrases. In other words, Thai noun phrases are better be considered as head-initial like all other structures in the language. That is because the head-initial approach can handle all the cases under examination with the proposals of NP movement and Cl-to-Num raising. The head-final approach, on the other hand, cannot explain the instances where nouns are modified by a referential adjective or a demonstrative. Therefore, the head-final structure of the noun phrases in Thai should be discarded.

When considering the demonstratives in Thai, I suggest that they are generated in the specifier of ClP like referential adjectives. Differences in interpretation of noun phrases containing demonstratives are attributable to the presence or absence of the classifier. If the classifier is present, its singularizing and individualizing function is in effect. Therefore, the noun phrase with a demonstrative and a classifier always expresses a specific number interpretation. If the classifier is not present, the noun phrase containing a demonstrative is ambiguous in number.

Summarizing, what I have found so far from the study of Thai noun phrases is the following.

1. The noun phrase in Thai is head-initial.
2. NP movement and Cl-to-Num raising occur in the syntax of Thai noun phrases.

3. Noun modifiers are either right adjuncts (i.e. attributive adjectives and nominal modifiers) or phrases in the specifier of ClP (referential adjectives and demonstratives).

Having studied noun phrases in various respects concerned, I am now in a position to explore the clausal structure of Thai to find out whether there is any parallelism between the two in these respects.

CHAPTER 5

THAI MODALITY

This chapter deals with modality in Thai. I will argue that all Thai modals are base-generated higher than VP despite the fact that some of them occur post-verbally. Thus, there occurs VP movement in the syntax of Thai. Moreover, the ordering of Thai modals with respect to one another conforms to the ordering proposed by Cinque (1999).

5.1 Introduction

Due to the existence of serial verbs or verb-in-series in Thai, a number of scholars consider Thai auxiliaries including modals and aspect markers as pre-serial and post-serial verbs according to their occurrence with respect to the main verb (Kanchanawan 1978, Thepkanchana 1989) as shown in (1)-(2) below.

(1) *khaw₅ tɔŋ₃ ?aan₂ naŋ₅sih₅*
he must read book
'He must read.'

(2) *khaw₅ ?aan₂ naŋ₅sih₅ day₃*
he read book can
'He can read.'

The modals *tɔŋ₃* 'must' and *day₃* 'can' in (1) and (2) are in the pre-verbal and the post-verbal positions respectively. Such surface word orders lead all the scholars who study Thai auxiliaries to the conclusion that the post-verbal auxiliaries in general are generated after the verb. The terms used for them are thus postverbs (Scovel 1970, Sriphen 1982), post-verbal auxiliaries (Panupong 1970) and post-VP temporal verbs

(Sookgasem 1990). Furthermore, some of them do not consider post-verbal auxiliaries as auxiliaries at all (Kanchanawan 1978, Savetamalya 1987, Indrambarya 1994, Warotamasikkhadit 1996).

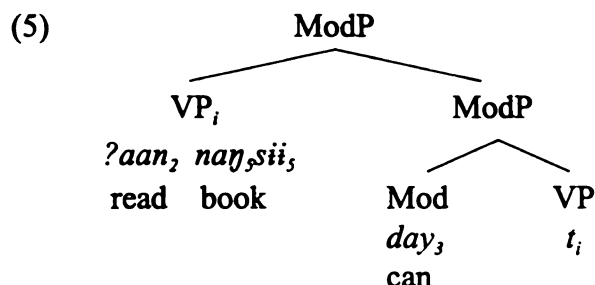
In this chapter I will discuss the syntactic positions of all of the modals and argue against the general claim above regarding the underlyingly post-verbal position of post-verbal modals. Part of the argument will use the predicator test, which has been widely claimed to be able to distinguish words with verbal properties from those lacking such properties as demonstrated in (3).

- (3) Q: khaw₅ ?aan₂ nan₅sih₅ may₄
 he read book QP
 'Does/Did he read?'
 A: a. ?aan₂
 read
 'Yes, he read(s).'
- b.* khaw₅
 he
- c.* nan₅sih₅
 book

Aside from verbness, being a 'predicator' will be shown to correlate with the height or scope of an element carrying verbal properties in the clause structure as illustrated in (4).

- (4) Q: khaw₅ yaak₂ ?aan₁ nan₅sih₅ may₄
 he want read book QP
 'Does he want to read?'
 A: a. yaak₂
 want
 'Yes, he wants to read.'
- b.*?aan₂
 read

The predictor test will thus be used to test the syntactic position of the modals under investigation. I will show that all Thai modals are underlyingly pre-verbal, including the post-verbal modals. I will argue that the surface word order of these modals is derived via VP movement as illustrated in (5) for sentence (2) above.



Evidence for VP adjunction to ModP, instead of substitution into its specifier, will come from the fact that post-verbal modals can be negated. I will argue that the Thai negator *may*₃ ‘not’ is an adverb situated in the specifier of various XPs with verbal properties as shown in (6). Since post-verbal modals can be negated, the specifier of ModP is reserved for the negation.

- (6) a. khaw₃ may₃ ?aan₂ nan,sii₂ may₃ day₃
 he not read book NEG may
 ‘He can’t not read.’
 b. khaw₃ may₃ naa₃-ca?₂ may₃ ton₃ may₃ tham,ηaan₁
 he not should not must not do-work
 ‘It is unlikely that he does not have to not work.’

The account of the negator *may*₃ will then be used to support the analysis of the modals, particularly in terms of their syntactic categories. The conclusion to be drawn from the exploration is that all modals that are heads can be negated (except for those that the negation never takes under its scope) whereas the modals that are of XP category or that are situated in the specifier cannot be negated.

This chapter is organized in the following way. Section 2 discusses the basic characteristics of ‘predicator’ which has long been used as a test for verbness. Section 3 deals with the characteristics of Thai modals in terms of their types, surface positions and distribution. The analysis of all the modals is given in section 4. The nature of Thai negation as well as its interaction with the modals is provided in sections 5 and 6 respectively. Two modals *naa*, and *khuan*, ‘should’ have distinct behaviors from the other modals; they are reanalyzed in section 7. This chapter is concluded in section 8.

5.2 Predicator

The term ‘predicator’ was first used by Noss (1964) to refer to the single word which can stand alone in the response to a yes-no question to represent the whole predicate. The words that can always behave as such are verbs. Therefore, it has been used as a test to distinguish verbs from other categories of words; that is, the word that can be a predicator is regarded as a verb (Noss 1964, Sriphen 1982, Sereechoensatit 1984).

The predicator test which has been claimed to show the characteristics or properties of verbs works as in (3) repeated in (7) below.

- (7) Q: khaw₅ ?aan₂ naŋ₅sih₅ may₄
 he read book QP
 ‘Does/Did he read?’
 A: ?aan₂
 read
 ‘Yes, he read(s).’

The word ?aan₁ ‘read’ in (7) which can stand alone as the response to the yes-no question to represent the whole predicate is called a ‘predicator’.

What can be derived from the predicator fact is that the predicator is an item with verbal properties that takes the widest scope and thus should be situated high in the syntactic structure. In other words, being a predicator correlates with the height in the syntactic representation as shown in the following examples.

(8) Q: khaw₅ yaak₂ ?aan₂ nan₅sih₅ may₄
 he want read book QP
 'Does he want to read?'

A: a. yaak₂
 want
 'Yes, he wants to read.'
 b. *?aan₂
 read

(9) Q: khaw₅ ruu₄sik₂ yaak₂ ?aan₂ nan₅sih₅ may₄
 he feel want read book QP
 'Does he feel like reading?'

A: a. ruu₄sik₂
 feel
 'Yes, he feels like reading.'
 b. *yaak₂
 want
 c. *?aan₂
 read

(10) Q: khaw₅ kit₄ waa₃ thəə₁ yaak₂ ?aan₂ nan₅sih₅ may₄
 he think COMP she want read book QP
 'Does he think that she wants to read?'

A: a. kit₄
 think
 'Yes, he does.'
 b. *yaak₂
 want
 c. *?aan₂
 read

In (8), the word *yaak₂* 'want' has scope over the VP *?aan₂ nan₅sih₅* 'read the book'. Ungrammaticality arises if the verb *?aan₂* 'read' is used as a predicator since it has

lower scope. Likewise, the verb *ruu,sik*, ‘feel’ in (9) has the VP *yaak₂ ?aan₂ naŋ₂sii₂*, ‘want to read the book’ under its scope; consequently, the former must be used as a predicator. The verbs *yaak₂* ‘want’ and *?aan₂* ‘read’ which do not have the widest scope in the sentence are thus illegitimate predicators in this particular case. The example in (10) gives an additional support for the correlation between the height or scope and the predicator because the verb of the main clause always wins over that (or those) of the embedded clause in being a predicator.¹

¹ It should be noted here that there also occur instances where the verb of the embedded clause can be a predicator as in (i) below.

- (i) Q: *khun₁ kit₄ waa₃ baay₂ nii₄ khun₁ waan₃ may₄*
you think COMP afternoon this you free QP
‘Do you think you are free this afternoon?’

- A: a. **kit₄*
think
b. *waan₃*
free
‘Yes, I am.’

This is interesting because the verb ‘think’ does not take a *wh*-complement, but it appears that the complement of ‘think’ in such a sentence is questioned. Examples from English (ii) and Mandarin Chinese (iii) also illustrate the same phenomenon. The Chinese example is from Cheng et al. (1996:58).

- (ii) Q: Do you think you are free this afternoon?

- A: a. Yes, I am.
b. *Yes, I do.

- (iii) *ta yiwei ni qu bu*
he think you go not

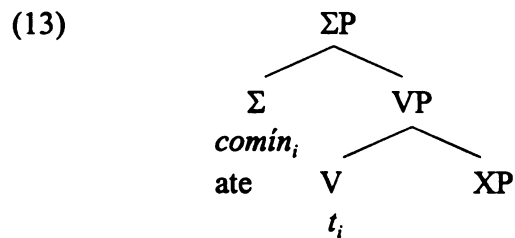
- a. ‘Does he think or not think that you are going?’
b. ‘Does he think that you are going or not going?’

For Chinese, Cheng et al. (1996) propose that the word with the [+Q] feature (*bu* in Chinese) is generated in the embedded clause (for reading b) but it has to raise to the main clause due to the incompatibility of the verb ‘think’ and the *wh*-complement. I am not investigating this instance here.

The so-called ‘predicator’ is not peculiar to Thai. Other languages also make use of a verb as a minimal response to a yes/no question as in the examples below from Martins (1994:177,188).

- (11) Q: Viste o João? (Portuguese)
‘Did you see John?’
A: Vi / #Sim
Saw / Yes
‘I saw him.’
- (12) Q: Comiche-lo bolo? (Galician)
ate the cake
‘Did you eat the cake?’
A: (Si,) comín.
Yes ate
‘Yes, I did.’

Martins accounts for this data by the introduction of the Sigma phrase (Σ P) proposed by Laka (1990) to be the locus of Affirmation/Negation. The minimal response to a yes/no question can thus be explained quite simply in the minimalist framework. Martins argues that the Σ head has strong V-features and therefore the verb has to move to Σ to check off its features. The simplified structural representation for (12) is as follows.



The Thai predicator data supports this analysis directly, and the relation between the scope and the predicator follows automatically. That is, the highest element with V-features moves to the Σ head according to ‘Attract Closest’ (Chomsky 1995:296, Pesetsky 1998) defined as follows.

(14) α can raise to target K only if there is no legitimate operation Move β targeting K, where β is closer to K.

The important point to be made clear here is that auxiliaries (including modals and aspects) possess V-features (López 1999). In other words, auxiliaries which are the extended projection of the lexical phrase VP have the same properties as VP; namely, V-features (Grimshaw 1991).

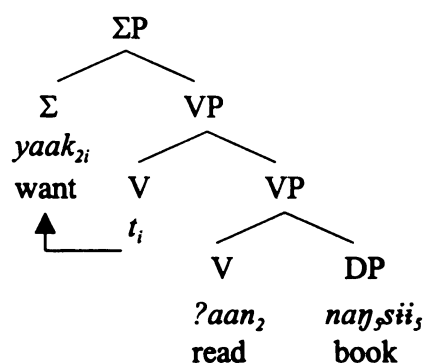
Assuming that the above analysis is on the right track, the predictor fact will be used to detect the syntactic positions of the modals in Thai. To illustrate the assumption that the predictor fact concerns Σ P and ‘Attract Closest’, the structures of the answers in (8), repeated below, are represented in (15) and (16) respectively.²

(8) Q: khaw₅ yaak₂ ?aan₂ naη₅sii₅ may₄
 he want read book QP
 ‘Does he want to read?’

A: a. yaak₂
 want
 ‘Yes, he wants to read.’

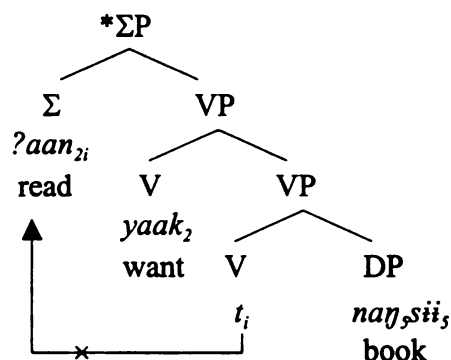
b. *?aan₂
 read

(15)



² For simplicity, I represent the two verbs *yaak₂* *?aan₂* ‘want read’ as VP-shell. The second verb *?aan₂* ‘read’ may be analyzed as the verb in the embedded clause with a PRO subject, which is the complement of *yaak₂* ‘want’. Alternatively, some studies analyze

(16)



The legitimate response to the question in (8) is *yaak*₂ ‘want’ because it is closer to the Σ head than the word *?aan*_{2i} ‘read’ as demonstrated in (15). If *?aan*₂ were to raise to Σ as in (16), ‘Attract Closest’ would be violated and ungrammaticality would arise.

Before using the predicator test to investigate the modals in Thai, I will outline the characteristics of Thai modals in the following section.

5.3 Characteristics of Thai Modals

Since linguists and scholars do not agree as to the exact number of modal auxiliaries in Thai due to different criteria used, I will take into consideration only those words which are equivalent to English modal words and conform to the definition of the modals as the words that ‘mark one or more of the following notions: possibility/permission, probability/obligation or certainty/requirement,’ (Steele 1975:199) or ‘indicate attitudes of the speaker/writer towards the state or event expressed by another verb.’ (Longman Dictionary of Applied Linguistics 1985:179) Thai words which meet

*yaak*₂ ‘want’ as a modal verb which takes VP as its complement. However, this is not a subject in this study.

the criteria above are thus *?aat*₂ ‘probably’, *khon*₁ ‘likely’, *naa*₃ ‘should’, *khuan*₁ ‘should’, *ton*₃ ‘must’, *ca?*₂ ‘will’, *day*₃ ‘can, may’, *pen*₁ ‘can’, and *way*₃ ‘can’.³

5.3.1 Types of modals

Modals are typically categorized in terms of their meaning into two major types: root and epistemic. The former which is also called ‘deontic’, ‘subject-oriented’ or ‘agent-oriented’ expresses volition, obligation, permission and ability on behalf of the subject or the agent of the clause. The latter, on the contrary, ‘expresses the speaker’s degree of confidence about the truth of the proposition (based on the kind of information he/she has),’ (Cinque 1999:86) including ‘his own judgments and the kind of warrant he has for what he says.’ (Palmer 1986:51). Accordingly, the modals in Thai can be grouped into the two types as follows.

³ Some studies include *saa,maat*₃ which denotes ability in the modal system of Thai. However, it is not regarded as a modal auxiliary here because it is better grouped in the class of adjectives. As noted by Sookgasem (1990:103), *saa,maat*₃ is a verb-like adjective because it can undergo nominalization (i) and be followed by a prepositional phrase (ii).

(i) *khaw*₅ *mii*₁ *khwaam*₁-*saa,maat*₃
 he have NOM-able
 ‘He has the ability.’

(ii) *khaw*₅ *saa,maat*₃ *nay*₁ *rii*₃ *nii*₄
 he able in issue this
 ‘He is able in this issue.’

	Root	Epistemic
<i>tɔŋ₃</i>	strong obligation	inferred certainty
<i>naa₃ (ca? ₂), khuan₁ (ca? ₂)</i>	weak obligation	probability
<i>ca? ₂</i>	volition	
<i>day₃</i>	permission	
<i>day₃, pen₁, way₅</i>	ability	
<i>?aat₂-ca? ₂, khɔ₁-ca? ₂</i>		probability

Table 2: Types of modals in Thai

As is apparent in the table above, some modals can express both root and epistemic senses. This is not uncommon when taken into consideration the suggestion made by Bybee et al. (1994:195) regarding the derivation of epistemic modals from root ones as below.

(17)	<u>agent-oriented</u>		<u>epistemic</u>	
	strong obligation	gives	inferred certainty	(must)
	weak obligation	gives	probability	(should)
	ability	gives	possibility	(may)

5.3.2 Surface positions of Thai modals

All of the modals in Thai precede a verb except those indicating ability and permission as in the examples below.

(18) *khaw₅ khuan₁ ?aan₂ naŋ₅sii₅*
 he should read book
 'He should read.'

(19) *khaw₅ tɔŋ₃ ?aan₂ naŋ₅sii₅*
 he must read book
 'He must read.'

- (20) *khaw₅ ?aan₂ naŋ₅sii₅ day₃*
 he read book may/can
 'He may/can read.'

Regardless of the root or the epistemic sense, their positions relative to one another are represented in the table below⁴.

A	B	C	D		E
<i>?aat₂</i> 'probably'	<i>ca?₂</i>	<i>tɔŋ₃</i>	<i>day₃</i> 'may'	VP	<i>day₃</i> 'can, may (permission)'
<i>khon₁</i> 'likely'	'will'	'must'	permission		<i>pen₁</i> 'can'
<i>naa₃</i> 'should'					<i>way₅</i> 'can'
<i>khuan₁</i> 'should'					

Table 3: Positions of modals relative to one another

5.3.3 Distribution of Thai modals

In terms of distribution, two or more modals can co-occur as long as they do not belong to the same column shown in Table 3 as in (21) and (22) below, and they obey the ordering restrictions shown in the same table as in (23). Also, as can be noticed, the modal *day₃* which expresses 'permission' can either precede or follow the VP.

- (21) a. *chan₅ ca?₂ tɔŋ₃ ?aan₂ naŋ₅sii₅*
 I will must read book
 'I will have to read.'
 b. *khaw₅ khuan₁ ?aan₂ naŋ₅sii₅ day₃*
 he should read book can
 'He should be able to read.'
 c. *chan₅ ca?₂ tɔŋ₃ ?aan₂ naŋ₅sii₅ day₃*
 I will must read book can
 'I will have to be able to read.'

- (22) a. **khaw₅ khuan₁ ?aat₂ ?aan₂ naŋ₅sii₅*
 he should probably read book

⁴ The modals in column A are usually followed by *ca?₂*. I exclude *ca?₂* here for the sake of simplicity. However, I will show later that *ca?₂* after the modals in column A is different from the modal of volition *ca?₂* in column B.

- b.*khaw₅ ?aan₂ naŋ₅sii₅ day₃ pen₁
 he read book may can
- (23) a.*khaw₅ tɔŋ₃ khuan₁ ?aan₂ naŋ₅sii₅
 he must should read book
- b.*khaw₅ day₃ tɔŋ₃ ?aan₂ naŋ₅sii₅
 he may must read book
- c.*khaw₅ day₃ ?aan₂ naŋ₅sii₅ tɔŋ₃
 he may read book must

In what follows I will show that the surface positions of these modals do not always correlate with their syntactic positions. I will argue that the post-verbal modals in Thai are base-generated pre-verbally. Moreover, the fact that the modals in the same column cannot co-occur will be accounted for on both semantic and syntactic grounds.

5.4 Analysis of Thai modals

Cinque (1999), using data from a wide variety of languages, argues that there is a universal ordering of clausal functional projections of V including mood, modality, aspect, tense and voice. His claim is mainly derived from the relation of adverbs to these functional projections; that is, different types of adverbs are in the specifiers of related functional projections⁵.

I will show in this section that the syntactic locations of Thai modals basically support the proposal made by Cinque (1999) concerning the cross-linguistic ordering of various types of modals as demonstrated in (24).

- (24) Mod_{epistemic} > Mod_{root} (volition>obligation>permission/ability)

⁵ See Ernst (1997) and Shaer (1998), among others, for different approaches to adverb analyses.

As observed from (24), the epistemic modals are located higher than the root ones. One piece of evidence supporting his claim is from Scots English which allows double modals; the first and the second of which express the epistemic and the root senses respectively (Brown 1992:77).

- (25) a. He must can do it; He can surely do it.
b. He should can do it; He can likely do it.

Unlike the epistemic modals, modals with the root sense are claimed to be of three distinct types which are generated in three different positions of the following ordering: volition>obligation>permission/ability. It should be noted that the modals denoting permission and ability are assumed to occupy the same position. The study of these two modals in Thai will confirm this assumption. However, the distinction between strong and weak obligation modals is not made by Cinque⁶. Examination of these two types of modals in Thai seems to suggest that they do not occupy the same position.

I will start with the root modals and then deal with the epistemic ones. Since the former can appear either before or after VP, the pre-verbal root modals will be examined first, starting from the one closest to the VP. The epistemic modals will then be studied.

5.4.1 Root modals

The Thai modals with the root sense are *naa*₃, *khuan*₁ ‘weak obligation’, *ca?*₂ ‘will’, *toŋ*₃ ‘strong obligation’, *day*₃ ‘permission’ and *day*₃, *pen*₁, *way*₅ ‘ability’. As already stated, some root modals occur pre-verbally while others, post-verbally. The discussion,

⁶ Obligation is distinguished according to degrees of strength into weak and strong. That is, ‘if a weak obligation is not fulfilled, the consequences are not too serious; but the consequences of not fulfilling a strong obligation are much more severe.’

therefore, will start with the pre-verbal modals beginning with the one closest to VP, followed by the post-verbal modals.

5.4.1.1 *day*₂ ‘permission’

The pre-verbal word *day*₃ has several meanings. Hence, it has been treated according to its denotations as a past tense marker (Kanchanawan 1978), a regular verb when it carries the meaning of ‘having an opportunity to do something’ (Sookgasem 1990) or ‘get’, and an auxiliary denoting permission (Warotamasikkkhadit 1996). The examples which correspond to the above meanings are provided below.

- (26) a. khaw₅ day₃ pay₁ haa₅ khun₁ miə₃-waan₁
 he PAST go see you yesterday
 ‘He went to see you yesterday.’
 b. khaw₅ day₃ duu₁ nan₅ thuk₄-wan₁
 he have an opportunity see movie every day.
 ‘He has an opportunity to see the movies every day.’
 c. khaw₅ day₃ muak₂ bay₁ suay₅
 he get hat Cl beautiful
 ‘He has got the beautiful hat.’

It should be noted that the meaning of the regular verb *day*₃ ‘have an opportunity to do something’ somewhat overlaps with that of *day*₃ ‘permission’. Therefore, sentence (26 b) can also mean ‘He is allowed to see the movies every day.’ Consequently, some scholars do not consider *day*₃ as a modal of permission, but a regular verb.

However, there are cases where *day*₃ expresses merely ‘permission’ not the meaning of ‘having the opportunity to do something’ as in (27) below.

- (27) A: pəɔ₃ hay₃ chan₅ pay₁ pat₄tha₁yaa₁ phuak₃-thəə₁ day₃ pay₁ may₄
 father let me go Pattaya group-you may go QP
 ‘My father allows me to go to Pattaya. Are you allowed to go?’

(Bybee et al. 1994:186) Strong obligation in English is expressed by ‘must’ and ‘have to’ whereas weak obligation by ‘should’.

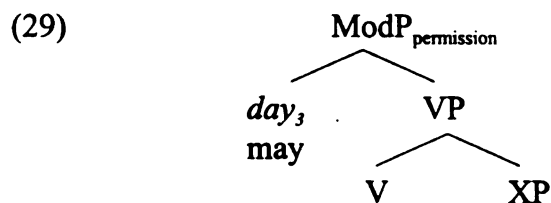
B: chan₅ day₃ pay₁
 I may go.
 'I am allowed to go.'
 C: chan₅ may₃ day₃ pay₁
 I not may go.
 'I am not allowed to go.'

The above dialogue clearly shows that *day₃* can be a separate word denoting 'permission', which can be regarded as a modal. As a result, I will include *day₃* as one of the Thai modals.

Taking into account the predictor test in (28) below, I would propose that the modal *day₃* expressing permission is located above VP.

(28) Q: khaw₅ day₃ pay₁ pat₄tha₁yaa₁ may₄
 he may go Pattaya QP
 'Is he allowed to go to Pattaya?'
 A: a. day₃
 may
 'Yes, he is allowed to go to Pattaya.'
 b. *pay₁
 go

As obviously seen, the interrogative containing the modal *day₃* requires *day₃* to be the predictor, not the verb. The modal *day₃* thus must be located higher than the verb to be 'closest' attracted to the Σ head. The suggested structure is thus as below.



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5.4.1.2 *tɔŋ*₃ ‘strong obligation’

The next modal to be considered is the one to the left of *day*₃ ‘permission’ - *tɔŋ*₃ ‘must’, which expresses strong obligation or necessity. Like *must* in English, the modal *tɔŋ*₃ can express both root and epistemic meanings as shown in (30 a, b) respectively.

- (30) a. *khaw*₅ *may*₃ *chɔɔp*₃ *thəə*₁ *tææ*₂ *khaw*₅ *tɔŋ*₃ *pay*₁ *haa*₃ *thəə*₁
 he not like her but he must go see her
 ‘He does not like her but he has to go to see her.’
 b. *khaw*₅ *may*₃ *yuu*₂ *baan*₃ *khaw*₅ *tɔŋ*₃ *pay*₁ *haa*₃ *thəə*₁ *nææ*₃-*nææ*₃
 he not stay home he must go see her surely
 ‘He is not at home. He surely must go to see her.’⁷

I will examine in this section only the modal *tɔŋ*₃ in the root sense as the one with the epistemic meaning will be discussed later.

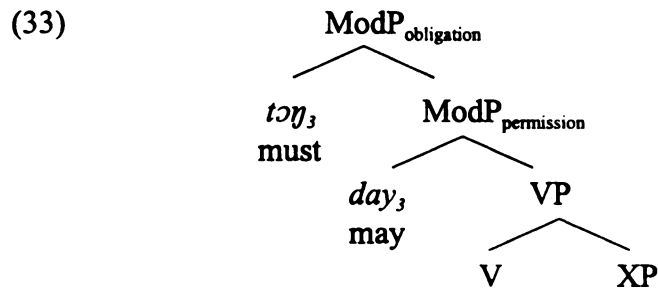
In terms of the syntactic position, the predicator test in (31) shows that the root modal *tɔŋ*₃ is higher than VP, and (32) points to the fact that it is also generated higher than the modal *day*₃.

- (31) Q: *khaw*₅ *tɔŋ*₃ ?*aan*₂ *nan*₃ *sii*₅ *may*₄
 he must read book QP
 ‘Must he read?’
 A: a. *tɔŋ*₃
 must
 ‘Yes, he must.’
 b. *?*aan*₂
 read
 (32) Q: *khaw*₅ *tɔŋ*₃ *day*₃ *pay*₁ *roon*₁ *riian*₁ *may*₄
 he must may go school QP
 ‘Must he be allowed to go to school?’

⁷ It should be noted that *tɔŋ*₃ as an epistemic modal is usually accompanied by *nææ*₃-*nææ*₃ ‘surely’, probably for emphasis or to make a clear distinction between the root and the epistemic ones.

- A: a. $tɔŋ_3$
 must
 ‘Yes, he must.’
 b. * day_3
 may
 c. * pay_1
 go

As it is apparent that the modal $tɔŋ_3$ ‘must’ is situated higher than VP and the modal day_3 ‘may’, the syntactic representation of the three elements is as illustrated below.



5.4.1.3 $ca?_2$ ‘intention’

The word $ca?_2$ is usually treated as the future marker because it is normally used to express the future time as in (34) (Sriphen 1982).

- (34) $khaw_3$ $ca?_3$ pay_2 pat_4 ta_1 yaa_1 $phruŋ_3$ nii_4
 he will go Pattaya tomorrow
 ‘He will go to Pattaya tomorrow.’

However, $ca?_2$ can occur in a sentence representing a past event as below.

- (35) $khaw_3$ $ca?_3$ $?aan_2$ $naŋ_3$ sii_3 $miə_3$ $khiin_1$ $tææ_2$ fay_1 dap_2
 he will read book last night but power out
 ‘He would read last night but the power was out.’

The more accurate interpretation of (35) is ‘He intended/wanted to read last night.’ Therefore, future indication is not the only meaning conveyed by $ca?_2$. The word $ca?_2$ is thus claimed to be a non-absolute future marker (Kanchanawan 1978) or suggested

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to be an intensitive marker (Sriphen 1982). My proposal is that *ca?*₂ is of two different categories: one is a future tense marker which includes the meaning of prediction and the other is a modal expressing volition or willingness. I will examine in this section the word *ca?*₂ which signifies the meaning of volition as exemplified in the following sentences⁸.

- (36) a. *khaw₅ may₃ pay₁ khaw₅ ca?₃ ?aan₂ nan₅sih₅ sɔɔp₂*
 he not go he will read book take-an-exam
 ‘He won’t go because he will study for the exam.’
 b. *khaw₅ ca?₃ pay₁ mææ₄ pɔɔ₃ may₃ a₂nu₄yaat₃*
 he will go though father not permit
 ‘He will go though his father does not allow him to.’

As illustrated in (37) below, the modal *ca?*₂ fails the predicator test; that is, it cannot be a minimal response to a yes/no question.

- (37) Q: *thəə₁ ca?₃ ?aan₂ nan₅sih₅ sɔɔp₂ may₄*
 you will read book take-an-exam QP
 ‘Will you study for the exam?’
 A: a. **ca?₃*
 will
 b. *?aan₂*
 read

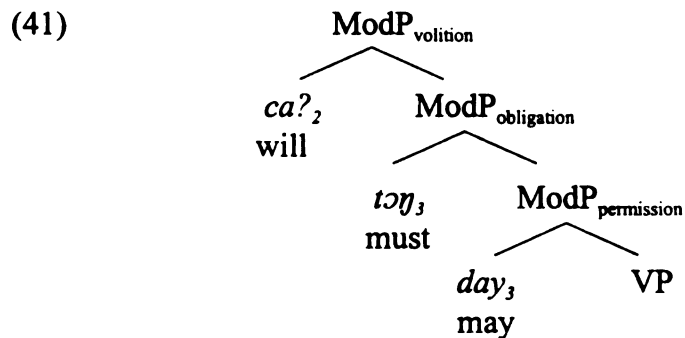
The above instance seems to give the first impression that *ca?*₂ is generated lower than VP. However, there is some evidence disproving such a claim. First of all, *ca?*₂ never occurs post-verbally as in (38). Furthermore, *ca?*₂ always precedes *tɔŋ₃* ‘must’ and

⁸ Ekniyom (1979) hypothesizes that *ca?*₂ is derived from the verb *cak₂*, which means ‘want, desire’ or the verb *ka?*₂, which means ‘plan, expect’. The interchangeability of *ca?*₂ and *cak₂* in stylish or archaic writing is prevalent. It might, therefore, be the case that *ca?*₂ has undergone phonological change and as will be claimed, syntactic change in terms of category.

*day*₃ ‘may’ which are earlier proven to be base-generated higher than VP as demonstrated in (39) and (40)⁹.

- (38) a. **khaw*₅ ?*aan*₂ *ca*?₃ *nan*₅*sii*₅
 he read will book
 b. **khaw*₅ ?*aan*₂ *nan*₅*sii*₅ *ca*?₃
 he read book will
- (39) a. *khaw*₅ *ca*?₃ *tɔŋ*₃ ?*aan*₂ *nan*₅*sii*₅
 he will must read book
 ‘He will have to read.’
 b. **khaw*₅ *tɔŋ*₃ *ca*?₃ ?*aan*₂ *nan*₅*sii*₅
 he must will read book
- (40) a. *khaw*₅ *ca*?₃ *day*₃ *pay*₁ *pat*₄*tha*₁*yaa*₁
 he will may go Pattaya
 ‘He will be allowed to go to Pattaya.’
 b. **khaw*₅ *day*₃ *ca*?₃ *pay*₁ *pat*₄*tha*₁*yaa*₁
 he may will go Pattaya

From the examples above, it is reasonable to assume that the volition modal *ca*?₂ is located above the obligation and the permission modals as represented in the structure below.



⁹ As noted in footnote 8, the word *ca*?₂ in (39a) and (40a) can be replaced by *cak*₂ in bookish style of writing as in (i) and (ii) respectively.

- (i) *khaw*₅ *cak*₂ *tɔŋ*₃ ?*aan*₂ *nan*₅*sii*₅
 he want must read book
 (ii) *khaw*₅ *cak*₂ *day*₃ *pay*₁ *pat*₄*tha*₁*yaa*₁
 he want may go Pattaya

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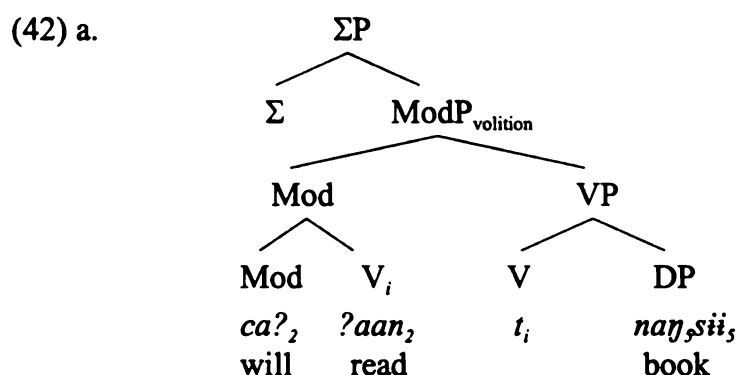
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Still, the fact that the modal *ca?*₂ behaves differently from the other modals mentioned earlier in terms of the ability to be a predicator has to be accounted for. One possibility is that *ca?*₂ may be the head but lack V-features; consequently, it cannot be attracted to the Σ head. The next highest element with V-features thus moves to Σ to function as the predicator as in (37), repeated below.

- (37) Q: *thəə*₁ *ca?*₃ *?aan*₂ *naŋ,sii*₅ *sɔɔp*₂ *may*₄
you will read book take-an-exam QP
‘Will you study for the exam?’
A: a. **ca?*₃
will
b. *?aan*₂
read

However, treating *ca?*₂ as the head of $\text{ModP}_{\text{volition}}$ appears problematic. Since (37) suggests that the next highest head with V-features moves to Σ past the head *ca?*₂, this movement would violate the Head Movement Constraint (Travis 1984). Alternatively, if *?aan*₂ ‘read’ in (37) adjoins to *ca?*₂ before moving to Σ , *ca?*₂ should always accompany the element which moves to the Σ head as a complex head movement as shown in (42)¹⁰.



¹⁰ Similar to the analysis of noun phrases, the right-adjunction is assumed for Thai clausal structures.

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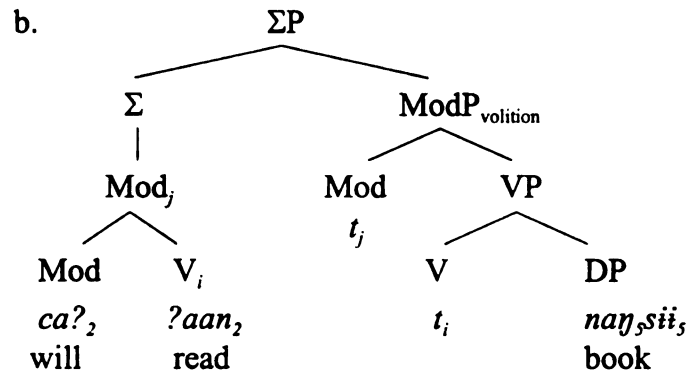
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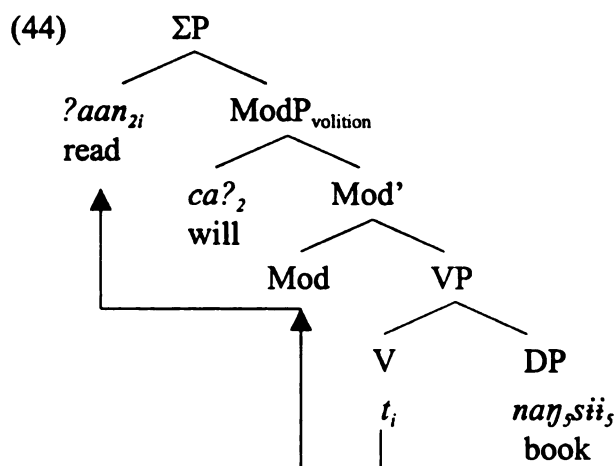


However, as the most common response to a question containing the modal of volition is simply the bare verb as shown in (43), the analysis above does not seem right¹¹.

- (43) Q: thəə₁ ca?₃ ?aan₂ nan₅sii₅ sɔɔp₂ may₄
 you will read book take-an-exam QP
 ‘Will you study for the exam?’
 A: a. *ca?₃ ?aan₂
 will read
 b. ?aan₂
 read

It seems, then, that *ca?*₂ may not be a head. What I would tentatively hypothesize is that *ca?*₂ is a phrase in the specifier of ModP_{volition}¹². The possibility of the movement of the head below *ca?*₂ to Σ without violating the HMC as well as without adjoining to *ca?*₂ can thus be analyzed as in (44).

¹¹ It should be noted that *ca?*₂ may accompany the verb to function as a predicator, but only when it is emphasized. This does not constitute an argument against my claim that *ca?*₂ is in the specifier instead of a head. An account of this instance is that *ca?*₂ moves to the specifier of ΣP which is also claimed to be the locus of emphasis.



5.4.1.4 *naa₃* and *khuan₁* ‘weak obligation’

I will discuss the modals *naa₃* and *khuan₁* ‘should’ together because both express the meaning of ‘weak obligation’ and they will be assumed to be generated in the same position as they never co-occur as in (45)¹³.

- (45) a. *khaw₅ khuan₁ naa₃ ?aan₁ naŋ,sii₅
 he should should read book
 b. *khaw₅ naa₃ khuan₁ ?aan₁ naŋ,sii₅
 he should should read book

Moreover, *naa₃* and *khuan₁* behave exactly the same in terms of their ability to be a predicator as shown in (46) and (47) below.

- (46) Q: khaw₅ naa₃ ?aan₂ naŋ,sii₅ sɔɔp₂ may₄
 he should read book take-an-exam QP
 ‘Should he study for the exam?’
 A: a. naa₃
 should
 ‘Yes, he should.’
 b. *?aan₂
 read

¹² The word *ca?₂* is thus hypothesized to undergo both phonological change and syntactic change from the head verb *cak₂* ‘want, desire’ to an element in the specifier.

¹³ It seems that *naa₃* is losing its root meaning of weak obligation and is becoming an epistemic modal denoting probability whereas *khuan₁* resists the change. The meaning of the former is inclined to be epistemic whereas the latter, root.

(47) Q: *khaw₅ khuan₁ ?aan₂ nan₅sii₅ sɔɔp₂ may₄*
 he should read book take-an-exam QP
 ‘Should he study for the exam?’

A: a. *khuan₁*
 should
 ‘Yes, he should read.’
 b. **?aan₂*
 read

Although *naa₃* and *khuan₁* are certainly syntactically higher than VP, it is not easy to tell where in the clausal structure they are generated with respect to the other modals mentioned earlier. This is because *naa₃* and *khuan₁* usually carry the epistemic interpretation, not the root one, when they precede *tɔŋ₃* ‘must’ as in (48) below¹⁴.

(48) a. *khaw₅ naa₃-ca?₂ tɔŋ₃ ?aan₂ nan₅sii₅*
 he should must read book
 ‘He likely has to read.’
 b. *khaw₅ khuan₁ tɔŋ₃ ?aan₂ nan₅sii₅*
 he should must read book
 ‘He likely has to read.’

The above phenomenon is not surprising, given that *naa₃*, *khuan₁* ‘should’ and *tɔŋ₃* ‘must’ are very close in meaning; that is, weak vs. strong obligation. The fact that they cannot co-occur when they have the root reading can thus be justified.

Although it does not sound natural when the root modals *naa₃* and *khuan₁* precede the modal of permission *day₃*, it is absolutely acceptable when the former appear before the modal of ability *day₃*, which I will assume in the following section to be base-generated in the same position as that of the permission modal (as also suggested by Cinque 1999).

pos

tha

(51

"It
foli

(49) a. *khaw₅ naa₃-ca?₂ day₃ pay₁ pat₄tha₁yaa₁*
 he should may go Pattaya
 ‘He is likely allowed to go to Pattaya.’

b. *khaw₅ khuan₁ day₃ pay₁ pat₄tha₁yaa₁*
 he should may go Pattaya
 ‘He is likely allowed to go to Pattaya.’

(50) a. *khaw₅ naa₃ tham₁ day₃*
 he should do can
 ‘He should be able to do it.’

b. *khaw₅ khuan₁ tham₁ day₃*
 he should do can
 ‘He should be able to do it.’

It seems tempting, therefore, to conclude that *naa₃* and *khuan₁* occupy the same position as *tɔŋ₃*, which is ModP_{obligation} right above ModP_{permission/ability}. However, the fact that the modal of volition *ca?₂* always precedes *tɔŋ₃* but follows *naa₃* and *khuan₁* as in (51-53) renders the conclusion suspicious.

(51) a. *khaw₅ ca?₂ tɔŋ₃ ?aan₂ naŋ₅sii₅*
 he will must read book
 ‘He will have to read.’

b. **khaw₅ tɔŋ₃ ca?₂ ?aan₂ naŋ₅sii₅*
 he must will read book

(52) a. *khaw₅ naa₃ ca?₂ ?aan₂ naŋ₅sii₅*
 he should will read book
 ‘He should read.’

b. **khaw₅ ca?₂ naa₃ ?aan₂ naŋ₅sii₅*
 he will should read book

(53) a. *khaw₅ khuan₁ ca?₂ ?aan₂ naŋ₅sii₅*
 he should will read book
 ‘He should read.’

b. **khaw₅ ca?₂ khuan₁ ?aan₂ naŋ₅sii₅*
 he will should read book

¹⁴ It should be mentioned that the word *ca?₂* in (48a) is obligatory. I will discuss in the following section the status of *ca?₂*, which always attaches to most of the epistemic

Importantly, it should be made clear that the word *ca?*, following *naa*₃ and *khuan*₁, is the modal of volition, not a future marker or a predictive marker¹⁵. Evidence for this comes from the following sentences where *ca?*₂ is replaced without any change of meaning by *cak*₂, which means ‘want, desire’ and is used in an archaic, bookish or poetic style of writing (see fn.8).

- (54) a. *khaw*₅ *cak*₂ *ton*₃ *?aan*₂ *nan*₅*sii*₅
 he want must read book
 ‘He will have to read.’
 b. *khaw*₅ *naa*₃ *cak*₂ *?aan*₂ *nan*₅*sii*₅
 he should want read book
 ‘He should want to read.’
 c. *khaw*₅ *khuan*₁ *cak*₂ *?aan*₂ *nan*₅*sii*₅
 he should want read book
 ‘He should want to read.’

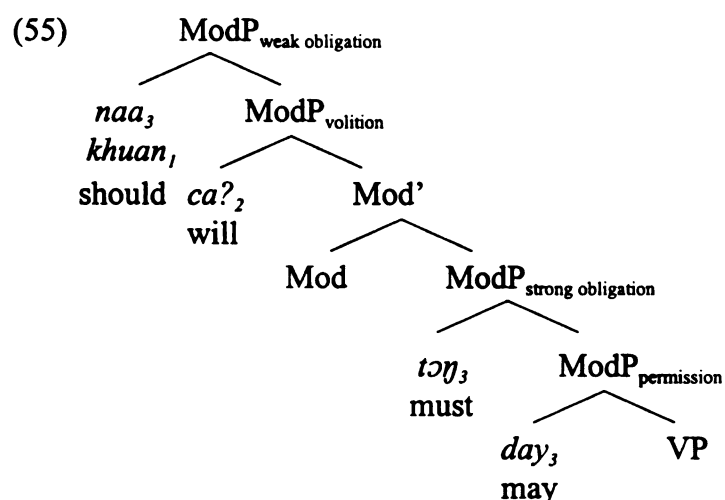
modals.

¹⁵ Also, *ca?*₂ following the modals of weak obligation is not a part of the word, say *naa*₃-*ca?*₂/*khuan*₃-*ca?*₂, which I will claim epistemic modals of probability to be such. The evidence supporting the claim is that these two modals with the root sense cannot be accompanied by *ca?*₂ when they function as predicators although *ca?*₂ is present in the question as shown in (i)-(ii).

- (i) Q: *khaw*₅ *naa*₃ *ca?*₂ *?aan*₂ *nan*₅*sii*₅ *may*₄
 he should will read book QP
 ‘Should he want to read?’
 A: a. *naa*₃
 should
 ‘Yes, he should.’
 b. **naa*₃ *ca?*₂
 should will
 (ii) Q: *khaw*₅ *khuan*₁ *ca?*₂ *?aan*₂ *nan*₅*sii*₅ *may*₄
 he should will read book QP
 ‘Should he read?’
 A: a. *khuan*₁
 should
 b. **khuan*₁ *ca?*₂
 should will

As will be discussed, *ca?*₂ has to accompany *naa*₃ and *khuan*₁, when the latter are epistemic modals behaving as predicators.

Summing up, despite the similar meanings of *naa₃*, *khuan₁* and *tɔŋ₃* as well as their same position relative to the modals of ability, they cannot be claimed to be in the same projection due to their different word orders with respect to the modal of volition *ca?*₂. Therefore, I suggest that the syntactic position of *naa₃* and *khuan₁* is as in (55) where ModP_{weak obligation} is above ModP_{volition} which is in turn above ModP_{strong obligation}.¹⁶



5.4.1.5 Post-verbal modals: *day₃* ‘ability, permission’, *pen₁* and *way₂* ‘ability’

Having discussed the pre-verbal modals, we are now in a position to analyze the post-verbal modals. Given that Thai is an SVO language, the fact that some modals appear post-verbally is both interesting and problematic.

The Thai post-verbal modals are *pen₁* and *way₂*, which express ability and *day₃* which means either ability or permission. The difference between the three modals of ability is that *day₃* conveys general ability, *pen₁* denotes mental or intellectual ability and *way₂* expresses the physical ability, as demonstrated below.

¹⁶ Cinque (1999) does not discuss the modals of weak obligation. He considers only the strong obligation modal ‘must’. It is not explicitly clear whether he includes ‘should’ under the modal of obligation.

(56) a. khaw₅ ?aan₂ nan₅sii₅ day₃/pen₁
 he read book can
 ‘He can read.’

 b. khaw₅ yok₄ nan₅sii₅ day₃/way₅
 he lift book can
 ‘He can lift books.’

Due to their post-verbal position, they might be thought of as VP right-adjuncts, not verbs. The predicator test, however, shows that the VP adjunct analysis is incorrect. All three words, although post-verbal, are able to be predicators as illustrated in (57)-(60). This clearly shows that they are heads situated above VP.

(57) Q: khaw₅ ?aan₂ nan₅sii₅ day₃ may₄
 he read book may QP
 ‘May he read?’

A: a. day₃
 may
 ‘Yes, he may read.’
 b. *?aan₂
 read

(58) Q: khaw₅ ?aan₂ nan₅sii₅ day₃ may₄
 he read book can QP
 ‘Can he read?’

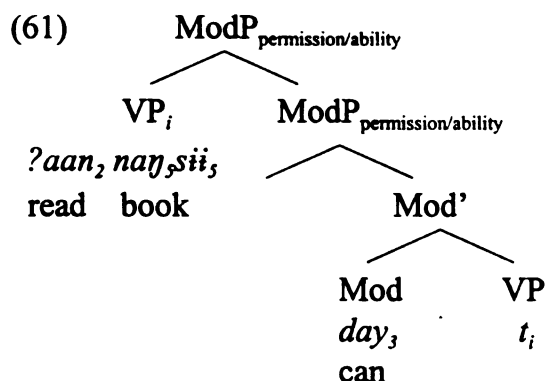
A: a. day₃
 can
 ‘Yes, he can read.’
 b. *?aan₂
 read

(59) Q: khaw₅ ?aan₂ nan₅sii₅ pen₁ may₄
 he read book can QP
 ‘Can he read?’

A: a. pen₁
 can
 ‘Yes, he can read.’
 b. *?aan₂
 read

- (60) Q: khaw₅ yok₄ naŋ₅si₅ way₅ may₄
 he lift book can QP
 ‘Can he lift the books?’
 A: a. way₅
 can
 ‘Yes, he can lift the books.’
 b. *yok₄
 lift

The examples above suggest that the post-verbal modals are in fact the base-generated pre-verbal ones. They also indicate that the scope concerns are determined by base positions, not the surface ones (as Cinque 1999 also argues is true for negation in Italian). In order to derive the surface word order, we must therefore raise the VP to some position higher than the modal. This can account for the word order fact as illustrated below.¹⁷



Although these post-verbal modals are higher than VP, they must be below the pre-verbal modals discussed above. This is shown in (62) and (63) where the modals *tɔŋ*, ‘must’ and *khuan*, ‘should’, not the post-verbal modals, function as predicates.

- (62) Q: khaw₅ tɔŋ₃ phuut₃ thay₁ day₃ may₄
 he must speak Thai can QP
 ‘Must he be able to speak Thai?’

¹⁷ I will assume without argument here that the VP adjoins to ModP. See Section 5.5 for arguments based on negation that support this assumption.

A: a. tɔŋ₃
 must
 ‘Yes, he must.’
 b. *phuut₃
 speak
 c. *day₃
 can

(63) Q: khaw₅ khuan₃ phuut₃ thay₁ pen₁ may₄
 he should speak Thai can QP
 ‘Should he be able to speak Thai?’

A: a. khuan₁
 should
 ‘Yes, he should.’
 b. *phuut₃
 speak
 c. *pen₁
 can

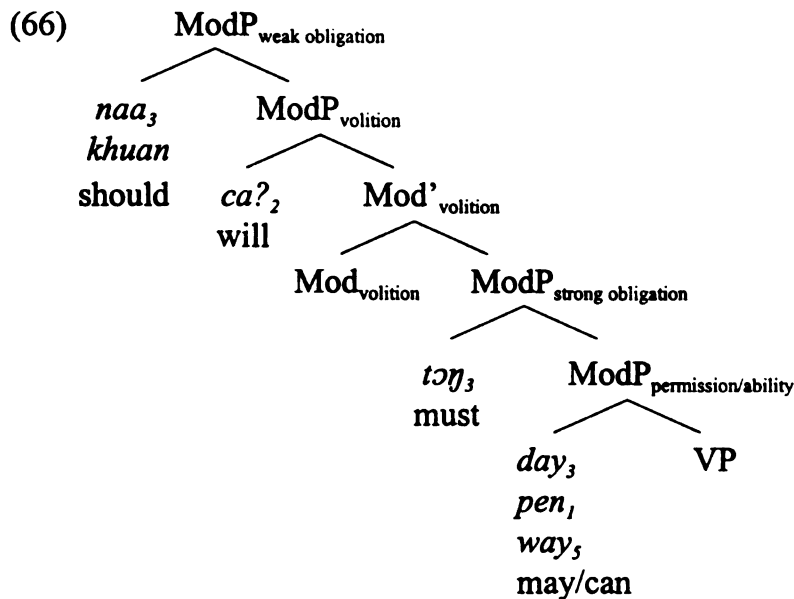
Rather than creating a new node for these modals, I assume that they are in ModP_{permission}. Evidence for this comes from the following facts: 1) the modals of permission and ability never co-occur as demonstrated in (64) and 2) the meanings of *day₃*, which denotes permission in the pre-verbal and post-verbal positions are not different as shown in (65).

(64) a. *khaw₅ day₃ ?aan₂ naŋ₅sii₅ day₃
 he may read book can
 b. *khaw₅ day₃ ?aan₂ naŋ₅sii₅ day₃
 he may read book may
 c. *khaw₅ day₃ ?aan₂ naŋ₅sii₅ pen₁
 he may read book can
 d. *khaw₅ day₃ yok₄ naŋ₅sii₅ way₅
 he may lift book can

(65) a. khaw₅ day₃ ?aan₂ naŋ₅sii₅
 he may read book
 ‘He is allowed to read.’
 -

b. *khaw₅ ?aan₂ naŋ₃sih₃ day₃*
 he read book may
 ‘He is allowed to read.’

Therefore, the syntactic representation of all the modals we have looked at so far is shown in (66).



Having sketched out the basic analysis, I will now provide further arguments which support the idea that the post-verbal modals are generated in the pre-verbal position. Then I will attempt to give an account of the operation of VP movement.

5.4.1.5.1 *Arguments for the claim that post-verbal modals are generated pre-verbally*

There are several pieces of evidence suggesting that the post-verbal modals behave exactly like the pre-verbal ones and thus support the assumption that they are also pre-verbal.

(1) Negatability

Similar to pre-verbal modals, the post-verbal modals can be directly negated by the negator *may₃* ‘not’ as demonstrated below.

(67) khaw₅ may₃ khuan₃ ?aan₂ naŋ₅sii₅
 he not should read book
 'He should not read.'

(68) khaw₅ may₃ tɔŋ₃ ?aan₂ naŋ₅sii₅
 he not must read book
 'He needs not read.'

(69) khaw₅ ?aan₂ naŋ₅sii₅ may₃ day₃
 he read book not can/may
 'He cannot/may not read.'

(2) Scope over VP

In spite of their post-verbal position, such modals always take scope over VP like all other pre-verbal modals as mentioned earlier¹⁸. Also, in the negative sentence, if the negator *may*₃ 'not' directly negates the modals, either pre- or post- verbal ones, the negator *may*₃ takes the modals under its scope as in (67-69) above. On the other hand, if the negator *may*₃ 'not' directly negates the main verb, the VP including 'not' is under the scope of the modal as in (70-72) below.

(70) khaw₅ khuan₁ may₃ ?aan₂ naŋ₅sii₅
 he should not read book
 'He should not read.'

(71) khaw₅ tɔŋ₃ may₃ ?aan₂ naŋ₅sii₅
 he must not read book
 'He must not read.'

(72) khaw₅ may₃ ?aan₂ naŋ₅sii₅ day₃
 he not read book can
 'He can [not read].'

¹⁸ I follow here the Scope Principle defined by Ernst (1991:753) as below.

The Scope Principle

An operator A has scope over an operator B in case A c-commands a member of the chain containing B.

Also, according to Ernst, scope is determined by strict c-command.

Better interpretations of the above sentences are ‘It is advisable that he does not read.’, ‘It is necessary that he does not read.’, and ‘He is able to not read.’ respectively.

In sum, no matter where the negator *may*₃ is, the modals all take scope over the VP. The negation is under the scope of the modals only when VP is negated. It should thus be repeated here that the scope relations are determined by the base positions, not the surface ones.

(3) Co-ordination

When two VPs are conjoined, the modals can take scope over both VPs independent of the pre- or post-verbal position as shown below.

(73) khaw₅ khuan₁ ?aan₂ nan₃sii₅ lææ₄ tham₁ kaan₁-baan₃
 he should read book and do homework
 ‘He should read and do his homework.’

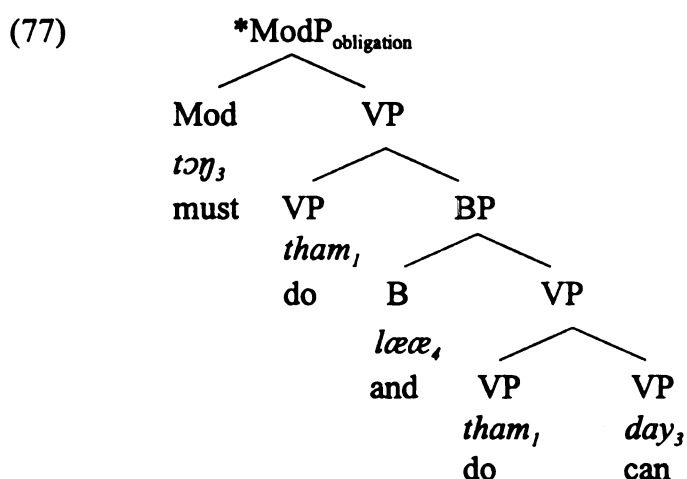
(74) khaw₅ tɔŋ₃ ?aan₂ nan₃sii₅ lææ₄ tham₁ kaan₁-baan₃
 he must read book and do homework
 ‘He must read and do his homework.’

(75) khaw₅ ?aan₂ nan₃sii₅ lææ₄ tham₁ kaan₁-baan₃ day₃
 he read book and do homework can/may
 ‘He can/may read and do his homework.’

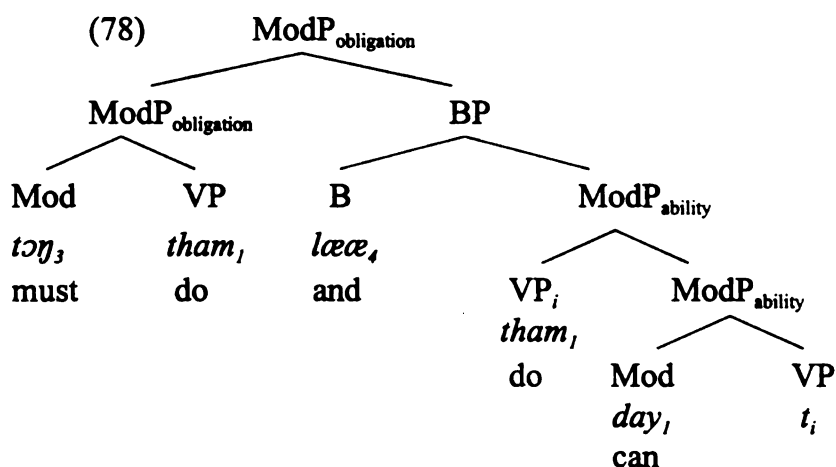
However, in a co-ordinated construction where the first conjunct contains a pre-verbal modal and the second conjunct, a post-verbal modal, the pre-verbal modal cannot take scope over the second conjunct (76a). The repetition of the pre-verbal modal in the second conjunct is necessary (76b) if the former is to have scope over the former.

(76) a. *khaw₅ tɔŋ₃ tham₁ lææ₄ tham₁ day₃
 he must do and do can
 ‘He must and must be able to do it.’
 b. khaw₅ tɔŋ₃ tham₁ lææ₄ tɔŋ₃ tham₁ day₃
 he must do and must do can

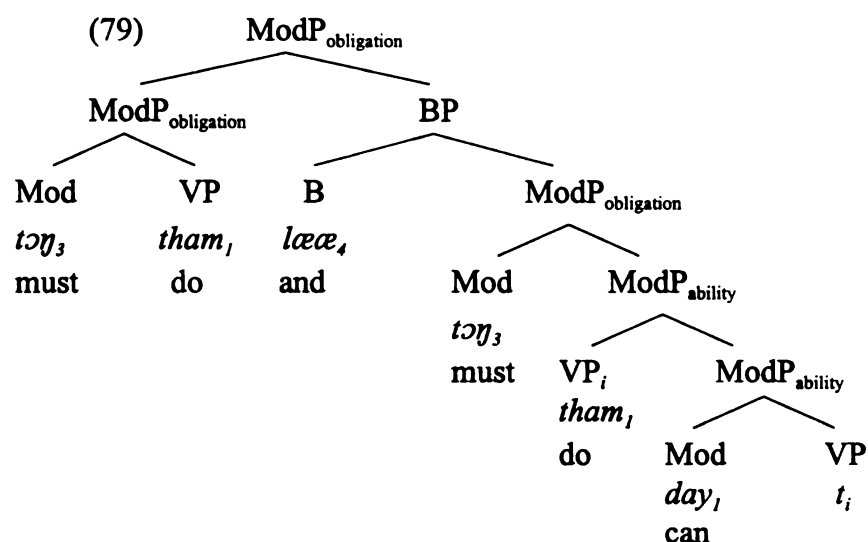
The above examples show that the post-verbal modals cannot be VP right-adjuncts. If they were, sentence (76a) would not be ungrammatical. Let me explain this. If the post-verbal modal of ability *day*₃ ‘can’ were VP right-adjunct, the two conjoined phrases would be VPs as in (77). Assuming the co-ordination analysis as in Munn (1992, 1993), the fact that the modal of obligation *tɔŋ*₃ ‘must’ cannot have scope over both conjoined VPs cannot be explained.



The ungrammaticality of (76a) coupled with the requirement of the modal of obligation in the second conjunct is thus attributable to the fact that the post-verbal modal of ability *day*₃ ‘can’ projects ModP_{ability} above VP. Since the second conjunct is a ModP, the first conjunct is required to be a ModP too. The structure is thus as in (78).



Since two ModPs are conjoined in (78), the modal of obligation in the first conjunct does not have scope over the second conjunct. Therefore, another modal of obligation in the second conjunct is needed as shown in (79).



(4) Other pre-verbal modals becoming post-verbal

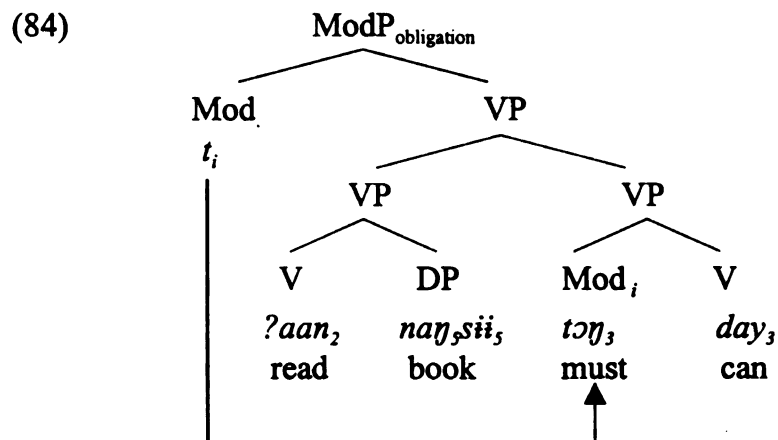
Perhaps the most important piece of evidence supporting the claim that post-verbal modals in Thai trigger VP movement is that the VP can move above the pre-verbal modals when the post-verbal modals are present. The pre-verbal modals never appear post-verbally when they stand alone. This is shown in (80).

- (80) a. *khaw₅ ?aan₂ nan₅sɨi₅ ca?₂
 he read book will
 b. *khaw₅ ?aan₂ nan₅sɨi₅ khuan₁
 he read book should
 c. *khaw₅ ?aan₂ nan₅sɨi₅ tɔŋ₃
 he read book must

However, these pre-verbal modals can be preceded by a VP when the post-verbal modals are present.

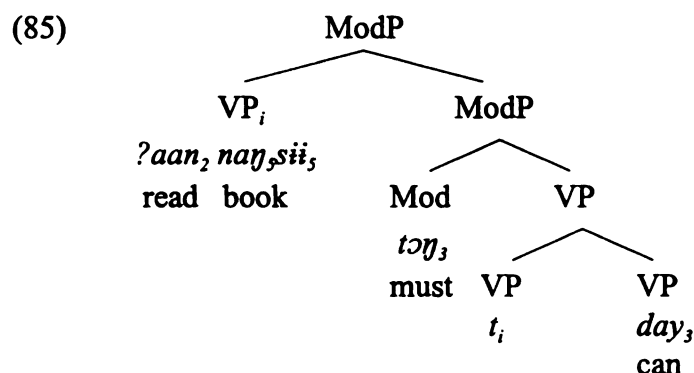
- (81) a. *khaw₅ tɔŋ₃ ?aan₂ naŋ₅sii₅ day₃*
 he must read book can
 ‘He must be able to read.’
 b. *khaw₅ ?aan₂ naŋ₅sii₅ tɔŋ₃ day₃*
 he read book must can
 ‘He must be able to read.’
- (82) a. *khaw₅ khuan₁ ?aan₂ naŋ₅sii₅ day₃*
 he should read book can
 ‘He should be able to read.’
 b. *khaw₅ ?aan₂ naŋ₅sii₅ khuan₁ day₃*
 he read book should can
 ‘He should be able to read.’
- (83) a. *khaw₅ ca?₂ tɔŋ₃ ?aan₂ naŋ₅sii₅ day₃*
 he will must read book can
 ‘He will have to be able to read.’
 b. *khaw₅ ?aan₂ naŋ₅sii₅ ca?₂ tɔŋ₃ day₃*
 he read book will must can
 ‘He will have to be able to read.’

It is obvious from the translation that each pair has the same meaning. Let’s find out whether the adjunction analysis can account for the above examples. First of all, to capture the word order fact, the pre-verbal modals have to lower to adjoin to the post-verbal modals which are VP right-adjuncts as in (84), represented for sentence (81b).



The analysis in (84) does not seem right mainly due to lowering which violates **ECP**; that is, the trace is not properly governed. In other words, the moved element does **not** c-command its trace. This renders the first possibility unpromising.

The second possibility concerns VP movement. If the post-verbal modals are VP adjuncts, it must be the case that only part of VP moves. In other words, the VP right adjunct *day₃* is stranded as illustrated in (85).



Such a movement is illegitimate, given the general assumption that the deleted or moved element must be either X^0 or XP including its adjunct (Ernst 1992). Moreover, what is unclear is why VP moves further away from the post-verbal modals if the latter trigger the movement. Therefore, the idea that the post-verbal modals are right-adjuncts is improbable. I will attempt to give an account of VP movement in the following sub-section.

5.4.1.5.2 Account of VP movement

What triggers VP movement needs explication. It must be the case that the post-verbal modals possess a certain feature that attracts VP, most probably $[+V]$ feature. However, as claimed from the beginning, almost all pre-verbal modals have V-features. Therefore, the question that arises is why the other pre-verbal modals do not attract the

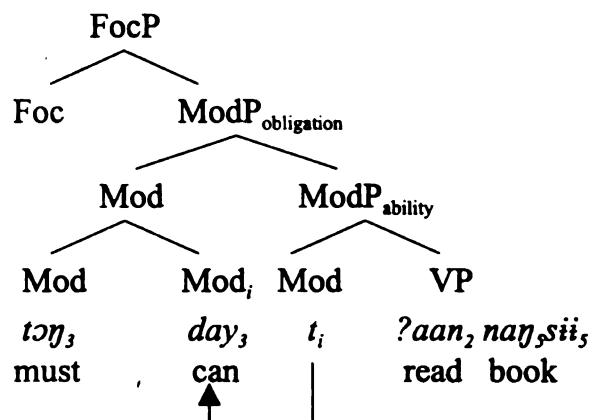
VP. A feasible explanation is that the post-verbal modals have strong V-features whereas the pre-verbal, weak ones.

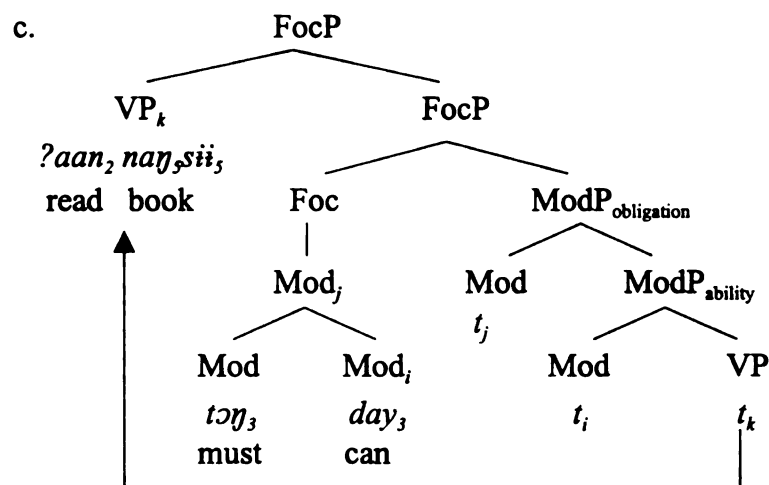
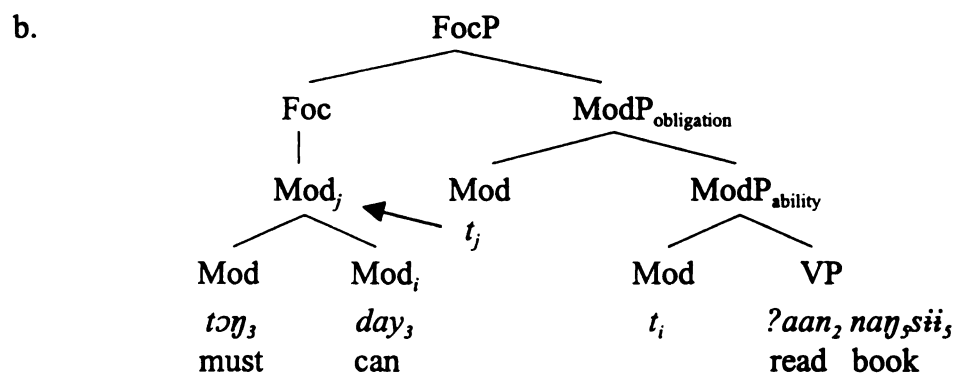
In addition, my tentative hypothesis regarding the VP movement above the pre-verbal modals with the presence of the post-verbal is as follows. Although the pair of sentences as in (81), repeated below, are not different in meaning (Sookgasem 1990), they are not exactly the same. That is, the post-verbal modal in sentence (b) is more focused than that in (a).

- (81) a. *khaw₅ tɔŋ₃ ?aan₂ naŋ₅sii₅ day₃*
 he must read book can
 ‘He must be able to read.’
 b. *khaw₅ ?aan₂ naŋ₅sii₅ tɔŋ₃ day₃*
 he read book must can
 ‘He must be able to read.’

I will, therefore, speculate that the post-verbal modal moves to a Focus phrase which is high in the structure. (I am not assuming here what exactly that phrase is, but I will stipulate a FocP for simplicity). On its way to FocP, the post-verbal modal has to be adjoined to the higher pre-verbal modal to avoid HMC as illustrated in (86a, b) for (81b). The VP movement is then triggered by the feature carried by the post-verbal modal which now substitutes into the head of FocP (86c).

(86) a.





Support for this analysis comes from the predicator fact as demonstrated in (87)

where the minimal response to the question as in (81b) is the complex head consisting of the pre- and the post-verbal modals. Either modal used alone as the predicator leads to ungrammaticality.

(87) Q: khaw₅ ?aan₂ naŋ₃sɪi₃ tɔŋ₃ day₃ may₄
 he read book must can QP
 ‘Must he be able to read?’

A: a. *day₃
 can

b. *tɔŋ₃
 must

c. tɔŋ₃ day₃
 must can

Although my hypothesis is tentative, it seems to be able to take care of the instances under examination. However, it needs more profound studies to discover whether the analysis works in such a way.

5.4.1.6 Summary

To conclude, I have argued that all the root modals are basically pre-verbal although some have post-verbal surface word order. VP movement thus operates in Thai syntax, which makes some pre-verbal modals appear post-verbally. Moreover, all the root modals are heads with V-features, except for the modal of volition *ca?*, which is suggested to be a phrase in the specifier of $\text{ModP}_{\text{volition}}$. The syntactic positions of Thai root modals, furthermore, conform in principle to the cross-linguistic orderings proposed by Cinque (1999), except for that of the modals of weak obligation which, according to the empirical evidence, are not in the same base position as that of the strong obligation modal. Hence, I tentatively suggest that the former is positioned above $\text{ModP}_{\text{volition}}$ which is in turn above $\text{ModP}_{\text{strong obligation}}$.

5.4.2 Epistemic modals

Having analyzed the root modals, I now turn to the epistemic modals. All epistemic modals occur pre-verbally. As they all concern the judgment of a proposition on the part of the speaker, they are assumed to be in the same position above the root modals (Cinque 1999). However, the epistemic modals in Thai do not behave in a unified way. Therefore, I will divide them into three groups according to their behavior.

5.4.2.1 *tɔŋ*₂ ‘inferred certainty’

The word *tɔŋ*₃ as an epistemic modal expresses inferred certainty as shown in (88) below.

- (88) *khaw*₅ *may*₃ *yuu*₂ *baan*₃ *khaw*₅ *tɔŋ*₃ *pay*₁ *haa*₅ *thəə*₁ *nææ*₃-*nææ*₃
 he not stay home he must go see her surely
 ‘He is not at home. He surely must go to see her.’

Like the volition modal *ca?*₂, the epistemic modal *tɔŋ*₃ cannot be a predicator as demonstrated below.

- (89) Q: **khaw*₅ *tɔŋ*₃ *pay*₁ *haa*₅ *thəə*₁ *may*₄
 he must go see her QP
 ‘Is it certain that he has gone to see her?’
 A: **tɔŋ*₃
 must

Not only is the epistemic modal *tɔŋ*₃ unable to be a predicator, it cannot be questioned either, no matter whether the question particle is *rii*₅ or *may*₄.¹⁹

- (90) a. **khaw*₅ *tɔŋ*₃ *pay*₁ *haa*₅ *thəə*₁ *nææ*₃ *rii*₅
 he must go see her sure QP
 b. **khaw*₅ *tɔŋ*₃ *pay*₁ *haa*₅ *thəə*₁ *nææ*₃ *may*₄
 he must go see her sure QP

However, the above fact is not unexpected, considering the same phenomenon in English where the epistemic modals *must*, *should* and *may* are odd in questions because they are incompatible with the request for information (Jackendoff 1972:84-85). The three modals in (91) below thus prefer the root meanings.

¹⁹ The two question particles are different although both form a yes/no question. *rii*₅ questions the truth value of the proposition whereas *may*₄ which is a reduced form of

(91) Must/Should/May John have left?

In contrast to regular questions, tag questions do not solicit information, and are thus acceptable with epistemic modals as shown by the English examples below.

- (92) a. John must have left, mustn't he?
b. John should have left, shouldn't he?
c. John may have left, may he not?

This is also true in Thai. The epistemic modal *tɔŋ*₃ can be questioned by *chay*₃-*may*₄ 'true or not', the tag question in Thai.

- (93) *khaw*₅ *tɔŋ*₃ *pay*₁ *haa*₅ *thəə*₁ *nææ*₃ *ləəy*₁ *chay*₃-*may*₄
he must go see her sure PRT true-or not
'Is it true that he surely went to see her?'

However, the modal *tɔŋ*₃ cannot stand alone nor accompany *chay*₃ 'true' as the response to (93) as shown in (94), unlike verbs as illustrated in (95).

- (94) a. **tɔŋ*₃
must
b. **chay*₃ *tɔŋ*₃
true must
c. *chay*₃
true

- (95) Q: *khaw*₅ *pay*₁ *haa*₅ *thəə*₁ *chay*₃-*may*₄
he go see her true-or not
'Is it true that he went to see her?'

- A: a. *chay*₃
true
b. *chay*₃ *pay*₁
true go
c. ?*pay*₁
go

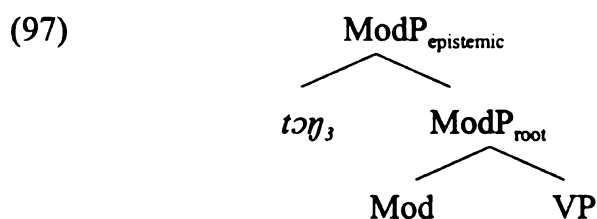
*rɪi*₅ *may*₃ 'or not' asks for the affirmation or denial of the proposition, or particularly the verb. Therefore, *may*₄ is used as a question particle for the predicator test.

The above fact is not surprising when an explanation is given on the semantic grounds. As the epistemic *tɔŋ*₃ involves certain inference or judgment on the part of the speaker, it seems odd that the statement of inferred certainty is questioned by the speaker himself/herself and confirmed or denied on the part of the hearer.²⁰

From what has been discussed above, syntactic information about the epistemic modal *tɔŋ*₃ cannot be definitively drawn from its inability to function as a predicator or to be questioned. What can simply be speculated is that it must be positioned in ModP_{epistemic} which is above root modals as indicated by the following examples.

- (96) a. pɔɔ₃ may₃ waa₄ khaw₅ tɔŋ₃ day₃ pay₁ baa₁ nææ₃
 father not scold he must may go bar sure
 ‘His father did not complain. He certainly must be allowed to go to the bar.’
 b. khaw₅ sii₃ maay₄ maa₁ khaw₅ tɔŋ₃ ca?₂ sɔm₃ pra₁ tuu₁ nææ₃-nææ₃
 he buy wood come he must will repair door sure
 ‘He bought some wood. He certainly must plan to repair the door.’

Hence, the syntactic structure of the epistemic *tɔŋ*₃ is represented as in (97), where its syntactic position (head or phrase) is left open.



²⁰ In fact, the epistemic modal *tɔŋ*₃ can be used as an answer to (93), but only with the verb and adverbial *nææ*₃ ‘surely’ as in (i).

- (i) tɔŋ₃ pay₁ nææ₃
 must go surely

This is not different from English in which the answer to the question containing an epistemic modal *must* is usually ‘must + Aux/V’ as in (ii).

- (ii) Q: He must have left, mustn’t he?

5.4.2.2 *?aat₂-ca?*₂ and *khon₁-ca?*₂ ‘probability’

The epistemic modals *?aat₂-ca?*₂ ‘probably’ and *khon₁-ca?*₂ ‘likely’ behave in the same way as the epistemic *tɔŋ₃* ‘must’ in terms of their inability to be questioned by question particles other than the tag question *chay₃-may₄* as shown below.

- (98) a. **khaw₅ ?aat₂-ca?*₂ *?aan₂ nan₅sii₅ may₄*
 he probably read book QP
 ‘Does he probably read?’
 b. **khaw₅ ?aat₂-ca?*₂ *?aan₂ nan₅sii₅ rii₅*
 he probably read book QP
 c. *khaw₅ ?aat₂-ca?*₂ *?aan₂ nan₅sii₅ chay₃-may₄*
 he probably read book true-or not
- (99) a. **khaw₅ khon₁-ca?*₂ *?aan₂ nan₅sii₅ may₄*
 he likely read book QP
 ‘Does he likely read?’
 b. **khaw₅ khon₁-ca?*₂ *?aan₂ nan₅sii₅ rii₅*
 he likely read book QP
 c. *khaw₅ khon₁-ca?*₂ *?aan₂ nan₅sii₅ chay₃-may₄*
 he likely read book true-or not

Unlike *tɔŋ₃*, however, when *?aat₂-ca?*₂ and *khon₁-ca?*₂ are questioned by the tag question particle *chay₃-may₄*, they themselves can be predicators.

- (100) Q: *khaw₅ ?aat₂-ca?*₂ *?aan₂ nan₅sii₅ chay₃-may₄*
 he probably read book true-or not
 ‘Is it true that he probably reads.’
 A: a. *(chay₃) ?aat₂-ca?*₂
 (tru) probably
 b. **(chay₃) ?aan₂*
 (tru) read
- (101) Q: *khaw₅ khon₁-ca?*₂ *?aan₂ nan₅sii₅ chay₃-may₄*
 he likely read book true-or not
 ‘Is it true that he likely reads.’

A: Yes, he must have.

- A: a. (chay₃) khon₁-ca?₂
 (true) likely
 b. *(chay₃) ?aan₂
 (true) read

The fact that the verb cannot be a predicator in the examples above seemingly implies that ?aat₂-ca?₂ and khon₁-ca?₂ function as heads which block the movement of V to the Σ head. However, ?aat₂-ca?₂ ‘probably’ and khon₁-ca?₂ ‘likely’ often stand alone without the accompaniment of ca?₂. This casts doubt on the status of ca?₂. That is, is it an intrinsic part of the words ?aat₂-ca?₂ and khon₁-ca?₂ which is optional and thus sometimes omitted or is it a separate element which adjoins to ?aat₂ and khon₁? The pairs ?aat₂-ca?₂/ ?aat₂ and khon₁-ca?₂/ khon₁ are not different in meaning. The absence of ca?₂ is not a problem, given that probability usually implies futurity or prediction which is expressed by the future marker ca?₂.²¹ Thus, with or without ca?₂, these modals express the same meaning.²²

Let’s take as a start the following examples where ?aat₂ and khon₁ cannot occur alone as predicators without ca?₂.

- (102) Q: khaw₅ ?aat₂ ?aan₂ nan₅sih₅ chay₃-may₄
 he probably read book true-or not
 ‘Is it true that he probably reads?’

²¹ Bybee et al. (1994:248, 207) state that ‘possibility markers are often restricted to future interpretations,’ and ‘the normal or default interpretation for epistemic possibility and probability with dynamic predicates is that the situation is expected to take place in the future.’

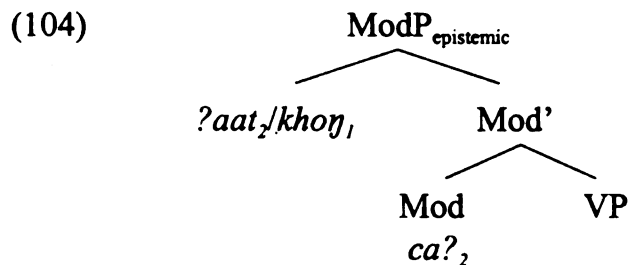
²² Sookgasem (1990:90) considers such words as compound-like words because the meaning of the whole word cannot be decomposed. She also mentions that ‘all compound-like single temporal verbs have ca?₂ as their parts, and this ca?₂ can be omitted without affecting the meaning of the words’.

- A: a. **?aat*₂
 probably
 b. *?aat*₂ *ca?*₂
 probably will

(103) Q: *khaw*₅ *khon*₁ *?aan*₂ *nan*₅ *sih*₅ *chay*₃-*may*₄
 he likely read book true-or not
 ‘Is it true that he likely reads?’

- A: a. **khon*₁
 likely
 b. *khon*₁ *ca?*₂
 likely will

The above examples can be interpreted in two different ways. First, suppose *?aat*₂-*ca?*₂ and *khon*₁-*ca?*₂ have the following structure where *ca?*₂ is the head while *?aat*₂ and *khon*₁ are in the specifier.



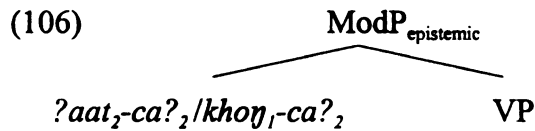
The proposal that *ca?*₂ is the head can handle the case where *ca?*₂ may not be omitted in the minimal response to yes/no questions. Still, the remaining problem is ‘is *ca?*₂ generated there or does it move from a head down below?’ Since *ca?*₂ usually appears as a tense marker, it is unlikely to be generated in the head of ModP. Instead it should project its own projection which is presumably TP_{future}. Moreover, if the hypothesis is that *ca?*₂ is the head of TP_{future}, then it is dubious why *ca?*₂ itself cannot behave as a predicator as shown in (105).

(105) Q: phruŋ₃nii₄ khaw₅ ca?₂ maa₁ rooŋ₁riian₁ may₄
tomorrow he will come school QP
‘Will he come to school tomorrow?’

A: a. maa₁
come
b. *ca?₂
will

The above example also weakens the possibility of *ca?*₂ moving from a lower head which is supposed to be TP_{future} situated between the epistemic modals and the root ones (Cinque 1999).

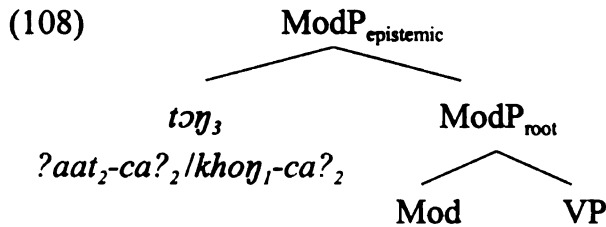
Alternatively, the obligatoriness of *ca?*₂ can be looked at in another way. That is, *ca?*₂ is intrinsically incorporated in the words *?aat?*₂-*ca?*₂ and *khon?*₁-*ca?*₂ and they together behave as a compound head as in (106). The incomplete head is, as a consequence, unacceptable as the predicator. This sounds too simple but no apparent problem is found.



Summing up, the only convincing possibility is the simplest one; that is, *?aat?*₂-*ca?*₂ and *khon?*₁-*ca?*₂ are compound heads. The word *ca?*₂ in the epistemic modals is thus different from *ca?*₂ as a future marker. Since the epistemic modals under investigation can behave as predicators and block the movement of the verb to Σ, they are qualified as heads.

The unacceptability of their co-occurrence with the epistemic modal *tɔŋ*, as shown in (107) indicates that aside from their semantic incongruity, they are in the same structural position; namely, $\text{ModP}_{\text{epistemic}}$ as in (108)²³.

- (107) a. **khaw*₅ *?aat*₂ *tɔŋ*₃ *?aan*₁ *naŋ*₅ *sii*₅
 he probably must read book
 b. **khaw*₅ *tɔŋ*₃ *?aat*₂ *?aan*₁ *naŋ*₅ *sii*₅
 he must probably read book
 c. **khaw*₅ *khon*₁ *tɔŋ*₃ *?aan*₁ *naŋ*₅ *sii*₅
 he likely must read book
 d. **khaw*₅ *tɔŋ*₃ *khon*₁ *?aan*₁ *naŋ*₅ *sii*₅
 he must likely read book



5.4.2.3 *naa*₃-*ca*?₂ and *khuan*₁-*ca*?₂ ‘possibility’

As epistemic modals, *naa*₃-*ca*?₂ and *khuan*₁-*ca*?₂ express supposition or probability as shown in the examples below.

- (109) a. *khaw*₅ *pay*₁ *haa*₅ *thəə*₁ *thuk*₄ *wan*₁ *khaw*₅ *naa*₁-*ca*?₂ *choɔp*₅ *thəə*₁
 he go see she everyday he should like she
 ‘He goes to see her everyday. He possibly likes her.’
 b. *khaw*₅ *duu*₅ *dek*₂ *khaw*₅ *khuan*₁-*ca*?₂ *?on*₂ *kwaa*₂ *thəə*₁
 he look child he should young more she
 ‘He looks young. He should be younger than her.’

What needs to be clarified is that *ca*?₂ after *naa*₃ and *khuan*₁ in the epistemic sense is not the modal of volition as suggested in section 5.4.1.4 for *ca*?₂ following *naa*₃ and

²³ Sentences (107a,c) are acceptable when *tɔŋ*₃ is the root modal of strong obligation.

*khuan*₁ in the root sense. The first supporting piece of evidence comes from the following sentences where *cak*₂ ‘want’ which is believed to be the source of *ca?*₂ cannot replace it.

- (110) a. **khaw*₅ *naa*₁ *cak*₂ *chɔɔp*₅ *thəə*₁
 he should want like she
 b. **khaw*₅ *khuan*₁ *cak*₂ *ʔɔn*₂ *kwaa*₂ *thəə*₁
 he should want young more she

The word *ca?*₂ in this case is thus different from the volition modal. Like *ca?*₂ in *ʔaat*₂-*ca?*₂ and *khon*₁-*ca?*₂, it expresses futurity or prediction. Also, *ca?*₂ is obligatory when these two modals are predicators as in (111)-(112). However, unlike *ʔaat*₂-*ca?*₂ and *khon*₁-*ca?*₂, *ca?*₂ in *naa*₃-*ca?*₂ is obligatory whereas *ca?*₂ in *khuan*₁-*ca?*₂ can sometimes be omitted as in (113).

- (111) Q: *khaw*₅ *naa*₁-*ca?*₂ *chɔɔp*₅ *thəə*₁ *may*₄
 he should like. she QP
 ‘Is it probably that he likes her?’
 A: a. *naa*₃-*ca?*₂
 should
 b. **naa*₃
 should

- (112) Q: *khaw*₅ *khuan*₁-*ca?*₂ *ʔɔn*₂ *kwaa*₂ *thəə*₁ *may*₄
 he should young more she QP
 ‘Is it likely that he is younger than her?’
 A: a. *khuan*₁-*ca?*₂
 should
 b. **khuan*₁
 should

- (113) a. **khaw*₅ *naa*₁ *chɔɔp*₅ *thəə*₁
 he should like she
 b. ??*khaw*₅ *khuan*₁ *ʔɔn*₂ *kwaa*₂ *thəə*₁
 he should young more she

Taking the same line of arguments for *?aat₂-ca?*₂ and *khon₁-ca?*₂, I will assume that *naa₃-ca?*₂ and *khuan₁-ca?*₂ are compound heads as they also block the movement of V across them to the Σ head as in the examples below.

(114) Q: *khaw₅ naa₁-ca?*₂ *chɔɔp₅ thəə₁ may₄*
 he should like she QP
 ‘Is it probably that he likes her?’

A: a. *naa₃-ca?*₂
 should

 b. **chɔɔp₅*
 like

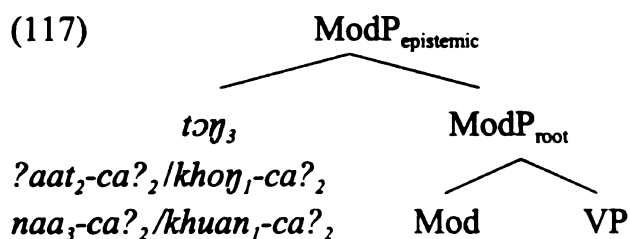
(115) Q: *khaw₅ khuan₁-ca?*₂ *?ɔn₂ kwaa₂ thəə₁ may₄*
 he should young more she QP
 ‘Is it likely that he is younger than her?’

A: a. *khuan₁-ca?*₂
 should

 b. **?ɔn₂*
 young

The impossibility of co-occurrence of all epistemic modals as illustrated in (116) below seems to suggest that they occupy the same position as illustrated in (117).

- (116) a. **khaw₅ tɔŋ₃ naa₃-ca?*₂ *?aan₁ naŋ₅sii₅*
 he must should read book
 b. **khaw₅ tɔŋ₃ khuan₁-ca?*₂ *?aan₁ naŋ₅sii₅*
 he must should read book
 c. **khaw₅ khon₁ naa₃ ?aan₁ naŋ₅sii₅*
 he likely should read book
 d. **khaw₅ khuan₁ ?aat₂ ?aan₁ naŋ₅sii₅*
 he should probably read book



Unlike the other epistemic modals which are odd in questions, however, *naa₃-ca?*₂ and *khuan₁-ca?*₂ can be questioned by *may₄* as in (114-115) above. I will turn to this issue along with some facts about the negatability of *naa₃-ca?*₂ and *khuan₁-ca?*₂ as distinct from the other epistemic modals in the following section.

5.4.3.4 Summary

In general, the epistemic modals in Thai have a unified behavior; that is, they are all heads and thus can function as predicates (although the case of *tɔŋ₃* is not conclusively affirmed). However, the fact that *naa₃-ca?*₂ and *khuan₁-ca?*₂ can be questioned whereas the others cannot has to be explained. As the question particle *may₄* is a shortened form of *rii₅ may₃* ‘or not’, the ability to be questioned by *may₄* is closely related to the ability to be negated. Negation is then the issue of discussion in the following section.

5.5 Thai negation

The most frequently used negator in Thai is *may₃*, which has also been used as a test for verbness (Noss 1964, Needleman 1973, Punyodyana 1976, Sriphen 1982, Indrambarya 1994)²⁴. That is, the word that can be directly negated or be preceded by

²⁴ The other two common negators in Thai are *may₃-day₃*, and *may₃-chay₃*. Their differences and usages have never been thoroughly studied. Although *may₃-chay₃* is undisputably assumed to be the negation of copula verbs in Thai; namely, *pen₁*, *khii₁*, and *chay₃* as they generally precede a noun phrase or a prepositional phrase, the usages of *may₃* and *may₃-day₃* are not agreed upon. For instance, Ekniyom (1979: 60-61) makes a claim that *may₃* denotes irrealis negation whereas *may₃-day₃*, realis, as illustrated in the examples below:

(i) a. *khaw₅ may₃ pen₁ khruu₁ nææ₃nææ₃*
 he not be teacher certainly

*may*₃ is treated as a verb. I will examine in this section what syntactic status the negator *may*₃ is as well as argue for my analysis of the modals mentioned in the previous section, utilizing the negation fact.

5.5.1 Distribution of *may*₃

The Thai negator *may*₃ is a free morpheme. It can basically be placed in front of verbs and adjectives as shown below²⁵:

- (118) a. *khaw*₅ *may*₃ *?aan*₁ *naŋ*₅ *sii*₅
 he not read book
 ‘He does not read book.’

 ‘He certainly will not be a teacher.’

- b. *khaw*₅ *may*₃-*day*₃ *pen*₁ *khruu*₁ *nææ*₃ *nææ*₃
 he not be teacher certainly
 ‘He certainly is/was not a teacher.’

However, *may*₃ does not always convey the irrealis negation as in (ii) below.

- (ii) a. *khaw*₅ *may*₃ *klap*₂ *baan*₃ *miiə*₃ *khiin*₁
 he not return home last night
 ‘He did not return home last night.’
 b. *khaw*₅ *may*₃-*day*₃ *klap*₂ *baan*₃ *miiə*₃ *khiin*₁
 he not return home last night
 ‘He did not return home last night.’

As obvious, the interpretations of (iia,b) are not different. Therefore, the claim by Eknaiyom does not sound completely right. Nonetheless, she also points out that *may*₃ can precede all verbs, but only some auxiliaries while *may*₃-*day*₃ can precede both verbs and auxiliaries.

To be solved is whether *may*₃ *day*₃ is a single unit or it is the combination of the negator *may*₃ and the word *day*₃ which can be considered either as a modal of permission or a past tense marker. This issue is beyond the scope of my study.

²⁵ In fact, *may*₃ can also precede noun phrases quantified by *thuk*₄ ‘every’ as in (i) and (ii) below.

- (i) *khaw*₅ *?aan*₂ *naŋ*₅ *sii*₅ *may*₃ *thuk*₄ *lem*₃
 he read book not every Cl.
 ‘He does not read every book.’
 (ii) *khaw*₅ *?aan*₂ *naŋ*₅ *sii*₅ *may*₃ *thuk*₄ *wan*₁
 he read book not everyday
 ‘He does not read everyday.’

I will assume that *may*₃ ‘not’ in the above cases is the constituent negation, not the sentential one.

- b. khaw₅ may₃ dii₁
 he not good
 'He is not good.'

Plus, two or more occurrences of *may₃* in a sentence where the negations cancel each other out are common as in (6), repeated below.

- (119) a. khaw₅ may₃ ?aan₁ nan₅ sii₅ may₃ day₃
 he not read book not can
 'He can't not read.'
 b. khaw₅ may₃ naa₃-ca?₂ may₃ tɔŋ₃ may₃ tham₁ ŋaan₁
 he not should not must not work
 'It is unlikely that he does not have to not work.'

5.5.2 Analysis of *may₃*

In this section, I will investigate the syntactic status of *may₃*. Although several studies claim that a negator is a head which projects its own maximal projection NegP (Pollock 1989, Ouhalla 1990, Benmamoun 1991, Zanuttini 1997) or a negator is in the specifier of NegP (Jung 1991, Ernst 1992, 1995, Cinque 1999), I will argue that *may₃*, like Chinese *bu*, is in the specifier of AuxP or VP (Ernst 1992, 1995). AuxP in this case can be either ModP or AspP because modals and aspect markers are considered two types of Thai auxiliaries. In other words, *may₃* is in the specifier of a phrase whose head has V-features.

In what follows I will present the study on Chinese negation by Ernst (1995) and my proposal of the status of negation in Thai

5.5.2.1 Ernst (1995)

Ernst proposes that the negation *bu* in Chinese is a proclitic in the specifier of AuxP or VP. Modals and aspects are considered two types of Chinese auxiliaries. Therefore, *bu* can be in the specifier of ModP or AspP.

The evidence he gives for his proposal of *bu* being in the specifier instead of heading NegP is as follows.

(1) Assuming that time and epistemic adverbs are left-adjoined to AuxP, the fact that *bu* never precedes these two adverbs as shown in (120) follows from the proposal that *bu* is in the specifier of AuxP or VP.

- (120) a. Ta mingtian hui qu
 he tomorrow will go
 ‘He will go tomorrow.’
 b. *Baorong bu jintian lai
 Baorong not today come
 ‘Baorong isn’t coming today.’

If *bu* is the head of NegP which takes AuxP as its complement, the ungrammaticality of (120b) cannot be explained.

(2) Topicalized direct objects can be preposed to the position before or after adverbs which are adjoined to VP as in (121).

- (121) Shujuan (yizhi) dianying (yizhi) don bu kan
 Shujuan (always) movie (always) all not see
 ‘Shujuan always doesn’t watch movies.’

When such direct objects and *bu* co-occur, the former must precede the latter as in (122), indicating that the former which is a VP-adjunct is higher than *bu* which is in the specifier of VP.

- (122) a. Wo jiu bu he le
 I liquor not drink ASP
 ‘I won’t drink liquor any more.’
 b. *Wo bu jiu he le
 I not liquor drink ASP

If *bu* heads NegP, it would precede the topicalized direct objects and (122b) should be acceptable.

Evidence for his claim that *bu* is a proclitic comes from the ungrammaticality of
*[*bu* + V + manner adverb] as illustrated in (123).

- (123) a. **Ta bu jiang de (hen) qingchu*
 he not speak DE very clear
 ‘He doesn’t speak very clearly.’
 b. *Ta jiang de bu (hen) qingchu*
 he speak DE not very clear
 ‘He doesn’t speak very clearly.’

His reason is that the manner adverb which is generated as an adjunct to V’ is postposed and leaves a trace which blocks the cliticization of *bu* to the following word. Such a construction is, therefore, unacceptable in Chinese.

I will show in the following sub-section that the negator *may*₃ in Thai is generated in the specifier of AuxP and VP like the negation in Chinese although Ernst’s arguments are not applicable to the Thai data due to the post-verbal position of all Thai adverbials.

5.5.2.2 Status of Thai negator *may*₃

My proposal for the status of *may*₃ as NegP in the specifier of XP with V-features will be clarified as follows.

(1) Multiple negation

As previously stated, a Thai sentence can contain two or three *may*₃’s which cancel each other out as in (119) above. In fact, more than three occurrences of *may*₃ are possible in a Thai sentence, although their actual number may be constrained by processing limitations.

Cinque (1999), adopting some ideas of Zanuttini (1997), accounts for sentences with several negations as in (124) below (Cinque 1999:126) by suggesting that a NegP can be base-generated ‘on top of every adverb-related functional projection, even

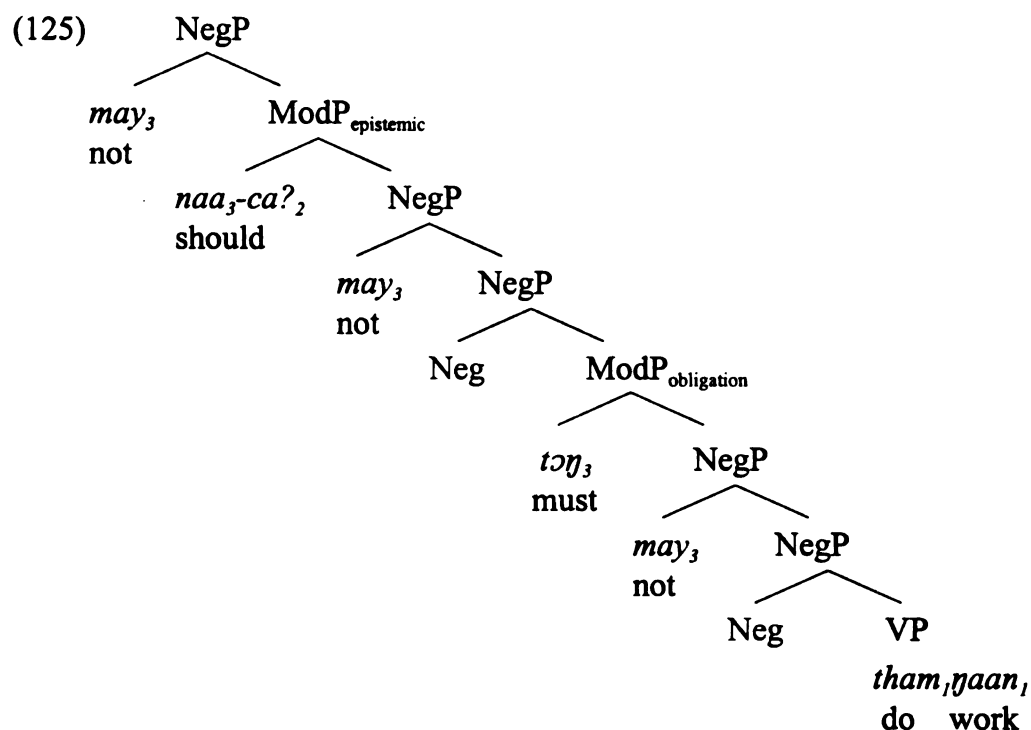
simultaneously, up to a certain height' (most probably below the projection occupied by the epistemic modal or the speaker-oriented adverb).²⁶

- (124) a. He couldn't (possibly) *not* have accepted.
b. He couldn*ae* have *no* been *no* working. (Hawick Scots; Brown 1992, 84)
'It is impossible that he has not been out of work.'

He claims that the first negation of each sentence above (*n't*, *nae*) is a head of a NegP whereas the rest (*not*, *no*) are specifiers of NegPs interspersed among adverb-related functional projections.²⁷ If his suggestion is adopted, the syntactic representation of (119b) would be as in (125) below.

²⁶ As mentioned earlier, this is due to the scope concerns. That is, the negation never takes scope over the epistemic modal and the speaker-oriented adverb, both of which are assumed to be in the same projection; namely, the latter is in the specifier of the ModP_{epistemic}.

²⁷ It should be noted here that Zanuttini (1997:23) regards the real sentential negative marker or the one that can negate the sentence by itself as the head of NegP whereas the one(s) that cannot as being 'left-adjoined to an independently existing functional projection'. To sum up, there is only one NegP preceding the main verb. That is why the negative markers that co-occur in a sentence are not the same (as demonstrated in (124)).



However, sentences with multiple negations in Thai (119) and in English (124) (and almost all languages studied by Zanuttini 1997 and Cinque 1999) are different in that in English the negator which is considered a head and those as specifiers are different lexical items whereas in Thai the same negator recurs in the same sentence. Therefore, it is hard to tell why in Thai the only first negator is the head whereas the others are specifiers. In other words, what makes them different? Worse, the following coordination data make this an unlikely solution for Thai negation.

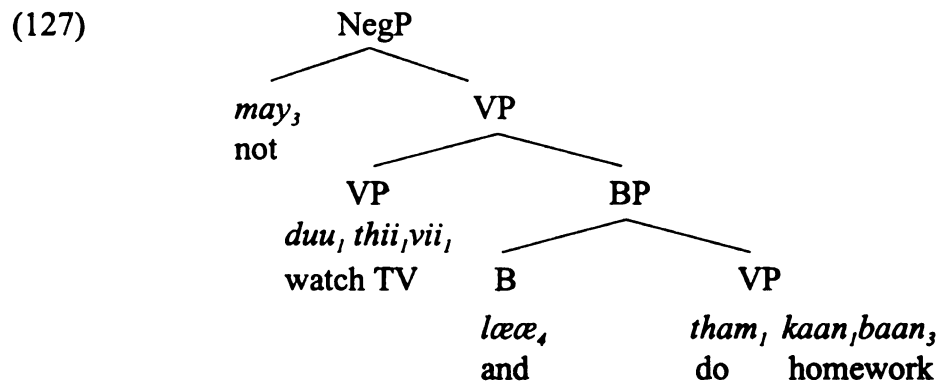
(2) Co-ordination

When two VPs, the first of which contains *may3*, are conjoined, the sentence is ambiguous in terms of the scope of the negation. That is, the negation can take scope over the first VP only or it can take both VPs under its scope as demonstrated in the interpretations of the following sentence.

This is different from the sentence with multiple negation in Thai in which the same

- (126) *khaw₅ may₃ duu₁ thii₁vii₁ lææ₄ tham₁ kaan₁baan₃*
 he not watch TV and do homework
 'a. He will neither watch TV nor do his homework.'
 'b. He will not watch TV and will do his homework.'

The first interpretation where the negation takes scope over the two VPs does not disprove the claim that the negation is the head or the specifier of NegP because the structure can be as follows.²⁸



The second interpretation, on the other hand, seems to pose a problem for the idea that *may₃* is in a NegP above VP because there is no way that the negation could have scope over the first conjunct only, given (127). Therefore, the hypothesis about the negation projecting its own projection above VP does not seem right.

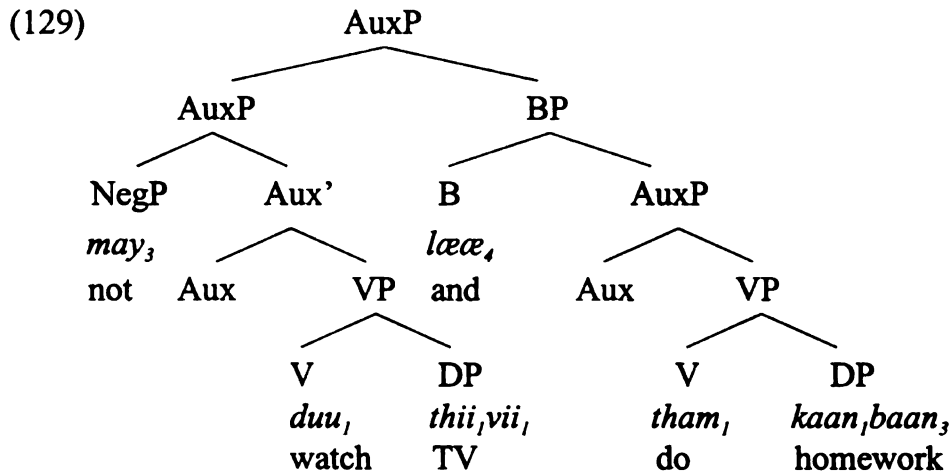
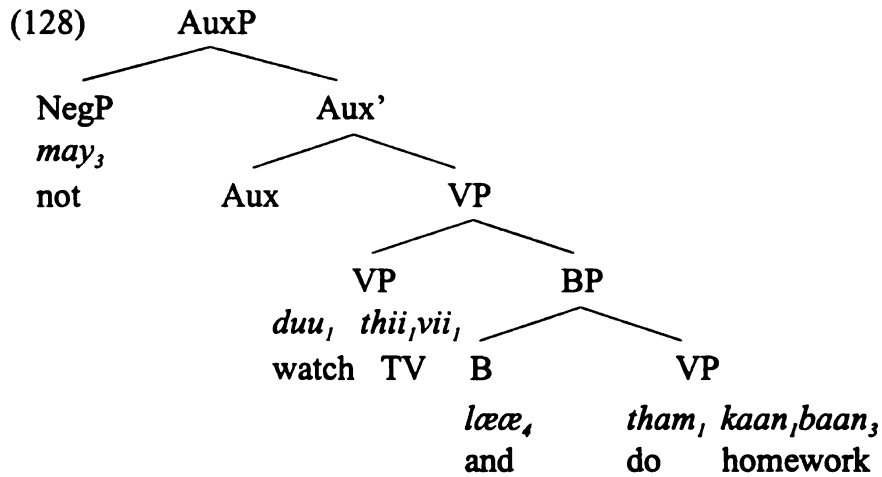
The problems above can be solved if the negator in Thai is considered as a NegP situated in the specifier of a maximal projection whose head has V-features, i.e. VP and AuxP. This suggestion can handle the phenomena stated above.

The two interpretations of sentence (126) can be taken care of if NegP is in the specifier of AuxP. (AuxP can be either AspP, ModP or TP.) That is, the one where the negation can take both verb phrases in its scope is the outcome of the

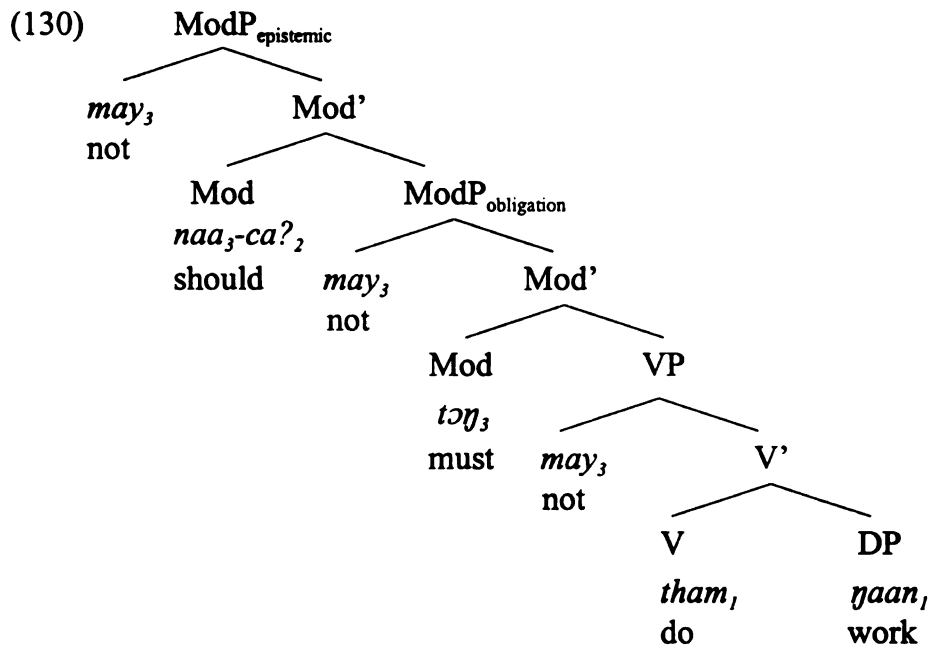
negative marker can recur.

²⁸ Again I am assuming here the analysis of conjunction as in Munn 1992, 1993.

conjunction of VP as in (128). The negation in the specifier of AuxP c-commands both conjoined VPs in (128). On the contrary, the other where the negation has scope over only the first conjunct is the result of AuxP conjunction as in (129). The NegP in the specifier of AuxP of the first conjunct does not have scope over the second conjunct.



Concerning the double or triple negation (or more), it follows automatically if NegP is in the specifier of VP or ModP. That is, it does not matter how many negations appear in a sentence as long as there are enough heads with V-features. The syntactic representation of (119b) above is thus as demonstrated below.



(3) Ellipsis

Another piece of supporting evidence comes from the following ellipsis sentences which show that the negator *may₃* cannot be stranded.

- (131) a. khaw₅ duu₁ thii₁vii₁ tææ₄ chan₅ may₃ duu₁
 he watch TV but I not watch
 ‘He watches TV but I do not.’
 b. *khaw₅ duu₁ thii₁vii₁ tææ₄ chan₅ may₃
 he watch TV but I not

- (132) a. khaw₅ tɔŋ₃ tham₁ ŋaan₁ tææ₄ chan₅ may₃ tɔŋ₃
 he must do work but I not must
 ‘He has to work but I do not.’
 b. *khaw₅ tɔŋ₃ tham₁ ŋaan₁ tææ₄ chan₅ may₃
 he must do work but I not
 ‘He has to work but I do not.’

The fact that *may₃* cannot stand alone without a verb or an auxiliary suggests that it is not a head of NegP. If only heads can license an elided constituent (Lobeck 1990, 1995), then *may₃* is not a head. Moreover, the deleted element must be X° or

XP (Ernst 1992); consequently, the illegitimacy of the deletion of VP or AuxP without the negator *may*₃ shows that *may*₃ is a part of VP.

In brief, the negator *may*₃ in Thai is proven to be a phrase located in the specifiers of various projections the heads of which carry V-features.

5.6 Interaction between modals and negation

Assuming that this analysis of Thai negation is on the right track, the ability or inability of the modals and the negator *may*₃ to co-occur can be explained, and will support the analysis of modals presented in this chapter.

5.6.1 Modals that can be negated by *may*₃

All the modals that can be directly preceded by *may*₃ are those that can be predicators, namely, *naa*₃ / *khuan*₁ ‘should’, *tɔŋ*₃ ‘must’, *day*₃ ‘may’, and *day*₃ / *pen*₁ / *way*₅ ‘can’ as shown below.

- (133) a. *khaw*₅ *may*₃ *naa*₃ *duu*₁ *thii*₁ *vii*₁
 he not should watch TV
 ‘He should not watch TV.’
 b. *khaw*₅ *may*₃ *khuan*₁ *duu*₁ *thii*₁ *vii*₁
 he not should watch TV
 ‘He should not watch TV.’
 c. *khaw*₅ *may*₃ *tɔŋ*₃ *duu*₁ *thii*₁ *vii*₁
 he not must watch TV
 ‘He need not watch TV.’
 d. *khaw*₅ *may*₃ *day*₃ *duu*₁ *thii*₁ *vii*₁
 he not may watch TV
 ‘He is not allowed to watch TV.’
 e. *khaw*₅ *duu*₁ *thii*₁ *vii*₁ *may*₃ *day*₃
 he watch TV not can
 ‘He cannot watch TV.’
 f. *khaw*₅ *yok*₄ *thii*₁ *vii*₁ *may*₃ *way*₅
 he lift TV not can
 ‘He cannot lift the TV set.’

This confirms my proposal that these modals are heads with V-features. They can move to Σ to function as a response to a yes/no question as well as host the negator *may*₃ in their specifier.

5.6.2 Modals that cannot be negated by *may*₃

The modals that do not allow *may*₃ to precede them are the modal of volition *ca?*₂ ‘will’, and the epistemic modals *tɔŋ*₃ ‘must’, *?aat*₂-*ca?*₂ ‘probably’ and *khon*₁-*ca?*₂ ‘likely’ as illustrated below²⁹.

- (134) a. **khaw*₅ *may*₃ *ca?*₂ *duu*₁ *thii*₁ *vii*₁
 he not will watch TV
 b. **khaw*₅ *may*₃ *tɔŋ*₃ *duu*₁ *thii*₁ *vii*₁
 he not must watch TV
 c. **khaw*₅ *may*₃ *?aat*₂ *duu*₁ *thii*₁ *vii*₁
 he not probably watch TV
 d. **khaw*₅ *may*₃ *khon*₁ *duu*₁ *thii*₁ *vii*₁
 he not likely watch TV

The non-negatability of the volition modal *ca?*₂ can be accounted for in terms of its being an XP, not a head. If *ca?*₂ is base-generated in the specifier of the $\text{ModP}_{\text{volition}}$, then NegP will have no position. An instance confirming the above assumption is the sentence below where only *may*₃ is present but the sentence carries the meaning of volition.³⁰

²⁹ Example (134b) is fine when the modal *tɔŋ*₃ has the root sense of obligation. Also, sentence (134c) where *?aat*₂ is negated by *may*₃ is acceptable only when the former has the meaning of ability. Thus, the meaning of (134c) can be ‘He cannot watch TV.’ The root interpretation of *?aat*₂, however, is archaic and becomes rare. Its only use nowadays is after the negator *may*₃. This also supports the analysis by Bybee et al. (1994) that the root sense of ability gives the epistemic sense of probability.

³⁰ This is similar to Chinese *bu* which also carries the meaning of volition as below (Zhou 1998:2).

(i) Zhangsan bu kan zhe ni
 Zhangsan NEG see PROG you

- (135) *khaw₅ may₃ duu₁ thii₁vii₁ phruŋ₃nii₄ khaw₅ mii₁ sɔp₁*
 he not watch TV tomorrow he have exam
 ‘He will not watch TV because he has an exam tomorrow.’

My speculation is that *may₃* in this case is in the specifier of $\text{ModP}_{\text{volition}}$ carrying the zero head without the presence of *ca?*₂ in the specifier.

Nevertheless, that the negation cannot precede *tɔŋ₃* ‘must’, *?aat₂-ca?*₂ ‘probably’ and *khon₁-ca?*₂ ‘likely’ does not necessarily falsify the previous hypothesis which considers the epistemic modals as heads. An explanation can be made, following the fact that the negation never has scope over epistemic modals (Cinque 1999:124); it sounds odd when someone negates their own judgment. Therefore, the assumption still holds as there is no evidence strongly against it.

However, the fact that the epistemic modals *naa₃-ca?*₂ and *khuan₁-ca?*₂ can be negated as in (136) needs explanation which I cannot convincingly provide.

- (136) a. *khaw₅ may₃ naa₁-ca?*₂ *chɔɔp₅ thəə₁*
 he not should like she
 ‘It is unlikely that he likes her.’
 b. *khaw₅ may₃ khuan₁-ca?*₂ *?ɔn₂ kwaa₂ thəə₁*
 he not should young more she
 ‘It is unlikely that he is younger than her.’

My only (blunt) speculation is that these two modals behave differently than the other epistemic modals in terms of scope. That is, they can be under the scope of negation as shown by the English example in (137). Therefore, the similar phenomenon in Thai should not be a surprise.

‘Zhangsan refuses to/won’t look at you.’

Therefore, it is believed to be either a clitic attached to the zero modal of volition (Huang 1988) or a fusion of negation and an empty modal of volition (Zhou 1998).

- (137) He should not be younger than her.
 ‘He is unlikely to be younger than her.’

Another puzzle to be solved is the fact that *naa₃-ca?*₂ and *khuan₁-ca?*₂, unlike the other epistemic modals, can be questioned by *may₄*. The answer comes naturally when taking into account the fact that *may₄* is the shortened form of *rii₃may₃* ‘or not’. The question particle *may₄* is used only in a sentence containing a verb or an element with verbal properties that can be negated. For example, the copula verb *khii₁* in Thai is one of few verbs that cannot be negated as in (138). Therefore, sentence (139) where the question particle *may₄* questions the copula *khii₁*, brings about ungrammaticality although *khii₁* can occur in an interrogative sentence containing different question particles as in (140).

- (138) *khaw₅ may₃ khii₁ phuu₃chaay₁ hua₅ laan₄ khon₁ nan₅
 he not be man head bald Cl that

- (139) *khaw₅ khii₁ phuu₃chaay₁ hua₅ laan₄ khon₁ nan₅ may₄
 he be man head bald Cl that QP

- (140) a. khaw₅ khii₁ phuu₃chaay₁ hua₅ laan₄ khon₁ nan₅ ri₃
 he be man head bald Cl that QP
 ‘Is he that bald man?’
 b. khaw₅ khii₁ phuu₃chaay₁ hua₅ laan₄ khon₁ nan₅ chay₃-may₄
 he be man head bald Cl that true-or not
 ‘Is it true that he is that bald man?’

The explanation follows automatically, given that *naa₃-ca?*₂ and *khuan₁-ca?*₂ can be negated whereas the other epistemic modals cannot. Therefore, the fact that the former can be questioned while the latter cannot is clarified.

5.7 *naa*, and *khuan*, revisited

It should be noted that unlike the other modals discussed in the study, *naa*₃ and *khuan*₁ can be followed by *thii*₃ *ca?*₂, the element introducing a subordinate clause³¹. The word *thii*₃ is a complementizer and *ca?*₂ is likely to be in this case the modal of volition. When *naa*₃ and *khuan*₁ are followed by *thii*₃ *ca?*₂, the only interpretation is the root sense of weak obligation as illustrated below.

- (141) a. *khaw*₅ *naa*₃ *thii*₃ *ca?*₂ *?aan*₁ *naŋ*₅*sii*₅
 he should COMP will read book
 ‘He should read.’
 b. *khaw*₅ *khuan*₁ *thii*₃ *ca?*₂ *?aan*₁ *naŋ*₅*sii*₅
 he should COMP will read book
 ‘He should read.’
- (142) a. * *khaw*₅ *naa*₃ *thii*₃ *ca?*₂ *?aa*₁*yu*₄ *nooy*₄
 he should COMP will age little
 ‘It is likely that he is young.’
 b. * *khaw*₅ *khuan*₁ *thii*₃ *ca?*₂ *?aa*₁*yu*₄ *nooy*₄
 he should COMP will age little
 ‘It is likely that he is young.’

More interestingly, *naa*₃ and *khuan*₁ appear to have the similar behavior to the verb ‘seem’ in English which involves the subject DP movement as demonstrated below³².

- (143) a. *naa*₃ *thii*₃ *khaw*₅ *ca?*₂ *?aan*₁ *naŋ*₅*sii*₅
 should COMP he will read book
 ‘He should read.’
 b. *khuan*₁ *thii*₃ *khaw*₅ *ca?*₂ *?aan*₁ *naŋ*₅*sii*₅
 should COMP he will read book
 ‘He should read.’

³¹ Sookgasem (1990) suggests that *thii*₃ *ca?*₂ is equivalent to ‘to’ in English. It is true that *ca?*₂ behaves in many ways like ‘to’. But as seen in (143), *thii*₃ *ca?*₂ can be separated or intervened by a DP. I will leave this for further study.

³² I would like to thank Alan Munn for pointing this out to me.

It may be the case, consequently, that the structure in (141) is derived from that in (143). This also suggests that *naa*₃ and *khuan*₁ may be verbs or stative verbs (adjectives) that take a clause as a complement like such verbs as *yaak*₂ 'want', *pha₁ya₁yaam₁* 'try' and *taŋ₃cay₁* 'intend' below.

- (144) a. *khaw₅ yaak₂ thii₃ ca?₂ ?aan₁ naŋ₅sii₅*
 he want COMP will read book
 'He wants to read.'
- b. *khaw₅ pha₁ya₁yaam₁ thii₃ ca?₂ ?aan₁ naŋ₅sii₅*
 he try COMP will read book
 'He tries to read.'
- c. *khaw₅ taŋ₃ cay₁ thii₃ ca?₂ ?aan₁ naŋ₅sii₅*
 he intend COMP will read book
 'He intends to read.'

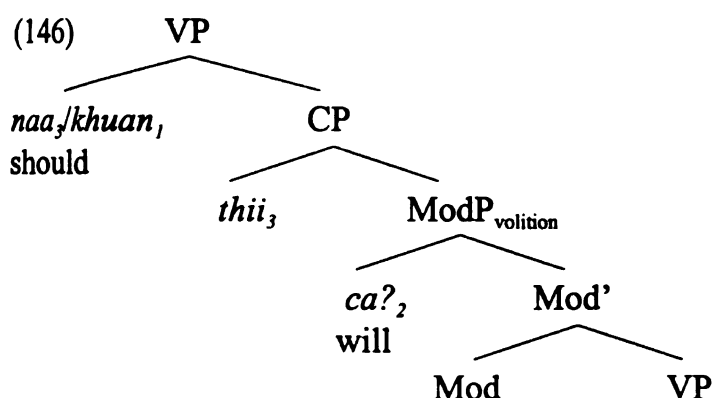
The omission of *thii₃* or *thii₃ ca?₂* is acceptable and the meaning is not affected as shown below.

- (145) a. *khaw₅ naa₃ (ca?₂) ?aan₁ naŋ₅sii₅*
 he should (will) read book
 'He should read.'
- b. *khaw₅ khuan₁ (ca?₂) ?aan₁ naŋ₅sii₅*
 he should (will) read book
 'He should read.'
- c. *khaw₅ yaak₂ (ca?₂) ?aan₁ naŋ₅sii₅*
 he want (will) read book
 'He wants to read.'
- d. *khaw₅ pha₁ya₁yaam₁ (ca?₂) ?aan₁ naŋ₅sii₅*
 he try (will) read book
 'He tries to read.'
- e. *khaw₅ taŋ₃ cay₁ (ca?₂) ?aan₁ naŋ₅sii₅*
 he intend (will) read book
 'He intends to read.'

As noted, the word *ca?₂* in all the examples above signifies volition or **willingness**. This supports my analysis which distinguishes between the root modals *naa₃*,

and *khuan*, which can be followed by the modal of volition *ca?*₂, and the epistemic ones which incorporates *ca?*₂, denoting futurity or prediction as a part of the words.

To sum up, what should be reanalyzed is the status of *naa*, and *khuan*, in the root sense. My proposal is that they are not auxiliaries, but true verbs. The root modality in Thai thus does not distinguish between the modals of strong and weak obligation. The structure of *naa*, and *khuan*, in the sense of weak obligation is suggested to be as follows.



5.8 Conclusion

In this chapter, I have investigated the two types of modals in Thai: root and epistemic. We have found that their ordering is consistent with the cross-linguistic one proposed by Cinque (1999) where the epistemic modals are situated higher than the root ones. The former are positioned under the same projection whereas the latter are located in distinct projections. Although the modals of weak obligation empirically indicate their separation from that of strong obligation; that is, the former are structurally higher than the latter with the modal of volition between them, the reanalysis of the former as verbs taking a clause as their complement dissolves the unlikely distinction. Moreover, all

modals in Thai, both pre-verbal and post-verbal, are generated pre-verbally. VP movement thus operates in Thai syntax.

In terms of their syntactic categories, the predicator fact together with the analysis of the negator as a phrase in the specifier of various projections with V-features leads to the conclusion that almost all the modals under investigation, except the modal of volition, are heads. The one that can neither be a predicator nor be negated is a phrase. Those which can be predicators but cannot be negated are heads which are never under the scope of negation.

CHAPTER 6

THAI ASPECTUALITY

I will discuss Thai aspect markers in this chapter and argue that post-verbal aspect markers are not generated pre-verbally like post-verbal modals, but as right-adjuncts. I will also investigate the relationship between modals and aspect markers in terms of their relative ordering.

6.1 Introduction

Similarly to modals, Thai aspect markers can occur pre-verbally and post-verbally as shown in the following examples.¹

- (1) a. *khaw₅ kam₁laŋ₁ ?aan₂ naŋ₅sii₅*
he PROG read book
'He is reading.'
- b. *khaw₅ ?aan₂ naŋ₅sii₅ lææw₄*
he read book PRF
'He read.'

The main objective of this chapter, therefore, is to find out whether the post-verbal aspect markers behave like the post-verbal modals. In other words, are the post-verbal aspectual words base-generated pre-verbally like the post-verbal modals? I will argue that they are not due to their different characteristics. Instead, I will propose that the post-verbal aspects are right-adjuncts.

¹ I will gloss *lææw₄* as a perfect or a perfective (PRF) until I discuss its nature as a marker of a temporal boundary. Then I will use 'already' as the gloss of *lææw₄*.

I will discuss each aspect marker in terms of its position in the clausal structure together with its syntactic status as a head or a phrase. Both the predicator and the negatability tests will again be used to discover the relevant facts.

The chapter is organized as follows. Section 2 provides a brief overview of aspect. Section 3 spells out the characteristics of Thai aspect markers including their aspect types, surface positions and distributions. My analysis of the aspect markers will be given in section 4. Section 5 explores the co-occurrences of modals and aspect markers with regard to their relative orderings. Section 6 concludes the chapter.

6.2 Aspect

Smith (1997) proposes two kinds of aspect: situation and viewpoint. The former is conveyed by the verb and its arguments. It is categorized into five types according to the temporal properties of dynamism, durativity, and telecity as in (2) below (p.3).

(2) Situation types

State : static, durative (know the answer, love Mary)

Activity : dynamic, durative, atelic (laugh, stroll in the park)

Accomplishment : dynamic, durative, telic, consisting of process and outcome (build a house, walk to school, learn Greek)

Semelfactive : dynamic, atelic, instantaneous (tap, knock)

Achievement : dynamic, telic, instantaneous (win a race, reach the top)

Viewpoint aspect, on the other hand, is usually signaled by a grammatical morpheme adjacent to the verb and it is of three types: perfective, imperfective and neutral. Their differences are enumerated in (3) below (Smith 1997:3).

(3) Viewpoint types

Perfective viewpoints focus a situation in its entirety, including both initial and final endpoints.

Imperfective viewpoints focus part of a situation, including neither initial nor final endpoints.

Neutral viewpoints are flexible, including the initial endpoint of a situation and at least one internal stage (where applicable).

Examples of the above viewpoint types are illustrated below.

- (4) a. *Perfective*: Mary walked to school.
b. *Imperfective*: Mary was walking to school.
c. *Neutral*: Zhangsan dao jia de shihou, Mali xie gongzuo baogao (Chinese:79)
Zhangsan arrive home DE time, Mali write work report
a. When Zhangsan arrived at home, Mali wrote the work report.
b. When Zhangsan arrived at home, Mali was writing the work report.

I will consider here only the words expressing viewpoint aspect. Since Thai does not seem to have neutral viewpoint aspect, I will not discuss it further. In addition to the imperfective/perfective distinction, it is also important to make a distinction between perfective and perfect since one Thai aspect marker can denote either one.

Perfective, according to Smith (1997), indicates that an event is terminated or a situation is temporally bounded; that is, the situation is considered as a single whole with both initial and final endpoints. Perfect, on the other hand, indicates the existence of some past event with some relation to the present. It is classified into three main types: existential, continuative and resultative (Comrie 1976, Demirdache & Uribe-Etxebarria 1997). The existential perfect indicates that an event occurred once or more in the past and the experience holds of the subject. The continuative perfect signifies that an event or a state extends from the past up to the present or the utterance time. And the resultative perfect signals that the result of a past event still holds. The following examples which contain existential perfect, continuative perfect and resultative perfect respectively are from Demirdache & Uribe-Etxebarria (1997:7-8).

- (5) a. Max was fired (five times/before).
 b. Henry has lived in Vancouver for three years (now).
 (= He is still living in Vancouver.)
 c. Where is John? John has jumped into the ditch.
 (= John is in the ditch now.)

Thai has two words that express perfect. One is *khəəy*, which conveys existential perfect and the other is *læəw*, which indicates both continuative and resultative perfect, in addition to perfective. Moreover, I will show that *læəw* also has the characteristics of ‘inchoative phasal adverbial’. All these together with the imperfective aspect markers will be elaborated in what follows.

6.3 Characteristics of Thai aspect markers

I will discuss in this section the viewpoint aspect types Thai aspect markers belong to, their surface positions as well as their distributions.

6.3.1 Types of aspect

The words which can be regarded as aspect markers in Thai are *khəəy*, ‘having experience of’, *kam,lan*, ‘in the process of’, *yan*, ‘still’, *yuu*, ‘in the process of’, and *læəw*, ‘already’. Boonyapatipark (1983) terms them ‘experiential’, ‘progressive’, ‘persistent’, ‘continuative’ and ‘perfective’ markers respectively. However, the aspect *khəəy* is better termed an ‘existential perfect’ or an ‘experiential perfect’ (EXP) and *læəw*, (for the time being) a ‘perfect/prefective’ (PRF). Moreover, although *kam,lan* and *yuu* are often referred to as progressive markers (PROG), *yuu* can express a variety of meanings including habitual, progressive, and non-progressive. Therefore, the more appropriate term for *yuu* is ‘imperfective’ (IMPF) (Meepoe 1997). The term

‘continuative’ will then be reserved for *yaŋ*, ‘still’ (van der Auwera 1998, Cinque 1999). I

will justify my proposal regarding their aspectual types in the next section where each aspect marker is discussed.

Summarizing, I suggest that Thai aspect markers belong to different types of aspect as demonstrated below.

(6) a. Perfective: *lææw*, ‘PRF’

b. Perfect: *khəəy*, ‘EXP’, *lææw*, ‘PRF’

c. Imperfective: *kam,laŋ*, ‘PROG’, *yaŋ*, ‘still’, *yuu*, ‘IMPF’

6.3.2 Surface positions of Thai aspect markers

As stated in the Introduction, some Thai aspect markers occur pre-verbally and others, post-verbally. As seen in Table 4 below, the pre-verbal aspect markers are the experiential perfect *khəəy*, the ‘continuative’ marker *yaŋ*, and the progressive marker *kam,laŋ*. The two post-verbal aspect markers consist of the imperfective *yuu*, and the perfect/perfective *lææw*.

A	B	C		D	E
<i>khəəy</i>	<i>yaŋ</i>	<i>kam,laŋ</i>	VP	<i>yuu</i>	<i>lææw</i>
‘EXP’	‘still’	‘PROG’		‘IMPF’	‘PRF’

Table 4: Positions of Thai aspect markers

6.3.3 Distribution of Thai aspect markers

All aspect markers can co-occur in the restricted order illustrated in Table 4 as shown by the examples in (7).

- (7) a. *khaw₅ yaŋ₁ kam₁laŋ₁ ?aan₂ naŋ₅sii₅ yuu₂*
 he still PROG read book IMPF
 ‘He is still reading.’
 b. *khaw₅ kam₁laŋ₁ ?aan₂ naŋ₅sii₅ yuu₂ lææw₄*
 he PROG read book IMPF PRF
 ‘He has been reading.’
 c. *khaw₅ khəəy₁ kam₁laŋ₁ ?aan₂ naŋ₅sii₅ yuu₂ miə₃ chan₂ maa₁ thiŋ₅*
 he EXP PROG read book IMPF when I come arrive
 ‘He has an experience of being reading when I arrived.’

Ungrammaticality arises if aspect markers are placed in different orders than in

Table 4 as demonstrated below.

- (8) a. **khaw₅ kam₁laŋ₁ yaŋ₁ ?aan₂ naŋ₅sii₅ yuu₂*
 he PROG still read book IMPF
 b. **khaw₅ kam₁laŋ₁ ?aan₂ naŋ₅sii₅ lææw₄ yuu₂*
 he PROG read book PRF IMPF

However, the combination of *yaŋ₁* and *lææw₄* is unacceptable owing to their

semantic incompatibility.² That is, the word *yaŋ₁* indicating persistence or continuation of a situation is not compatible with the word *lææw₄* which expresses the end of an event or a situation as demonstrated in (9).³

² The co-occurrence of *yaŋ₁* and *lææw₄* is possible as in (i) below where the meaning of *yaŋ₁* is ‘even’, not ‘still’. Whether the continuative *yaŋ₁*, like those in some other languages, is used in a non-continuative or additive sense in this case awaits further investigation. But it certainly shows the focus meaning of *yaŋ₁*.

(i) *khaw₅ yaŋ₁ ?aan₂ naŋ₅sii₅ lææw₄ ləəy₁*
 he still read book PRF PRT
 ‘Even he read the book.’

³ The incompatibility of *yaŋ₁* and *lææw₄* also arises when the latter is an ‘inchoative’ phasal adverbial word *lææw₄*, marking the beginning of an event or a state as in (i).

(i) *khaw₅ (*yaŋ₁) krot₂ lææw₄*
 he (*still) angry already
 ‘He has started to get angry.’

(9) *khaw₅ yaŋ₁ ?aan₂ naŋ₃sii₅ lææw₄
 he still read book PRF

6.4 Analysis of Thai aspect markers

I will examine in this section each aspect marker in terms of its syntactic position and category. The two tests discussed in length in the previous chapter; namely, predicator and negation, will be used here.

I will divide the analysis into two parts. The first part deals with the pre-verbal aspects and the second with the post-verbal ones.

6.4.1 Pre-verbal aspect markers

I will show that the three pre-verbal aspect markers are all different in one way or another. The experiential perfect *khəəy*₁ presents a clear case of being a head above VP. The continuative *yaŋ*₁ ‘still’ will be claimed to be in the specifier of an AspP like the modal of volition *ca?*₂. I will also suggest that the progressive *kam,laŋ*₁ is a head. But unlike *khəəy*₁, it does not have V-features.

6.4.1.1 Experiential perfect *khəəy*₁

The word *khəəy*₁ is considered a past-tense marker by several linguists (Panupong 1970, Uppakitsinlapasarn 1971) because its meaning is translatable as ‘used to’ in English. However, it is better to regard *khəəy*₁ as an aspectual word as its use is not restricted to past tense as demonstrated below.

The four phasal adverbials consist of *not yet* ‘continuative negative’, *already* ‘inchoative’, *still* ‘continuative’ and *no longer* ‘discontinuative’ (van der Auwera 1993,

- (10) a. *khaw₅ khəəy₁ ?aan₂ nan₅sii₅ lem₃ nan₄*
 he EXP read book CI that
 ‘He has an experience of reading that book.’
 b. *phrun₃nii₄ khaw₅ ca?₂ khəəy₁ ?aan₂ nan₅sii₅ lem₃ nan₄*
 tomorrow he will EXP read book CI that
 ‘Tomorrow he will have an experience of reading that book.’

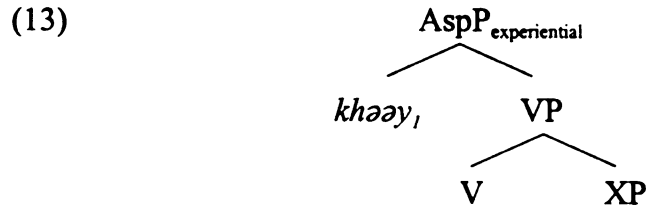
Therefore, the term ‘an experiential marker’ as used by Boonyapatipark (1983) or more specifically, the term ‘existential perfect’ or ‘experiential perfect’ which is defined as ‘the existence of one or more occurrences of a given past event.’ (Demirdache & Uribe-Etxebarria 1997:7) better describes the word *khəəy₁*. Although the word indicates that a situation occurs or a state holds at least once without an extension to the present time, the experience of such a situation or state prevails up to the utterance time. Accordingly, the subjects/experiencers in (11a,b) still have an experience of ‘being pretty’ and ‘visiting me’ although the implications of the sentences in (11) are ‘Nit is not pretty any longer’ and ‘he does not visit me now’ respectively.

- (11) a. *nit₄ khəəy₁ pen₁ khon₁ suay₅*
 Nit EXP be person pretty
 ‘Nit used to be a pretty woman.’
 b. *khaw₅ khəəy₁ maa₁ haa₅ chan₅ saam₅ khran₄*
 he EXP come visit I three time
 ‘He has visited me three times.’

According to the predicator test as in (12), the fact that *khəəy₁* wins over the main verb to become a predicator tells us that it is situated higher than VP as illustrated in (13).

- (12) Q: *khaw₅ khəəy₁ ?aan₂ nan₅sii₅ lem₃ nan₄ may₄*
 he EXP read book CI that QP
 ‘Has he read that book?’
 A: a. *khəəy₁*
 EXP

‘Yes, he has.’
b. *ʔaan₂
read



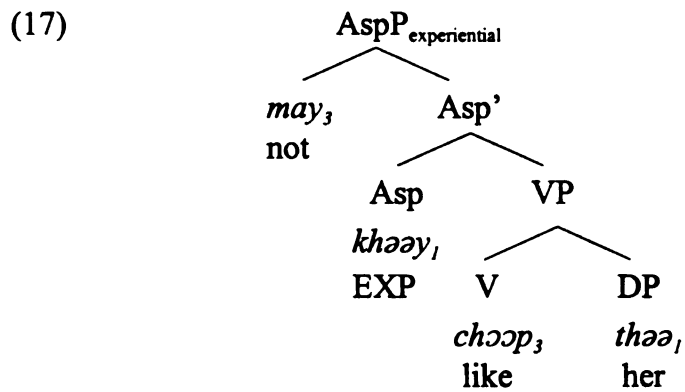
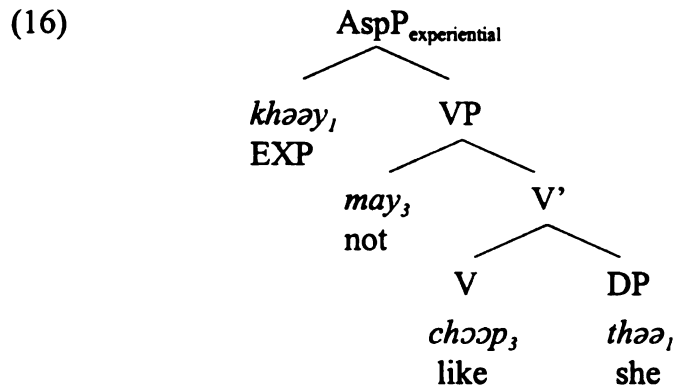
The negatability test confirms the assumption that the experiential perfect *khəəy*₁ is a head because it can be directly negated by *may*₃, which is claimed in the previous chapter (section 5.5) to be in the specifier of a projection whose head has V-features as shown below.

- (14) khaw₅ may₃ khəəy₁ chəp₃ thəə₁
he not EXP like she
‘He does not have an experience of liking her.’
‘He never likes her.’

Nonetheless, *may*₃ can appear after *khəəy*₁ when the former is under the scope of the latter as in (15).

- (15) khaw₅ khəəy₁ may₃ chəp₃ thəə₁
he EXP not like she
‘He has an experience of not liking her.’
‘He used to dislike her.’

In short, *khəəy*₁ can undoubtedly be claimed as a head. The different scope relations between the experiential aspect and the negation are determined by their positions relative to each other. That is, the experiential perfect has scope over the negation when the latter is in the specifier of VP as in (16). On the contrary, the experiential perfect is under the scope of the negation when it has the latter in its specifier as in (17).



6.4.1.2 Continuative *yaŋ₁*

As an aspect marker expressing ‘continuation’, *yaŋ₁* ‘still’ occurs after the experiential *khəəy₁*, as shown in (18). The reverse order in (19) leads to ungrammaticality.⁴

- (18) *khaw₅ khəəy₁ yaŋ₁ tham₁ ŋaan₁ tɔɔn₁ thiiŋ₃ khiin₁*
 he EXP still do work when midnight
 ‘He has an experience of still being working at midnight.’

- (19) **khaw₅ yaŋ₁ khəəy₁ tham₁ ŋaan₁ tɔɔn₁ thiiŋ₃ khiin₁*
 he still EXP do work when midnight

⁴ Sentence (20) is acceptable when *yaŋ₁* expresses the meaning of ‘even’, not ‘continuation’.

The above examples will be used as evidence for the precedence of *khəəy*₁ over *yaŋ*₁, because *yaŋ*₁ cannot be a predicator as illustrated in (20). Therefore, the predicator fact cannot be used here to discover the position of *yaŋ*₁ with respect to *khəəy*₁.

(20) Q: *khaw*₅ *yaŋ*₁ *chəp*₃ *thəə*₁ *may*₄
 he still like she QP
 'Does he still like her?'

A: a. **yaŋ*₁
 still

 b. *chəp*₃
 like
 'Yes, he does.'

From the predicator fact, is it possible that *yaŋ*₁, like *ca?*₂, is a phrase in the specifier of a projection? Let's consider another test - the negatability. As is predicted, *yaŋ*₁ cannot be negated by *may*₃ as shown below.

(21)* *khaw*₅ *may*₃ *yaŋ*₁ *tham*₁ *ŋaan*₁ *yuu*₂
 he not still do work IMPF

If *yaŋ*₁ is to have scope over the negation, the word *khəŋ*₁, which also means 'persist, remain' is to be inserted⁵; otherwise, the sentence is unacceptable.⁶

⁵ I speculate that *khəŋ*₁ is a part of the word *yaŋ*₁*khəŋ*₁, because the presence or absence of *khəŋ*₁ does not make any difference in meaning as shown in (i) below.

(i) a. *khaw*₅ *yaŋ*₁ *khəŋ*₁ *tham*₁ *ŋaan*₁
 he still remain do work
 'He still works.'

 b. *khaw*₅ *yaŋ*₁ *tham*₁ *ŋaan*₁
 he still do work
 'He still works.'

⁶ Sentence (22b) is acceptable when its meaning is 'He has not yet worked.' The word *yaŋ*₁ in this case is a negative counterpart of 'already'.

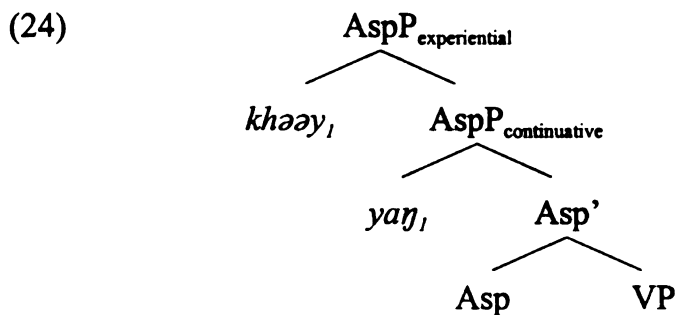
- (22) a. *khaw₅ yaŋ₁ khon₁ may₃ tham₁ ŋaan₁*
 he still remain not do work
 ‘He still does not work.’
 b. **khaw₅ yaŋ₁ may₃ tham₁ ŋaan₁*
 he still not do work

Yet, it should be mentioned that it is not the case that *yaŋ₁* can never be under the scope of negation⁷. Taking into account English examples in (23) below, ‘still’ can be either over or under the scope of the negation respectively.

- (23) a. He still doesn’t love her.
 b. He doesn’t still love her.

Therefore, the fact that *yaŋ₁* cannot be negated is not attributable to scope. To be consistent, *caʔ₂* and *yaŋ₁*, which can neither be predicates nor be negated by *may₃*, should be of the same syntactic category. Thus, I would propose that the latter is also a phrase in the specifier of a projection lower than the one whose head is *khəəy₁*, as illustrated below.

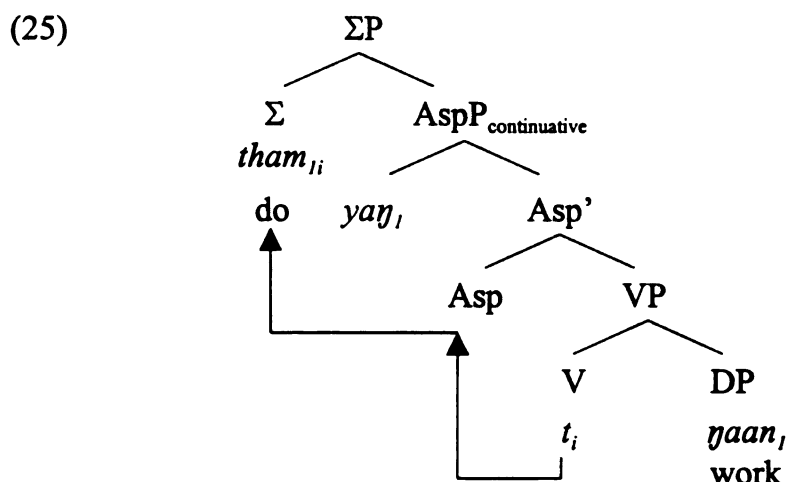
I will tentatively assume that the projection of *yaŋ₁* is $\text{AspP}_{\text{continuative}}$ (Cinque 1999).



⁷ If the continuative *yaŋ₁* is to be under the scope of negation, the negation *may₃day₃* is to be used as below.

- (i) *khaw₅ may₃day₃ yaŋ₁ choop₃ thəə₁*
 he not still like she
 ‘He does not still likes her.’

When a yes/no question containing the continuative *yaη*_i requires a positive minimal response, the verb moves across *yaη*_i to the Σ head without violating the HMC as demonstrated in (25)⁸.



The continuative *yaη*_i ‘still’ may be analyzed as a phasal adverbial because it also carries other meanings denoted by the phasal adverbial ‘still’. According to van der Auwera (1993), the continuative ‘still’ can express non-continuative meanings such as additive and iterative.⁹ The examples given by van der Auwera (1993:647-648) are in (26) while Thai examples are in (27).

- (26) a. London ist schön, aber Paris ist noch schöner. (German)
 London is nice, but Paris is still nicer.
 ‘London is nice, but Paris is still nicer.’

⁸ Similar to the modal of volition *ca?*₂, *yaη*_i and verb can co-occur as a predicator. I speculate that *yaη*_i always moves to [Spec, Σ P] but the omission of *yaη*_i is possible when it is not focused.

⁹ van der Auwera (1993) also claims that the continuative phasal adverbial ‘still’ can carry the meaning of perfective as shown in the German example below. However, *yaη*_i cannot denote such a sense.

- (i) Er gewinnt den lauf noch.
 he wins the race still
 ‘He will win the race yet.’

- b. Ikh volt es nokh geton.
I would it still done
'I would do it again.'

(Dutch)

- (27) a. chan₅ nik₄ waa₃ nit₄ suay₅ lææw₄ tææ₂ nɔɔy₄ yaŋ₁ suay₅ khwaa₂
I think COMP Nit pretty PRT but Noy still pretty -er/more
'I think that Nit is pretty, but Noy is prettier.'
b. khaw₅ yaŋ₁ ca?₂ tham₁ mææ₄ phlaa₃ pay₁ khran₄ lææw₄
He still will do though fail go time PRF
'He will do it again although he failed once.'

Also, the negative counterpart of *yaŋ₁* is *may₃ lææw₄* 'not already' (= 'no longer'

in English). This is exactly what is claimed for the phasal adverbial 'still' as shown below.

- (28) a. khaw₅ yaŋ₁ tham₁ ŋaan₁
he still do work
'He still works.'
b. khaw₅ may₃ tham₁ ŋaan₁ lææw₄
he not do work already
'He no longer works.'

Analyzing *yaŋ₁* as a phasal adverbial supports the claim that it is a phrase. As the position of *yaŋ₁* seems to be fixed, I follow Cinque (1999) in proposing that the continuative adverb is in the specifier of *AspP_{continuative}*.

6.4.1.3 Progressive *kam₁laŋ₁*

The word *kam₁laŋ₁* is unarguably considered to be a progressive marker in Thai. It gives the meaning of an event which is going on without the time specification as shown in (29).

- (29) a. khaw₅ kam₁laŋ₁ ?aan₂ naŋ₅sii₅
he PROG read book
'He is/was reading.'

- b. thəə, kam,lan, rɔŋ, pleŋ,
 she PROG sing song
 'She is/was singing.'

However, unlike progressive markers in many other languages, *kam,lan*, can be used with states as shown in (30). Therefore, it seems to have both the progressive and the imperfective properties.¹⁰

- (30) a. chan, kam,lan, dii,cay,
 I PROG happy
 '*I am being happy.'
 b. thəə, kam,lan, rak, khaw,
 she PROG love he
 '*She is loving him.'

Relative to the other pre-verbal aspect markers, the progressive *kam,lan*, occurs after both the experiential perfect *khəəy*, and the continuative *yan*, as demonstrated below.

- (31) a. khaw, khəəy, kam,lan, ?aan, nan,sih, tɔn, fay, dap,
 he EXP PROG read book when power out
 'He was reading when the power was out.'
 b. *khaw, kam,lan, khəəy, ?aan, nan,sih, tɔn, fay, dap,
 he PROG EXP read book when power out
- (32) a. khaw, yan, kam,lan, ?aan, nan,sih, tɔn, raw, pay, thiŋ,
 he still PROG read book when we go arrive
 'He was still reading when we arrived.'
 b. *khaw, kam,lan, yan, ?aan, nan,sih, tɔn, raw, pay, thiŋ,
 he PROG still read book when we go arrive

Only the word order facts can be used to claim that *kam,lan*, is situated higher than VP but lower than *yan*, and *khəəy*. The predicator test, unfortunately, cannot

¹⁰ According to Comrie (1976), the progressive markers in some languages have the properties of both progressive and imperfective. Therefore, their position may be characterized as ProgP/ImpP, not simply ProgP. I will return to this later.

confirm this hierarchical order because *kam,laŋ₁* cannot be a predicator as shown in (33).

What's more, the predicator of a response to the question containing *kam,laŋ₁* cannot be a bare verb either. The required predicator is a verb together with *kam,laŋ₁*.

- (33) Q: *khaw₅ kam,laŋ₁ ?aan₂ naŋ,sih₅ rii₅ /*may₄*
 he PROG read book QP
 'Is he reading?'
 A: a. **kam,laŋ₁*
 PROG
 b. **?aan₂*
 read
 c. *kam,laŋ₁ ?aan₂*
 PROG read
 'Yes, he is.'

Example (33) also shows that a sentence containing *kam,laŋ₁* cannot be questioned by the question particle *may₄*. As mentioned in Chapter 5, section 5.5.2, *may₄* is the shortened form of *rii₅ may₃* 'or not'. Therefore, it should not be used to question an item that cannot be negated by *may₃* 'not'. And it is true that *kam,laŋ₁* cannot be directly negated by *may₃* as below¹¹.

- (34) **khaw₅ may₃ kam,laŋ₁ ?aan₂ naŋ,sih₅*
 he not PROG read book

However, from the discussion in section 5.5.2, the words that can neither be negated by *may₃* nor be questioned by *may₄* are those that may never be under the scope of

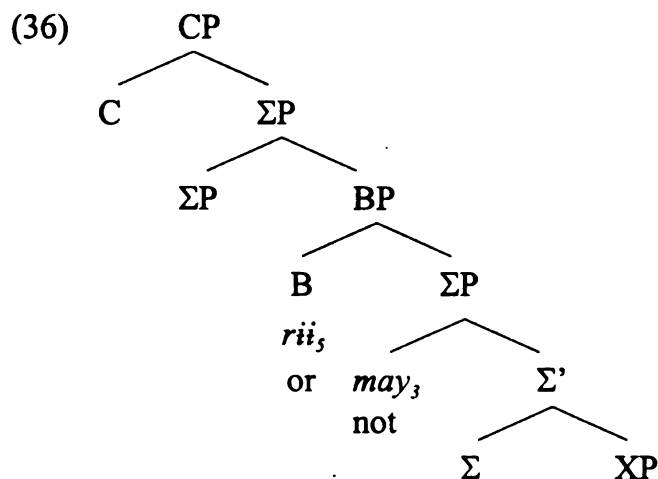
¹¹ Like *ca?*₂ and *yaŋ₁*, if the negation has to take scope over the progressive *kam,laŋ₁*, the negation *may₃ day₃* is to be used as illustrated below.

- (i) *khaw₅ may₃ day₃ kam,laŋ₁ ?aan₂ naŋ,sih₅*
 he not PROG read book
 'He is not reading.'

negation, namely epistemic modals. In contrast, the modal of volition *ca?*₂ and the continuative aspect marker *yaŋ*₁ cannot be negated by *may*₃ but can be questioned by the question particle *may*₄. Below is the paradigm summarizing this fact.

(35)	<u>Negatable</u> (<i>may</i> ₃)	<u>Questionable</u> (<i>may</i> ₄)
Epistemic modals	×	×
Volition modal <i>ca?</i> ₂	×	√
Continuative <i>yaŋ</i> ₁ ‘still’	×	√
Progressive <i>kam</i> ₁ <i>laŋ</i> ₁	×	×

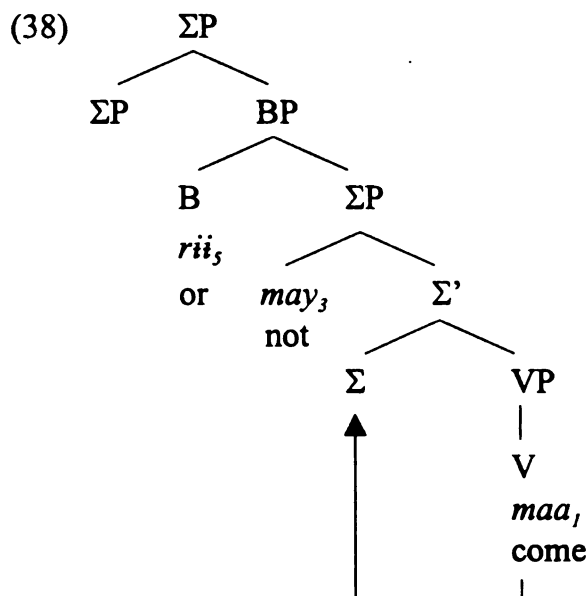
An explanation for the above puzzle requires a more profound analysis of the question particle *may*₄. I will begin with the assumption that *may*₄ is a reduced form of *rɪi*₅, *may*₃ ‘or not’, and that when *may*₃ is present, *rɪi*₅ can be phonologically null. It is possible that the change in tone from *may*₃ to *may*₄ is the phonological reflex of the null conjunction. I will tentatively hypothesize that the conjunction *rɪi*₅ ‘or’ conjoins two ΣPs, the first of which carries the feature [Aff] and the second of which carries the feature [Neg]. With the negator *may*₃ suggested to be in the specifier of ΣP in this case, the sketchy structure of *may*₄ is as in (36).



Consistent with my analysis of *may*₃ in Chapter 5, section 5.5, I will assume that *may*₃ occupies the specifier of ΣP, but because *may*₃ needs to be supported by a verbal head, Σ° must be filled with such a head. Once this is satisfied, Σ' may delete at PF.

Let's take a simple sentence as in (37) where (37b) is the full form of (37a). The representation in (38) shows how it works.

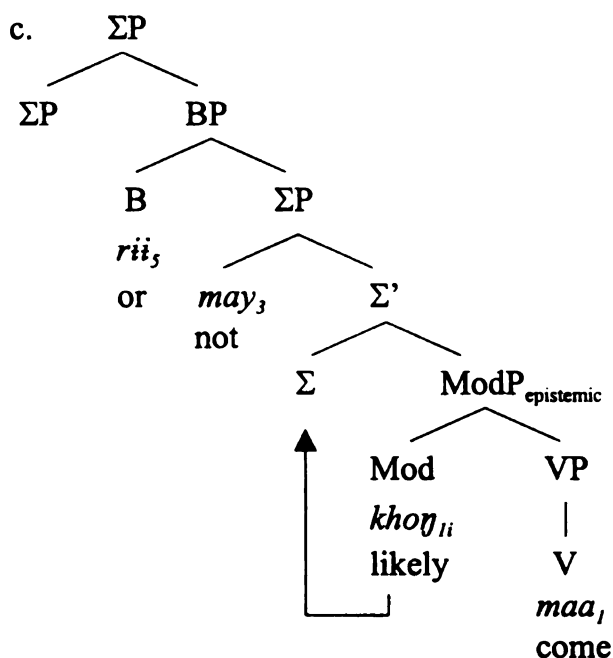
- (37) a. *khaw*₅ *maa*₁ *may*₄
 he come QP
 'Did he come?'
 b. *khaw*₅ *maa*₁ *rii*₅ *may*₃ *maa*₁
 he come or not come
 'Did he come?'



After the verb *maa*₁ ‘come’ has moved to Σ° to satisfy the requirement of *may*₃, Σ' (which contains the verb *maa*₁ ‘come’) is deleted, thus giving the sentence in (37a) at PF.

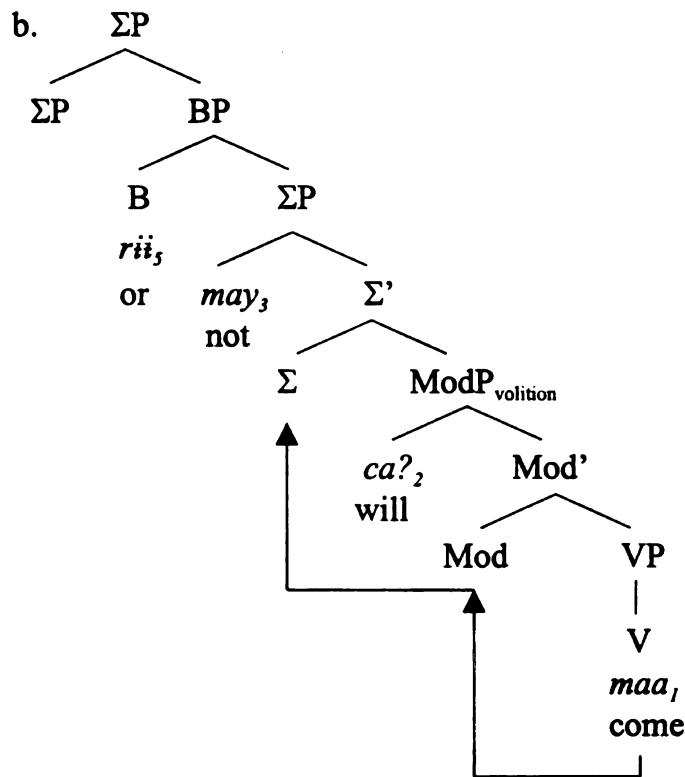
Now we can return to the paradigm (35). I will attempt to account for each case. First, the epistemic modals are neither negatable by *may*₃ nor questionable by *may*₄. This can be explained by the fact that they are never under the scope of negation. Given the suggested analysis of the question particle *may*₄, the closest head to be attracted to Σ is the epistemic modal which is situated higher than V. Although the derivation converges, the incompatibility in terms of scope relation makes the sentence ungrammatical. That is, the epistemic modal under the scope of negation is unacceptable. This is represented below.

- (39) a. **khaw*₅ *khon*₁ *maa*₁ *may*₄
 he likely come QP
 ‘Is it likely that he comes?’
 b. **khaw*₅ *khon*₁ *maa*₁ *rii*₅ *may*₃ *khon*₁ *maa*₁
 he likely come or not likely come



For the case of $ca?_2$, which is a phrase in the specifier of $\text{ModP}_{\text{volition}}$, it cannot co-occur with the negator may_3 , because they compete for the same position. However, the fact that $ca?_2$ can be questioned by may_4 is due to the fact that the negator may_3 is in the specifier of ΣP . The attracted verb can move past $ca?_2$ to Σ without violating the HMC as illustrated below.

- (40) a. $khaw_5$ $ca?_2$ maa_1 may_4
 he will come QP
 ‘Will he come?’

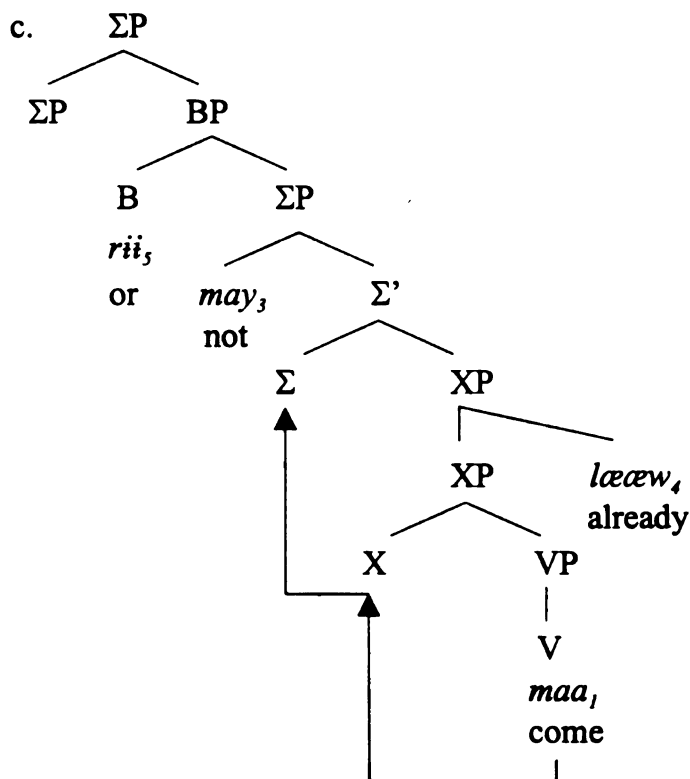


The case of $ya\eta_1$ ‘still’ is a bit more complicated although it behaves the same as $ca?_2$. As the negative counterpart of $ya\eta_1$ is $may_3 l\ae\ae w_4$ ‘not already’ or ‘no longer’ in English as discussed in section 6.4.1.2, the second conjunct consists not of $ya\eta_1$ but $may_3 l\ae\ae w_4$, as shown in (41).

- (41) a. **khaw₅ yan₁ maa₁ rii₅ yan₁ may₄ maa₁*
 he still come or still not come
 ‘*Does he still come or doesn’t he still come?’
- b. *khaw₅ yan₁ maa₁ rii₅ may₄ maa₁ lææw₄*
 he still come or not come already
 ‘Does he still come or doesn’t he come any longer?’

Assuming that *lææw₄* is right-adjoined to some XP higher than VP (as I will argue for in section 6.4.2.3), the fact above can be accounted for by the representation below where V can move to Σ without any problem. The fact that *yan₁* is not negatable by *may₃* but is questionable by *may₄* can thus be explained.

- (42) a. *khaw₅ yan₁ maa₁ may₄*
 he still come QP
 ‘Does he still come?’
- b. *khaw₅ yan₁ maa₁ rii₅ may₄ maa₁ lææw₄*
 he still come or not come already
 ‘Does he still come or doesn’t he come any longer?’



Now let's consider the case of the progressive *kam,laŋ*, which can neither be negated by *may*₃ nor questioned by *may*₄. Although *kam,laŋ* patterns like the epistemic modals, it is certainly not the case that the progressive aspect cannot be under the scope of negation like epistemic modals. The English examples in (43) show the scope of negation over the progressive. Their interpretations are 'It is not the case that he is reading' and 'It is not the case that she is singing' respectively.

- (43) a. He is not reading.
 b. She is not singing.

Therefore, the questions need solving are the following:

Q1: Why can't *kam,laŋ* be negated?

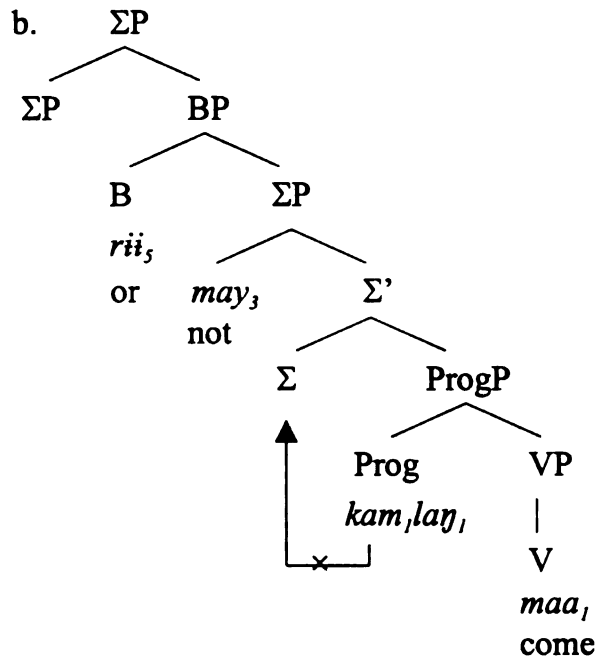
Q2: Why can't it be questioned by *may*₄?

Q3: Why does it always accompany the verb when the latter functions as a
 predicator?

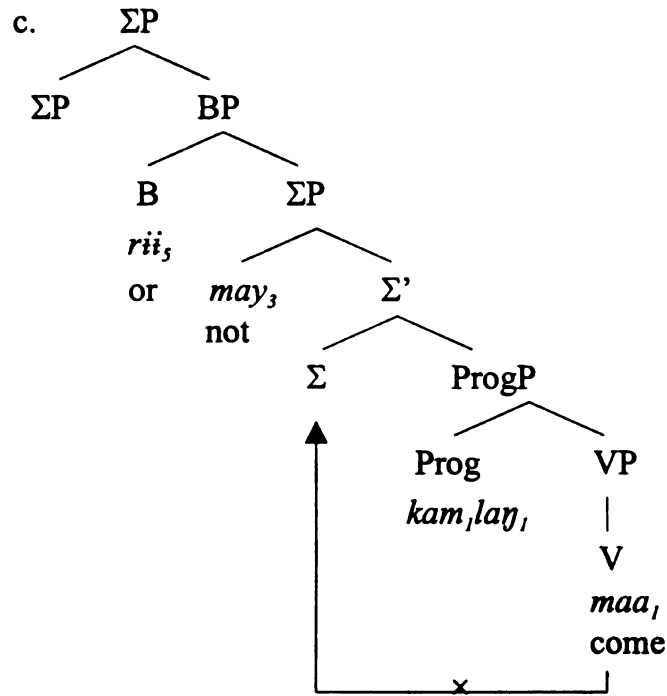
Question 1 seems to point to the idea that the progressive *kam,laŋ* is a phrase in the specifier of a projection like *ca?*₂ and *yaŋ*, because unlike the epistemic modals, it can be under the scope of negation. However, this assumption cannot explain questions 2 and 3. If *kam,laŋ* were in the specifier, the verb would unproblematically move to Σ past it in the sentence questioned by *may*₄, resulting in grammaticality, contrary to the fact. Instead, I hypothesize that *kam,laŋ* is the head. However, it is different from other modal or aspectual heads in that it lacks V-features. My proposal comes from the fact that the progressive marker in Thai is derived from the noun which means 'strength, power' (Ekniyom 1979, Meepoe 1996). This idea is not uncommon because in many

languages, the progressive has certain properties that could be taken as nominal or at least not purely verbal.¹² Therefore, the fact that *kam,laŋ₁* cannot be questioned by *may₄* is because *kam,laŋ₁* is unable to move to Σ owing to its lack of V-features (44b). However, since *kam,laŋ₁* is a head, movement of V to Σ will violate the HMC. This is shown in (44c).

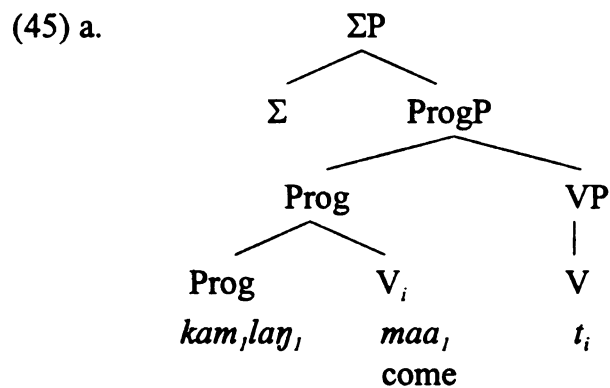
(44) a. **khaw₅ kam,laŋ₁ maa₁ may₄*
 he PROG come QP

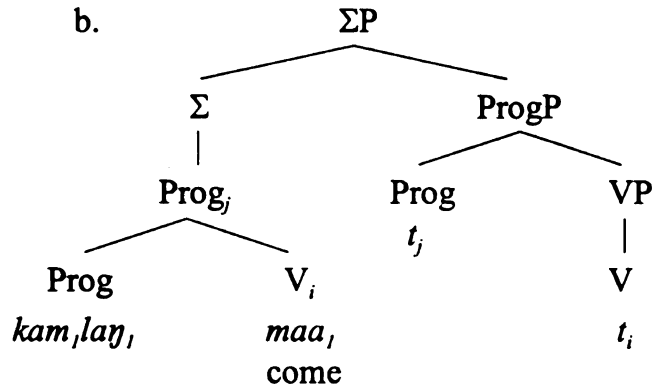


¹² This is pointed out to me by Cristina Schmitt. One example, suggested by Asuncion Martinez, is the French progressive 'en train de' which is a PP.



The proposal that *kam,laŋ₁* is the head without V-features can also answer Question 1; that is, it is incompatible with the negator *may₃*, which carries V-features. However, Question 3 still needs an explanation. Given that a head with V-features has to move to Σ to function as the minimal response, the verb under *kam,laŋ₁* must adjoin to *kam,laŋ₁* on its way to Σ . This can explain why a bare verb is unacceptable as a predicator when the progressive marker is present. The predicator, on the other hand, has to consist of both a verb and the progressive marker as illustrated in (45) below.



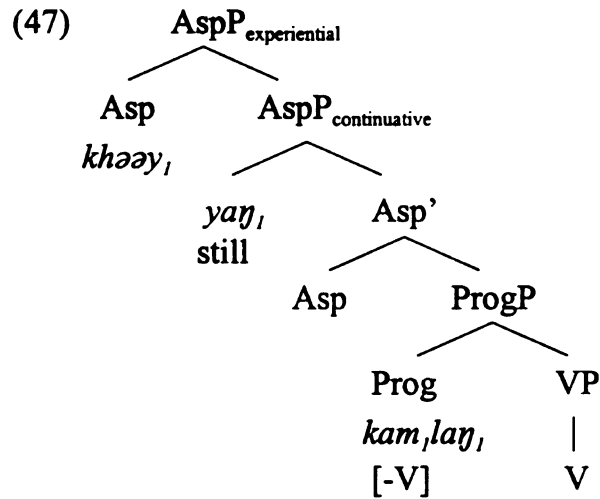


Another piece of evidence supporting my proposed analysis of *may*₄ and *kam,lan*₁ is the following questions containing the progressive marker and either *ca?*₂ ‘will’ (46a) or *yaŋ*₁ ‘still’ (46b).

- (46) a. **khaw*₅ *yaŋ*₁ *kam,lan*₁ *maa*₁ *may*₄
 he still PROG come QP
 b. **khaw*₅ *ca?*₂ *kam,lan*₁ *maa*₁ *may*₄
 he will PROG come QP

Recall that *ca?*₂ and *yaŋ*₁ without *kam,lan*₁ can be questioned by *may*₄. The ungrammaticality of (46) can thus be explained as follows. Although V can move past *ca?*₂ which is in the specifier of ModP_{volition} on its way to Σ, it cannot skip the head *kam,lan*₁. The same line of argument applies to (46b). That is, although the negative counterpart of *yaŋ*₁ - *lææw*₄ ‘already’ is a right adjunct and thus does not block V movement, the head *kam,lan*₁ above V does.

In short, the progressive marker in Thai is suggested to be a head of ProgP above VP below the experiential perfect *khæəy*₁ and the continuative *yaŋ*₁ ‘still’ as illustrated in (47).



6.4.1.4 Summary

To conclude, pre-verbal aspects are all different from one another. It is clear that the experiential perfect *khəəy*₁ possesses all the verbal properties; namely, its ability to be a predicator and to be negated by *may*₃. Therefore, it is undoubtedly a head of an $\text{AspP}_{\text{experiential}}$. The continuative marker *yaŋ*₁ and the progressive *kam*₁*laŋ*₁ can neither be a predicator nor be negated. However, the former can be questioned by *may*₄. The proposed analysis is that the continuative marker which behaves similarly to the modal of volition is a phrase in the specifier of $\text{AspP}_{\text{continuative}}$. The progressive marker, on the other hand, behaves differently in terms of its inability to be questioned by *may*₄ as well as its obligatory accompaniment of the verb which moves up to Σ to act as a predicator. Therefore, it is analyzed as a head without V-features.

6.4.2 Post-verbal aspect markers

The two aspect markers that occur post-verbally are *yuu*₂ and *lææw*₄. The former is considered as an imperfective whereas the latter, perfect as well as perfective. Their co-

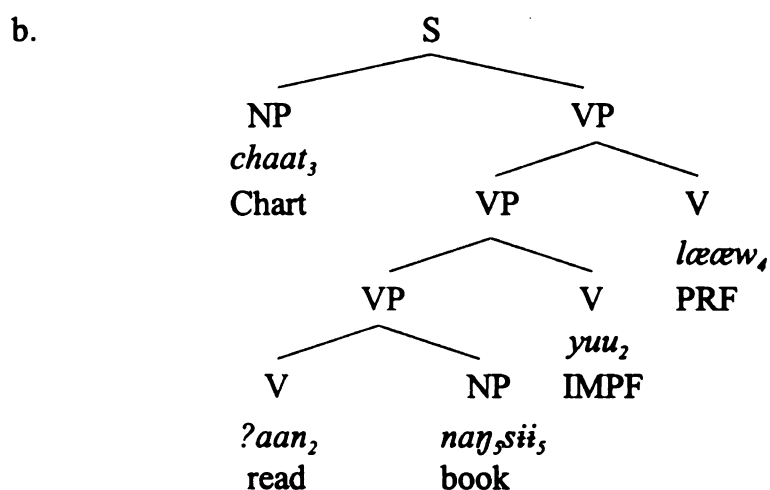
occurrence is possible where the imperfective precedes the perfective, the order which is opposite to the cross-linguistic order of these two aspect markers.

6.4.2.1 Previous studies

In the earlier studies, the combination of a verb and a post-verbal aspect marker was considered as a compound verb (Sereechareonsatit 1984) or a complex verb (Thepkanjana 1986) in which verbs modify others in the sequence as illustrated below:

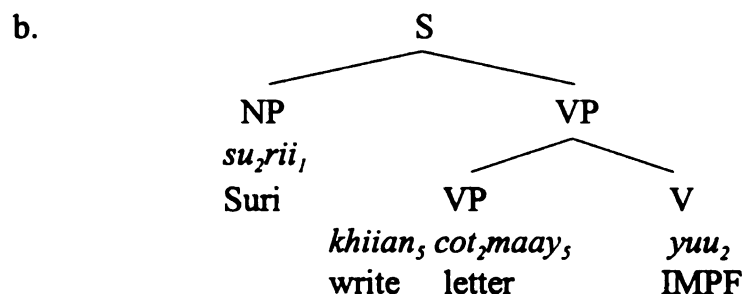
(48) Sereechareonsatit (1984:262)

- a. *chaat₃ ?aan₂ naŋ₅sii₅ yuu₂ lææw₄*
 Chart read book IMPF PRF
 'Chart has already been reading books.'

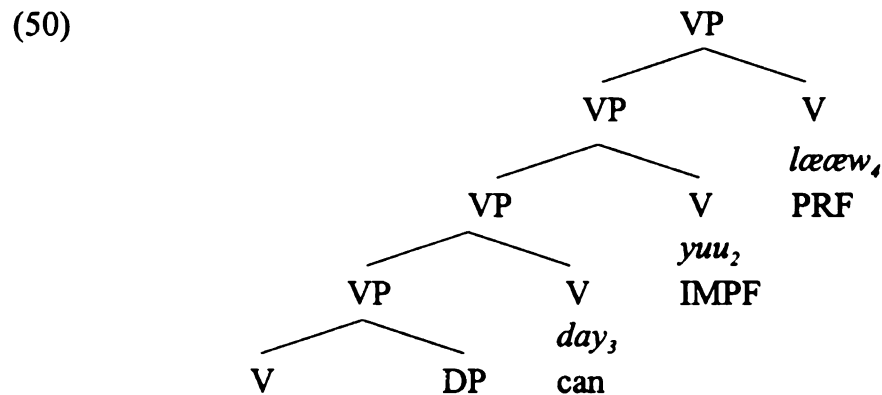


(49) Thepkanjana (1986:189)

- a. *su₂rii₁ khiian₅ cot₂maay₅ yuu₂*
 Suri write letter IMPF
 'Suri is writing a letter.'



I agree with the above analyses which place the post-verbal aspect markers as right-adjuncts. However, I disagree on their being heads because considering *yuu*₂ and *lææw*₄ as heads cannot explain their different behaviors from other heads discussed so far, as will be elaborated in the following section. Moreover, the analyses by which a maximal projection is mixed-headed is not favorable. Plus, the proposal that these two aspect markers are VP right-adjuncts misses the fact that they take scope over post-verbal modals which are assumed in the previous chapter (section 5.4.1.5) to be above VP. In spite of the suggestion that the post-verbal modals are also VP right-adjuncts like these two as in (50), it cannot explain why the order of these three is fixed, given that they are adjuncts.



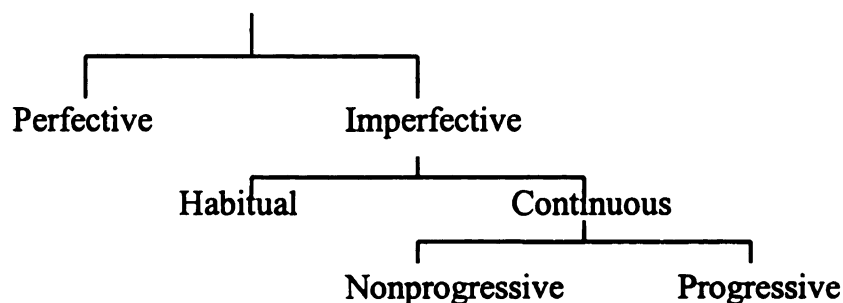
My proposed solution is that the post-verbal aspect markers are right adjuncts to different XPs. That is why their order cannot be switched around. And the fact that they are not heads can explain their different behaviors than the other auxiliaries which are claimed to be heads.

6.4.2.2 Imperfective *yuu*₂

The aspectual meaning of *yuu*₂ is not totally agreed among the linguists. It has been regarded in the literature as a ‘progressive’ marker (Warotamasikkhadit 1972), a

‘continuative’ marker (Boonyapatipark 1983), and an ‘imperfective’ marker (Meepoe 1996). If the following diagram proposed by Comrie (1976: 25) is taken into consideration, it can be concluded that *yuu*₂ is an imperfective as it can represent all the aspectual meanings under ‘Imperfective.’

(51) Classification of aspectual oppositions



The following examples represent the aspectual meanings *yuu*₂ can convey - habitual, nonprogressive and progressive respectively.

- (52) a. *khaw₅ suup₂ bu₁rii₂ yuu₂ sɔŋ₅ pii₁*
 he smoke cigarette IMPF two year
 ‘He smoked for two years.’
 b. *khaw₅ ?uan₃ yuu₂*
 he fat IMPF
 ‘He is fat.’
 c. *khaw₅ ?aan₂ naŋ₅sii₅ yuu₂*
 he read book IMPF
 ‘He is/was reading.’

In what follows, I will limit myself to the progressive use of *yuu*₂, but I will call it imperfective to distinguish it from the progressive *kam₁laŋ₂*.

Let’s look at the behaviors of *yuu*₂ with respect to the ability to be a predicator and be negated. It happens that *yuu*₂, like most of the aspect markers discussed so far, cannot behave as a predicator as shown in (53) below.

- (53) Q: khaw₅ ?aan₂ nan₅sih₅ yuu₂ may₄
 he read book IMPF QP
 ‘Is he reading?’
 A: a. * yuu₂
 IMP
 b. ?aan₂
 read

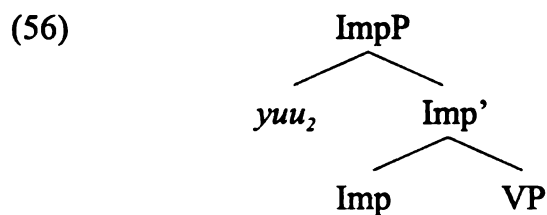
Given the fact that *yuu*₂ cannot be a predicator, it is not unexpected to find it unable to be negated by *may*₃ as in (54).

- (54) a. *khaw₅ ?aan₂ nan₅sih₅ may₃ yuu₂
 he read book not IMPF
 b. khaw₅ may₃ ?aan₂ nan₅sih₅ yuu₂
 he not read book IMPF
 ‘He is not reading.’

However, a sentence containing *yuu*₂ can be questioned by *may*₄ as shown in (55).

- (55) khaw₅ ?aan₂ nan₅sih₅ yuu₂ may₄
 he read book IMPF QP
 ‘Is he reading?’

Given the above facts, *yuu*₂ behaves exactly the same as the modal of volition *ca?*₂ and the continuative *yan*₁ in all respects concerned. As a result, the most likely claim is that *yuu*₂ is not a head, but a phrase. Is it possible then that *yuu*₂ is a phrase in the specifier of ImpP as in (56)?



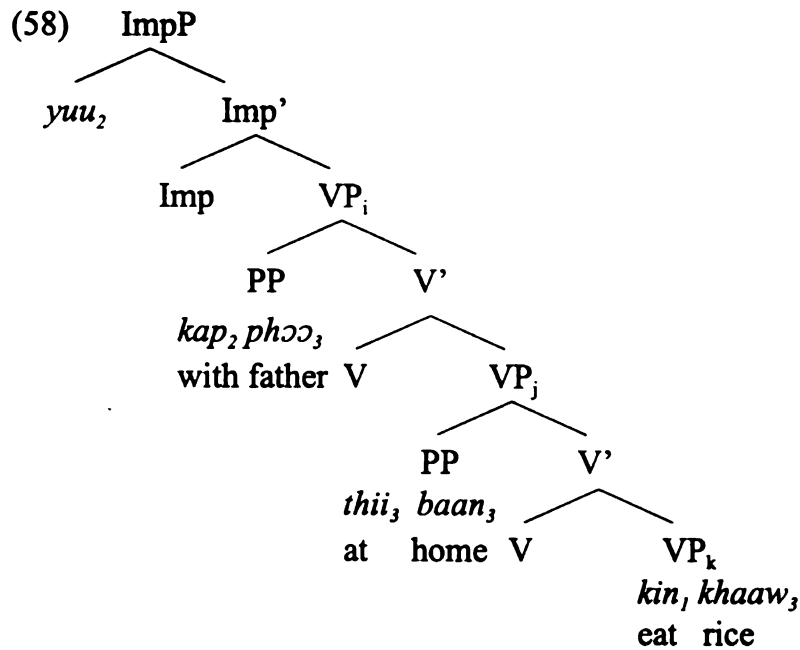
The structure shown in (56) seems to be able to explain the failure of *yuu*₂ in both the predicator and the negatability tests. As a phrase, *yuu*₂ cannot raise to Σ to function as a predicator. And owing to its location in the specifier of ImpP, the negator *may*₃ cannot

be merged in the very position. Moreover, the movement of V past *yuu*₂ to Σ in an interrogative containing *may*₄ is unproblematic.

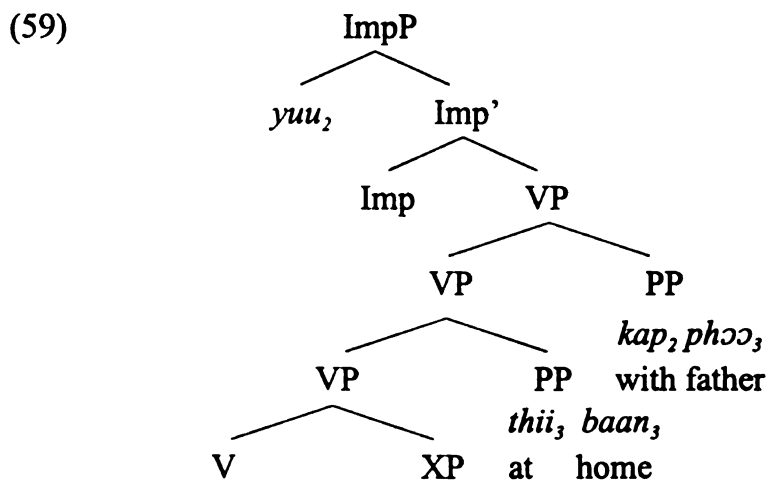
Unlike *ca?*₂ and *yaŋ*₁, nonetheless, *yuu*₂ always occurs post-verbally. Can VP raising account for the word order fact? This seems promising until the following instance where the order of *yuu*₂ and prepositional phrases is switched around is taken into account.

- (57) a. *khaw*₅ *kin*₁ *khaaw*₃ *thii*₃ *baan*₃ *kap*₂ *phoo*₃ *yuu*₂
 he eat rice at home with father IMPF
 ‘He is eating with his father at home.’
 b. *khaw*₅ *kin*₁ *khaaw*₃ *thii*₃ *baan*₃ *yuu*₂ *kap*₂ *phoo*₃
 he eat rice at home IMPF with father
 c. *khaw*₅ *kin*₁ *khaaw*₃ *yuu*₂ *thii*₃ *baan*₃ *kap*₂ *phoo*₃
 he eat rice IMPF at home with father

There is no way the proposal that *yuu*₂ is generated pre-verbally can account for this instance no matter where PPs are assumed to be generated. If PPs are considered ‘adverbial PPs’ as claimed by Cinque (1999:30) and generated in the specifier of various VP shells as in (58), *yuu*₂ has to lower and tuck in between or after these two PPs to get the word order right. This is unlikely because lowering causes ECP violation. Is it possible that different shells of VP move to a position higher than *yuu*₂? According to this proposal of the base-generation of adverbial PPs, the lowest VP has to successively adjoin to the higher VPs to get the order right. To account for (57b), therefore, the lowest VP_k has to adjoin to the VP_j, yielding *kin*₁ *khaaw*₃ *thii*₃ *baan*₃ ‘eat rice at home’. To get the order right, VP_j has to adjoin to ImpP, skipping the highest VP_i. This too is unlikely.



Alternatively, if PPs are suggested to be VP right adjuncts as in (59), the lowering and tucking-in of *yuu*₂ to PPs is still required, which is not favorable. The movement of VP without all adjuncts is not suggested either.



If *yuu*₂-as-right-adjunct is assumed, the problem can be solved. However, it is unlikely that *yuu*₂ is VP right-adjunct mainly because *yuu*₂ takes the modals of ability under its scope as demonstrated in (60). And the modals of ability are claimed in section 5.4.1.5 to be above VP.

- (60) khaw₅ kin₁ day₃ yuu₂
 he eat can IMPF
 ‘He is able to eat.’ (or ‘His ability to eat is in process.’)

What I would suggest then is that *yuu₂* is adjoined to an AspP which I will later specify. The flexible order as in (57) is captured by the rightward movement of PPs to some focus position above *yuu₂*. The phonological facts seem to confirm this. That is, with *yuu₂* as the last element, no pause is required. When *yuu₂* is placed between or in front of PPs, a pause is needed after *yuu₂*.

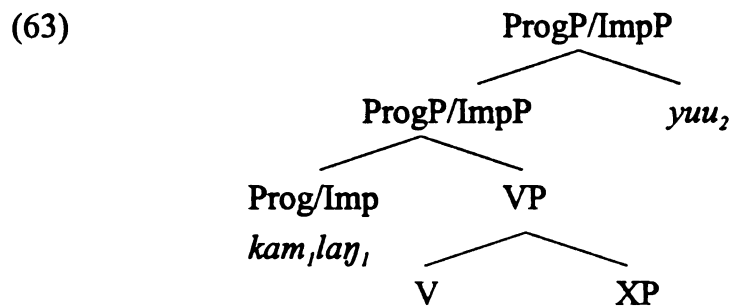
With the assumption of *yuu₂* as a right-adjunct, the fact that *yuu₂* cannot be negated nor be a predicator can be accounted for. As well, the fact that a sentence containing *yuu₂* can be questioned by *may₄* follows from my analysis of *may₄*; that is, V can move to Σ without *yuu₂* blocking the movement.

Now consider the projection to which *yuu₂* is adjoined. As mentioned earlier, the progressive marker in Thai seems to have the dual properties of both progressive and imperfective because it can occur with states. Therefore, the co-occurrence of the progressive *kam₁lan₁* and the imperfective *yuu₂* is very common and natural as in (61) below. They are therefore considered by some authors to be a unit called a discontinuous temporal verb (Sookgasem 1990) or a discontinuous auxiliary (Warotamasikkhadit 1996).

- (61) a. khaw₅ kam₁lan₁ ?aan₂ nan₃si₃ yuu₂
 he PROG read book IMPF
 ‘He is reading.’
 b. khaw₅ kam₁lan₁ rɔɔn₄pleen₁ yuu₂
 he PROG sing song IMPF
 ‘He is singing.’

However, the combination of *kam,laŋ*₁ and *yuu*₂ conveys simply the meaning of progressive, not continuative as shown in (62). Therefore, I will propose that *kam,laŋ*₁ is in ProgP/ImpP to which the imperfective *yuu*₂ is right-adjoined. Their structural representation is as in (63).

- (62) a. **khaw*₅ *kam,laŋ*₁ *suup*₂ *bu,rii*₂ *yuu*₂ *saam*₅ *pii*₁
 he PROG smoke cigarette IMPF three year
 ‘He is smoking for three years.’



The proposal above is able to take care of the scope concerns between *yuu*₂ and other pre-verbal aspect markers. Like the progressive *kam,laŋ*₁, *yuu*₂ is generated lower than the experiential perfect *khəəy*₁ as shown by the predicator test below.

- (64) Q: *khaw*₅ *khəəy*₁ *diim*₂ *law*₃ *yuu*₂ *təon*₁ *naay*₁ *maa*₁ *truat*₂ *may*₄
 he EXP drink alcohol IMPF when boss come supervise QP
 ‘Has he ever been drinking when his boss came for supervision?’
 A: a. *khəəy*₁
 EXP
 ‘Yes, he has.’
 b. **diim*₂ *yuu*₂
 drink IMPF

However, the predicator test cannot be used to test the position of *yuu*₂ with respect to the continuative *yaŋ*₁ because neither can be a predicator. However, the fact that the continuative *yaŋ*₁ seems to have semantic scope over the imperfective seems to

indicate that the former is higher than the latter. This is shown in (65), the meaning of which is the on-going action of ‘reading’ persists at the reference time.

- (65) khaw₃ yaŋ₁ ?aan₂ naŋ₃sih₃ yuu₂
 he still read book IMPF
 ‘He is still reading.’

I will show in the following section that *lææw₄* has the same behaviors as *yuu₂*. It will, therefore, be claimed to be a right-adjunct too.

6.4.2.3 Perfect/Perfective *lææw₄*

The word *lææw₄* is considered a perfective marker by Boonyapatipark (1983) although he realizes that it can convey either perfect or perfective. Likewise, Sookgasem (1990) considers *lææw₄* as two separate aspectual words: perfect and perfective. The differences between the two are that the perfective cannot occur with stative verbs and the perfect ‘involves the overlap of a described interval of eventuality and an interval of utterance.’ (1990:67) The differences between the two aspects are illustrated in the examples below.

- (66) a. khaw₃ choɔp₃ thəə₁ saam₃ pii₁ lææw₄
 he like she three year PRF
 ‘He has liked her for three years.’
 b. khaw₃ yaay₄ baan₃ pay₁ lææw₄ miiə₃ pii₁ kɔn₂
 he move house go PRF when year before
 ‘He moved last year.’

The word *lææw₄* in sentence (66a) can be considered as a continuative perfect because the action of liking started three years ago and continues to the utterance time while *lææw₄* in (66b) is perfective because it indicates the termination of the action

‘moving’. However, a sentence containing *lææw₄* may carry several readings as illustrated below.

- (67) khaw₅ kin₁ khaaw₃ lææw₄
he eat rice PRF
‘He ate.’
‘He has eaten.’
‘He has started eating.’

As can be seen, sentence (67) has three interpretations. It can indicate the termination of the action ‘eating’, which is the concept of ‘perfective.’ It can also be an answer to the question ‘Would he like something to eat?’ In this sense, *lææw₄* is regarded as a resultative perfect because it implies the resulting state of having eaten; that is, the agent is now full. The last meaning indicates the shift or transition of an event or state. The word *lææw₄* thus signals an arrival or a start of a new situation or state and the termination of a previous state is left understood (Boonyapatipark 1983:166). In fact, *lææw₄* is commonly used in the last sense. This is shown by additional examples in (68) below, the implications of which are ‘He was not fat previously’ and ‘He didn’t like her earlier’ respectively.

- (68) a. khaw₅ ?uan₃ lææw₄
he fat already
‘He is now fat.’
b. khaw₅ choop₃ thəə₁ lææw₄
he like she already
‘He has started to like her’

Such a meaning is assigned to a word equivalent to ‘already’ in various languages and the word is termed ‘inchoative phasal adverbial’ (Löbner 1989, van der Auwera 1998). For simplicity, I will reanalyze the word *lææw₄* ‘already’ in Thai to be a temporal

boundary marker. That is, it can mark the beginning of a state or an event, thus carrying the non-terminative and progressive sense. Plus, it can mark the end of an event, thus expressing the terminative sense. The former usage of *lææw*₄ is roughly equivalent to the perfect marker including the inchoative adverbial whereas the latter usage is the perfective marker alone. I will also assume that *lææw*₄ can be generated in different positions, and distinct loci correspond to various meanings it denotes. I will show that the position of *lææw*₄ is flexible due to its adverbial nature. Therefore, I consider *lææw*₄ as ‘already’ and will gloss it as such.

The examples in (69) obviously show the different positions of *lææw*₄ with respect to the experiential perfect *khəəy*₁.

- (69) a. *chan*₁ *khəəy*₁ *kin*₁ *khaaw*₃ *lææw*₄ *tææ*₂ *tɔŋ*₃ *ʔɔk*₂ *pay*₁ *kin*₁
 I EXP eat rice already but must exit go eat
 *khaaŋ*₃*nɔk*₃ *kap*₂ *phiiən*₃ *ʔiik*₁
 outside with friend again
 ‘I have an experience of having eaten but having to go out to eat with my
 friend again.’
 b. *chan*₁ *khəəy*₁ *kin*₁ *kop*₂ *lææw*₄
 I EXP eat frog already
 ‘I have already had an experience of eating frog.’

The word *lææw*₄ ‘already’ in (69a) which is under the scope of the experiential perfect *khəəy*₁ marks the termination of the event ‘eating’ while *lææw*₄ in (69b) which takes *khəəy*₁ in its scope marks the beginning of the state of ‘having experience’.

Therefore, *lææw*₄ may be generated either above or below the experiential perfect. How about its position relative to the other aspect markers then?

With respect to the continuative *yaŋ*₁, *lææw*₄ ‘already’ is incompatible with it as shown in (70) because *lææw*₄ marks the beginning or end but *yaŋ*₁ displays continuation which excludes the beginning or end of a state or a situation.

- (70) **khaw*₅ *yaŋ*₁ *kin*₁ *khaaw*₃ *lææw*₄
 he still eat rice already

Since *lææw*₄ as the marker of the beginning of an event or a state includes the progressive meaning, the co-occurrence of *lææw*₄ and the progressive *kam*₁*laŋ*₁ and/or the imperfective *yuu*₂ is perfectly fine as in (71)-(72) below.

- (71) A: *hiw*₅ *caŋ*₁
 hungry very
 ‘I’m very hungry.’
 B: *mææ*₃ *kam*₁*laŋ*₁ *tham*₁ ?aa₁*haan*₅ *lææw*₄
 Mom PROG do food already
 ‘Mom has been cooking.’
- (72) *khaw*₅ *kin*₁ *khaaw*₃ *yuu*₂ *lææw*₄
 he eat rice IMPF already
 ‘He has been eating.’

From the translations of (71) and (72), it is obvious that *lææw*₄ has scope over the progressive *kam*₁*laŋ*₁ and imperfective *yuu*₂; therefore, it should be structurally higher.

As a result, I would assume that *lææw*₄ can be generated from a position above ProgP/ImpP up to a position higher than the experiential *khəəy*₁. But what syntactic category is *lææw*₄? Is it a head or a phrase? I will suggest that it is a phrase like the imperfective *yuu*₂ because they exhibit the same behaviors as will be spelled out below.

Like *yuu*₂, *lææw*₄ cannot be a predicator as in (73) nor be negated by *may*₃ as in

(74).

(73) Q: *khaw*₅ *?aan*₂ *naŋ*₅ *sii*₅ *lææw*₄ *yaŋ*₁
 he read book already yet
 'Has he read?'

A: a. **?aan*₂
 read

b. **lææw*₄
 already

c. *?aan*₂ *lææw*₄
 read already
 'Yes, he has.'

(74) a. **khaw*₅ *?aan*₂ *naŋ*₅ *sii*₅ *may*₃ *lææw*₄
 he read book not already

b. *khaw*₅ *may*₃ *?aan*₂ *naŋ*₅ *sii*₅ *lææw*₄
 he not read book already
 'He did not read any longer.'

As the interpretation of (74b) shows, the sentence is not the negative of 'He has already read.' In section 6.4.1.2, I mentioned that *may*₃ *lææw*₄ 'not already' is the negative counterpart of *yaŋ*₁ 'still'. Therefore, (74b) is the negative of 'He is still reading.' On the other hand, the negative counterpart of *lææw*₄ 'already' is *yaŋ*₁ *may*₃ 'still not' (or 'not yet' in English) as shown in (75). This is common in any language which has phasal adverbials.

(75) *khaw*₅ *yaŋ*₄ *may*₃ *?aan*₂ *naŋ*₅ *sii*₅
 he still not read book
 'He has not yet read.'

Consequently, that the sentence containing *lææw*₄ must be questioned by *yaŋ*₁, which is the shortened form of *rii*₃ *yaŋ*₁ 'or (not) yet', instead of *may*₃, as in (76), is

explainable, given that a yes/no question in Thai is a kind of alternative question as in Chinese.

- (76) *khaw₅ ?aan₂ naŋ₃si₅ lææw₄ yaŋ₁*
 he read book already yet
 ‘Has he already read?’

I would propose that *yaŋ₁* as a question particle is a negative element. Because its full form is *rii₅yaŋ₁* ‘or yet’, I would assume that it works like the question particle *may₄*. The movement of V to Σ whose specifier hosts *yaŋ₁* is thus fine for the case of (76).

Taking the same line of arguments as given for the right-adjunction status of *yuu₂*, the following examples where the order of *lææw₄* and PPs can be switched around show that *lææw₄* is also a right adjunct.

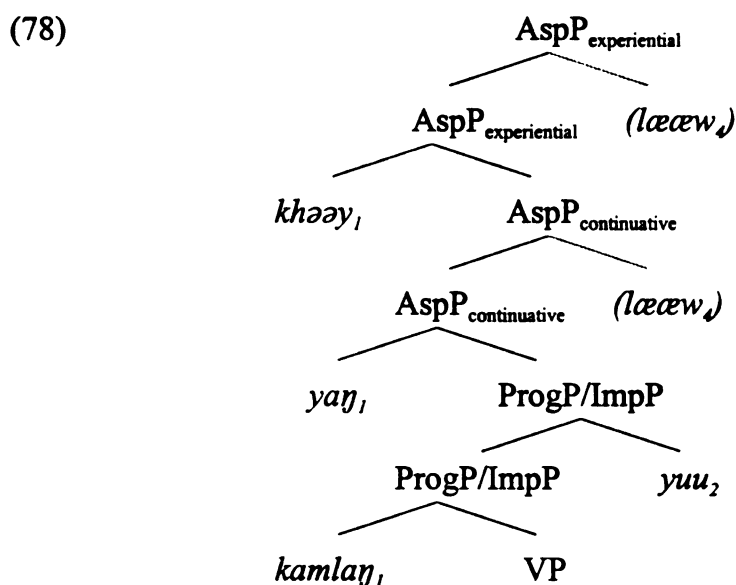
- (77) a. *khaw₅ kin₁ khaaw₃ thii₃ baan₃ kap₂ phoo₃ lææw₄*
 he eat rice at home with father already
 ‘He ate/started to eat with his father at home.’
 b. *khaw₅ kin₁ khaaw₃ thii₃ baan₃ lææw₄ kap₂ phoo₃*
 he eat rice at home already with father
 c. *khaw₅ kin₁ khaaw₃ lææw₄ thii₃ baan₃ kap₂ phoo₃*
 he eat rice already at home with father

In short, the similar behaviors of *yuu₂* and *lææw₄* indicate that they are of the same syntactic category, namely, phrases right-adjoined to XPs.¹³

¹³ I have no account here of the fact that *lææw₄* must accompany the verb to function as a predicator. As a phasal adverbial, *lææw₄* is believed to have a focus property. Whether this has something to do with this issue or what the analysis exactly is awaits further research.

6.4.2.4 Summary

The two post-verbal aspect markers in Thai are not heads generated pre-verbally with VP raising like the post-verbal modals. In contrast, they are right-adjuncts. The imperfective *yuu*₂ is adjoined to ProgP/ImpP whereas *lææw*₄ which is analyzed as a temporal boundary marker is adjoined to several phrases from AspP_{experiential} to XP above ProgP/ImpP as in (78) below.



6.5 Co-occurrences of modals and aspect markers

Having discussed both modals and aspects separately, I will now explore their co-occurrences which are normal in a sentence. Although the general claim is that modals are positioned structurally higher than aspect, the empirical data in Thai do not prove so. It seems that they are interspersed, i.e. some modals are higher than some aspects and vice versa.¹⁴ What I discover is that the epistemic modals are structurally highest, which

¹⁴ This is not different from Cinque's account (1999). Also, as pointed out by Cristina Schmitt, there are many languages where some modals are inflected while others are

is not uncommon, given that they are like ‘speaker-oriented’ adverbs. The post-verbal modals are found to be the lowest, which is again not surprising, given that they trigger the raising of VP right below them.

6.5.1 Surface positions of modals and aspect markers

As discussed earlier, both modals and aspects can occur either pre-verbally or post-verbally. The two tables below represent their co-occurrences in the pre-verbal and the post-verbal positions respectively.

A	B	C	D	E	F	
<i>?aat₂ca?₂</i> ‘probably’	<i>khəəy₁</i>	<i>yaŋ₁</i>	<i>ca?₂</i>	<i>tɔŋ₃</i>	<i>kam₁laŋ₁</i>	VP
<i>khon₁ca?₂</i> ‘likely’	‘EXP’	‘still’	‘will’	‘must’	‘PROG’	
<i>naa₃ca?₂</i> ‘should’						
<i>khuan₁ca?₂</i> ‘should’						
<i>tɔŋ₃</i> ‘must’						

Table 5: Positions of pre-verbal modals and aspect markers

	G	H	I
VP	<i>day₃</i> ‘can, may’	<i>yuu₂</i>	<i>lææw₄</i>
	<i>pen₁</i> ‘can’	‘IMPF’	‘PRF’
	<i>way₃</i> ‘can’		

Table 6: Positions of post-verbal modals and aspect markers

defective or do not have a real perfective form. In the latter case, tense and aspect are assumed to be higher.

As can be seen in the tables above, the root modals are intervened by the progressive *kam,lan*. The question is whether the progressive marker is higher than the post-verbal modals or vice versa.

6.5.2 Distributions of modals and aspect markers

All the pre-verbal modals and aspects in Table 5 can co-occur in the specified order as long as they do not convey incongruous or odd meanings as exemplified below:

- (79) *khaw₅ khon₁ khəy₁ tən₃ kam₁lan₁ tham₁ ŋaan₁*
 he likely EXP must PROG do work
tən₁ khon₁ ?iin₂ klap₂ læw₄
 when person other return already
 'It is likely that he has an experience of obligatorily be working while others left.'

All the post-verbal items can also co-occur as in (80) below¹⁵.

- (80) a. *khaw₅ ?aan₂ nan₃sii₅ day₃ yuu₂*
 he read book able IMPF
 'He is able to read.'
 b. *khaw₅ ?aan₂ nan₃sii₅ day₃ yuu₂ læw₄*
 he read book able IMPF already
 'He has already been able to read (for some time now).'

However, it is not the case that all pre-verbal and post-verbal items can co-occur in a sentence as shown below:

- (81)**khaw₅ khon₁ khəy₁ yan₁ tən₃ kam₁lan₁ tham₁ ŋaan₁ day₃ yuu₂ læw₄*
 he likely EXP still must PROG do work able IMPF already

Some of the possible combinations are illustrated as follows.

¹⁵ If the post-verbal modals and *læw₄* co-occur without *yuu₂*, as in (i) below, the latter is a 'phasal adverbial'. It signals the shift of an event or a state as discussed earlier.

- (i) *khaw₅ ?aan₂ nan₃sii₅ day₃ læw₄*
 he read book able already
 'He is able to read now.'

- (82) a. *khaw₅ khon₁ khəəy₁ yan₁ tən₃ kam₁ lan₁ tham₁ ŋaan₁ yuu₂*
 he likely EXP still must PROG do work IMPF
 ‘It is likely that he has an experience of obligatorily be working...’
- b. *khaw₅ khon₁ tən₃ tham₁ ŋaan₁ day₃ yuu₂ læəw₄*
 he likely must do work able IMPF already
 ‘It is likely that he must have been able to work.’

The following section will examine their positions relative to one another.

6.5.3 Analysis

I will justify my proposed analysis of modals and aspects in Thai by investigating their co-occurrences in pairs. The epistemic modals and the root modals are discussed as monolithic elements where applicable. The analysis is divided into two main parts. The first one concerns the relation between the epistemic modals and the aspect markers. The second one is about the relation between the root modals and the aspect markers.

6.5.3.1 Epistemic modals vs. aspect markers

As suggested in the previous chapter (section 5.4.2), the epistemic modals are monolithic. They are situated in the same position above all root modals. I will show in the following that they are also higher than all aspect markers.

(1) Epistemic modals > Experiential *khəəy₁*

It is common that epistemic modals have to be positioned highest in the tree as they involve the speaker’s judgment. Therefore, they are usually considered as equivalent to ‘speaker-oriented adverbs’ which should have scope over the proposition where other

modals and aspects are embedded (Ernst 1997). The reverse order of the two items under investigation leads to ungrammaticality as shown below.¹⁶

- (83) a. khaw, tɔŋ, khəy, tham, ŋaan, nak₂
 he must EXP do work hard
 ‘It is certain that he has an experience of working hard.’
 b. khaw, khon, ca?₂, khəy, tham, ŋaan, nak₂
 he likely EXP do work hard
 ‘It is likely that he has an experience of working hard.’
- (84) a. *khaw, khəy, tɔŋ, tham, ŋaan, nak₂
 he EXP must do work hard
 b. *khaw, khəy, khon, ca?₂, tham, ŋaan, nak₂
 he EXP likely do work hard

Besides the surface word order, the predicator test in (85) also confirms the suggested ordering above.

- (85) Q: khaw, khon, ca?₂, khəy, tham, ŋaan, nak₂ chay, may₄
 he likely EXP do work hard true or not
 ‘Is it true that he likely has an experience of working hard?’
 A: a. (chay₃) khon, ca?₂
 (true) likely
 ‘Yes, it is.’
 b. *(chay₃) khəy,
 (true) EXP

(2) Epistemic modals > Continuative yaŋ,

As mentioned earlier, the experiential aspect *khəy*, always precedes the continuative *yaŋ*, ‘still’. Therefore, what I have to prove is whether it is the case that the epistemic modals are also situated higher than *yaŋ*, ‘still’. The following examples seem

¹⁶ Sentence (83a) is grammatical when the modal *tɔŋ*, is a root one expressing obligation. The sentence is thus roughly interpreted as ‘He has an experience of having to work hard.’

to prove the point. The ungrammaticality of (87) is the result of the reverse order of the two elements.

- (86) a. *khaw₅ ?aat₂ ca?₂ yaŋ₁ tham₁ ŋaan₁*
 he probably still do work
 ‘He may still be working.’
 b. *khaw₅ naa₃ ca?₂ yaŋ₁ tham₁ ŋaan₁*
 he should still do work
 ‘He should still be working.’

- (87) a. **khaw₅ yaŋ₁ ?aat₂ ca?₂ tham₁ ŋaan₁*
 he still probably do work
 b. **khaw₅ yaŋ₁ naa₃ ca?₂ tham₁ ŋaan₁*
 he still should do work

Since the continuative *yaŋ₁* can never function as a predicator, the predicator test cannot be used here to confirm or disconfirm the proposed order. However, the fact that the reverse order is never accepted can sufficiently serve as empirical evidence for the claim.

(3) Epistemic modals > Progressive *kam₁ laŋ₁*

The precedence of the epistemic modals over the progressive *kam₁ laŋ₁* is evidenced in their surface ordering relative to each other as shown in (88) and (89).

- (88) a. *khaw₅ ?aat₂ ca?₂ kam₁ laŋ₁ tham₁ ŋaan₁*
 he probably PROG do work
 ‘He may be working.’
 b. *khaw₅ naa₃ ca?₂ kam₁ laŋ₁ tham₁ ŋaan₁*
 he should PROG do work
 ‘He should be working.’

- (89) a. **khaw₅ kam₁ laŋ₁ ?aat₂ ca?₂ tham₁ ŋaan₁*
 he PROG probably do work
 b. **khaw₅ kam₁ laŋ₁ naa₃ ca?₂ tham₁ ŋaan₁*
 he PROG should do work

Similar to *yaŋ*₁, the progressive *kam,laŋ*₁ cannot be used as a predicator because it is a head without V-features. However, the fact that the minimal response to the question in (90) is simply the epistemic modal without the accompaniment of *kam,laŋ*₁ shows that *kam,laŋ*₁ is not situated higher than the epistemic modal. Otherwise, the modal would have to adjoin to *kam,laŋ*₁ on its way to Σ like V does.

(90) Q: *khaw*₅ *?aat*₂ *ca?*₂ *kam,laŋ*₁ *tham*₁ *ŋaan*₁ *chay*₃ *may*₄
 he probably PROG do work true or-not
 ‘Is it true that he may be working?’

A: a. *(chay*₃) *?aat*₂ *ca?*₂
 (true) probably
 ‘Yes, he probably is’
 b. **(chay*₃) *kam,laŋ*₁ *?aat*₂ *ca?*₂
 (true) PROG probably

(4) Epistemic modals > Imperfective *yuu*₂

Earlier I suggested that the imperfective *yuu*₂ is generated as an adjunct to the right of ProgP/ImpP, lower than the experiential perfect *khəəy*₁ and the continuative *yaŋ*₁. It is therefore likely that *yuu*₂ is lower in the structure than the epistemic modals. Again, since *yuu*₂ cannot be a predicator, the predicator cannot be directly used here. However, given that *khəəy*₁ ‘EXP’ is attested to be higher than *yuu*₂, the fact that the epistemic modals are higher than *khəəy*₁ implies the hierarchical order of the epistemic modals and *yuu*₂.

(5) Epistemic modals > *lææw*₄

Like *yuu*₂, *lææw*₄ cannot be a predicator. Since *lææw*₄ may be higher than *khəəy*₁, the fact that the sentence containing both an epistemic modal and *lææw*₄ does not require the question particle *yan*₇ is evidence for the precedence of the former over the latter.

(6) Summary

To sum up, the epistemic modals are the highest in the clausal structure. They precede all other modals as well as aspect markers. The study of their co-occurrences does not disprove the suggested ordering of the aspect markers under investigation.

6.5.3.2 Root modals vs. aspect markers

Unlike the monolithic epistemic modals, the root modals have been shown in the previous chapter (Section 5.4.1) to be located in various positions. I will show that the post-verbal modals are closest to VP. They are separated from the other types of root modals by the progressive marker.

I will discuss the root modals as a group, where applicable.

(1) Experiential *khəəy*₁ > Root modals

A straightforward account of the ordering of root modals relative to the experiential perfect can be made by considering their surface word order as well as the predicator fact. The surface word order as illustrated in (91) indicates that the experiential *khəəy*₁ is structurally higher than all the root modals.

- (91) a. *khaw*₅ *khəəy*₁ *ca?*₂ *soon*₅ *phaa*₁ *saa*₅ *ciin*₁
he EXP will teach language Chinese
'He wanted to teach Chinese.'

- b. khaw₅ khəy₁ tɔŋ₃ sɔɔn₅ phaa₁saa₅ ciin₁
 he EXP must teach language Chinese
 ‘He had to teach Chinese.’
- c. khaw₅ khəy₁ day₃ sɔɔn₅ phaa₁saa₅ ciin₁
 he EXP may teach language Chinese
 ‘He was allowed to teach Chinese.’
- d. khaw₅ khəy₁ sɔɔn₅ phaa₁saa₅ ciin₁ day₃
 he EXP teach language Chinese can
 ‘He could teach Chinese.’

When the order of the experiential *khəy*₁ and the root modals is reversed, the resulting sentences are unacceptable as shown in (92)¹⁷.

- (92) a. *khaw₅ ca?₂ khəy₁ sɔɔn₅ phaa₁saa₅ ciin₁
 he will EXP teach language Chinese
- b. *khaw₅ tɔŋ₃ khəy₁ sɔɔn₅ phaa₁saa₅ ciin₁
 he must EXP teach language Chinese
- c. *khaw₅ day₃ khəy₁ sɔɔn₅ phaa₁saa₅ ciin₁
 he may EXP teach language Chinese
- d. *khaw₅ sɔɔn₅ phaa₁saa₅ ciin₁ day₃ khəy₁
 he teach language Chinese can EXP

Since both the experiential perfect and the root modals can all function as predicates, the examples below suggest that the former is situated higher than the latter.

- (93) Q: khaw₅ khəy₁ tɔŋ₃ sɔɔn₅ phaa₁saa₅ ciin₁ may₄
 he EXP must teach language Chinese QP
 ‘Did he have to teach Chinese?’
- A: a. khəy₁
 EXP
 ‘Yes, he did.’
- b. *tɔŋ₃
 must
- (94) Q: khaw₅ khəy₁ day₃ sɔɔn₅ phaa₁saa₅ ciin₁ may₄
 he EXP may teach language Chinese QP
 ‘Was he allowed to teach Chinese?’

¹⁷ Sentences (92a,b) sound fine if the word *ca?*₂ in (92a) expresses futurity, not volition, and the modal *tɔŋ*₃ in (92b) is the epistemic one conveying ‘inferred certainty’.

A: a. khəy₁
 EXP
 'Yes, he was.'
 b. *day₃
 may

(95) Q: khaw₅ khəy₁ soon₅ phaa₁saa₅ ciin₁ day₃ may₄
 he EXP teach language Chinese can QP
 'Was he able to teach Chinese?'

A: a. khəy₁
 EXP
 'Yes, he was.'
 b. *day₃
 can

In short, the experiential perfect can be claimed to be below the epistemic modals but above the root modals.

(2) Continuative *yan₁* > Root modals

The precedence of the continuative *yan₁* 'still' over the root modals is justified simply by the word order facts as in (96) and (97).¹⁸

- (96) a. khaw₅ yan₁ ca?₂ soon₅ phaa₁saa₅ ciin₁
 he still will teach language Chinese
 'He still wants to teach Chinese.'
 b. khaw₅ yan₁ tən₃ soon₅ phaa₁saa₅ ciin₁
 he still must teach language Chinese
 'He still has to teach Chinese.'
 c. khaw₅ yan₁ day₃ soon₅ phaa₁saa₅ ciin₁
 he still may teach language Chinese
 'He is still allowed to teach Chinese.'
 d. khaw₅ yan₁ soon₅ phaa₁saa₅ ciin₁ day₃
 he still teach language Chinese can
 'He still can teach Chinese.'

¹⁸ As in the previous footnote, when *ca?₂* and *tən₃* precede the aspect denoting continuation as in (97a) and (97b), they express futurity and epistemic sense respectively.

- (97) a. *khaw₅ ca?₂ yaŋ₁ sɔɔn₅ phaa₁saa₅ ciin₁
 he will still teach language Chinese
 b. *khaw₅ tɔŋ₃ yaŋ₁ sɔɔn₅ phaa₁saa₅ ciin₁
 he must still teach language Chinese
 c. *khaw₅ day₃ yaŋ₁ sɔɔn₅ phaa₁saa₅ ciin₁
 he may still teach language Chinese
 d. *khaw₅ sɔɔn₅ phaa₁saa₅ ciin₁ day₃ yaŋ₁
 he teach language Chinese can still

Once again, the predicator test cannot be used here because *yaŋ*₁ can never function as a predicator.

(3) Pre-verbal modals > Progressive *kam,laŋ*₁ > Post-verbal modals

It happens that the root modals cannot be discussed as a group when considering their positions with respect to the progressive *kam,laŋ*₁. It is obvious, however, that the modals of volition *ca?*₂ and obligation *tɔŋ*₃ have scope over the progressive marker and thus are structurally higher as demonstrated in the examples below.

- (98) a. wee₁laa₁ chan₅ klap₂ maa₁ thəə₁ tɔŋ₃ kam₁laŋ₁ ?aan₂ naŋ₅sii₅
 when I return come you must PROG read book
 ‘When I return, you must be studying.’
 b. wee₁laa₁ thəə₁ klap₂ maa₁ chan₅ ca?₂ kam₁laŋ₁ ?aan₂ naŋ₅sii₅
 when you return come I will PROG read book
 ‘When you return, I will be studying.’

Another piece of supporting evidence comes from the example in (99). That the sentence containing *kam,laŋ*₁ can be questioned by *may*₄ is attributable to the fact that there is another head with V-features above it which can move to Σ. Such a head in this case is the modal of obligation *tɔŋ*₃. Moreover, *tɔŋ*₃ can move to Σ to be a response to the yes/no question without the accompaniment of *kam,laŋ*₁, showing that *kam,laŋ*₁ is not situated higher and thus on the way of *tɔŋ*₃ to Σ.

(99) Q: wee₁laa₁ thəə₁ klap₂ maa₁ chan₅ tɔŋ₃ kam₁laŋ₁ ?aan₂ naŋ₅sii₅ may₄
 when you return come I must PROG read book QP
 ‘Must I be studying when you return?’

A: a. tɔŋ₃
 must
 ‘Yes, you must.’
 b. *kam₁laŋ₁ ?aan₂
 PROG read

When it comes to the modals of permission and ability, it seems that they do not normally co-occur with the progressive marker. In English as in (100) and (101), the co-occurrence of both in either ordering yields ungrammaticality.

(100) a. *He is being allowed to sing.
 b. *He is allowed to be singing.

(101) a. *He is being able to sing.
 b. *He is able to be singing.

In Thai, likewise, the co-occurrence of the pre-verbal modal of permission *day*₃ and the progressive marker is impossible as in (102)¹⁹. Nevertheless, it happens that the post-verbal modals of ability can occur with the progressive marker only when the latter has scope over the former as in (103).

(102) a. *khaw₅ kam₁laŋ₁ day₃ rɔɔŋ₄ pleen₁
 he PROG may sing song
 ‘*He is being allowed to sing.’
 b. *khaw₅ day₃ kam₁laŋ₁ rɔɔŋ₄ pleen₁
 he may PROG sing song
 ‘*He is allowed to be singing.’

(103) a. yaa₂ kuan₁ khaw₅ khaw₅ kam₁laŋ₁ kin₁ day₃
 not bother he he PROG eat can
 ‘Don’t bother him. He can eat at the very moment.’

¹⁹ If the word *day*₃ in (102a) is considered as a verb meaning ‘have an opportunity to do something’, then the sentence sounds better.

b. *khaw₅ kin₁ day₃ kam₁laŋ₁
 he eat can PROG

Sentence (103a) can be uttered in a situation where a person was very sick and could not eat for several days. Then he felt better and could eat at the very moment. If someone wanted to visit him, the nurse could say this sentence for fear of the interruption of his ability to eat.

Supporting evidence for the higher position of the progressive aspect than the post-verbal modals comes from the ungrammaticality of (104).

(104) *khaw₅ kam₁laŋ₁ kin₁ day₃ may₄
 he PROG eat can QP

The fact that the question particle *may*₄ cannot be used here indicates that the movement to Σ of the modal of ability *day*₄, which is situated higher than VP is blocked by the progressive *kam*₁*laŋ*₁ which is the head between ModP_{ability} and Σ P.

In brief, different types of root modals are not ordered in hierarchically adjacent position. The post-verbal modals are separated from the rest by the progressive marker.

(4) Pre-verbal modals > Imperfective *yuu*₂ > Post-verbal modals

Similar to the progressive *kam*₁*laŋ*₁, the pre-verbal root modals take scope over the imperfective *yuu*₂, whereas the post-verbal ones do not, as illustrated in (105) and (106) respectively.

- (105) a. khaw₅ ca?₂ tham₁ ŋaan₁ yuu₂ con₁ naay₁ maa₁ truat₂
 he will do work IMPF until boss come supervise
 'He will keep working until his boss comes to supervise his work.'
 b. khaw₅ tɔŋ₃ pen₁ khruu₁ yuu₂ saam₃ pii₁
 he must be teacher IMPF three year
 'He must be a teacher for three years.'

- (106) khaw₅ kin₁ day₃ yuu₂
 he eat can IMPF
 'He is able to eat.'

As discussed earlier (section 6.4.2.2), the sentence in (106) is better interpreted as 'His ability to eat is in process,' which more clearly shows the scope relation between the two items. This is consistent with my suggestion that *yuu₂* is right-adjoined to ProgP/ImpP headed by *kam₁laŋ₁*.

(5) Pre-verbal modals > *lææw₄* > Post-verbal modals

The pre-verbal root modals also precede *lææw₄* 'already'²⁰. Once again, the scope relation can indicate their positions with respect to each other as in (107).

- (107) a. tɔɔn₁ chan₅ klap₂ maa₁ khaw₅ tɔŋ₃ pay₁ lææw₄
 when I return come he must go already
 'When I return, he must have already left.'
 b. tɔɔn₁ thəə₁ klap₂ maa₁ chan₅ caʔ₂ tham₁ kaan₁ baan₃ lææw₄
 when you return come I will do homework already
 'When you return, I will have already done my homework.'

When *lææw₄* combines with the post-verbal modals, it only marks the beginning of the state or the ability as illustrated in the interpretations of sentences (108a, b) below.

- (108) a. dek₂ dəən₁ day₃ lææw₄
 kid walk can already
 'The infant has started to be able to walk. (It can walk now.)'
 b. khaw₅ waay₃ nam₄ day₃ lææw₄
 he swim can already
 'He has started to be able to swim. (He can swim now).'

²⁰ I cannot find examples that contain both pre-verbal root modals and *lææw₄*, that marks the beginning of an event or state. However, as *lææw₄* is assumed to be able to attach to various positions high in the structure, it is likely that the root modals are lower than the marker of the beginning which is suggested to be adjoined to the experiential perfect which is higher than the modals.

Recall the analysis of the question particle *may*₄. The fact that the sentence in (109) takes the question particle *yaŋ*₁, instead of *may*₄, indicates that *lææw*₄ is higher than the modal of ability. In other words, if the modal of ability were situated higher than *lææw*₄, the question particle *may*₄ would be used here, given that the choice of question particles has a lot to do with the element of the widest scope.

- (109) dek₂ dæn₁ day₃ lææw₄ yaŋ₁ /*may₄
 kid walk can already yet
 'Has the infant been able to walk?'

(6) Summary

Root modals are not like epistemic modals in that they are not monolithic. It happens that the post-verbal modals are situated closest to VP, lower than any aspect marker. This is not surprising, in fact, given that this type of words triggers VP movement. It does not attract any projections other than VP. Therefore, its closeness to VP is not puzzling. The exploration of their relative positions also contributes to the affirmation of the analyses made earlier.

6.6 Conclusion

I have shown in this chapter the syntactic categories as well as the structural positions of aspect markers in Thai. The two aspect markers which are considered as heads are the experiential *khəəy*₁ and the progressive *kam*₁/*laŋ*₁. The latter, on the other hand, is claimed to lack V-features, which prevents it from being a predicator, being negated by *may*₃ and being questioned by *may*₄. The continuative *yaŋ*₁ is a phrase in the specifier of an AspP. Both post-verbal aspects are right-adjuncts; the imperfective *yuu*₂ is

right-adjoined to ProgP/ImpP whereas *lææw*₄ ‘already’ which is analyzed as a temporal boundary marker can be adjoined to several positions high in the structure.

I also investigate the co-occurrences of modals and aspect markers in Thai. Their ordering with respect to one another is summarized as below where *lææw*₄ is left out due to its variable position.

(110) epistemic modals > experiential > still > pre-verbal root modals >
imperfective/progressive > post-verbal root modals

To conclude my study on modals and aspect markers, what I have found is the following.

- (1) Auxiliaries in Thai are head-initial.
- (2) VP movement occurs in the syntax of clauses in Thai.
- (3) The clausal structure in Thai allows phrases as right-adjuncts (the imperfective *yuu*₂ and the temporal boundary marker *lææw*₄) and as specifiers of XPs (the modal of volition *ca?*₂ and the continuative *yaŋ*₁).

CHAPTER 7

CONCLUSION

Having considered both noun phrases and clauses in Thai, I am now in a position to answer the research questions raised in the Introduction. All in all, I have found that noun phrases and clauses in Thai are parallel in all the respects mentioned, namely in their head-directionality, in the syntactic operations that derive the apparent head-final orders, and in the allowance of right-adjunction.

Regarding head-directionality, I have shown that noun phrases in Thai are head-initial like all other structures in the language. In spite of the noun being the first element of the noun phrase, the hypothesis that Thai noun phrases are head-final is to be rejected because the head-final analysis requires more syntactic operations than the head-initial (not to mention its inconsistency) and it fails to account for some of the data.

With respect to syntactic operations, I have argued that phrasal movements operate in the syntax of both noun phrases and clauses in Thai. In other words, NP raising can capture the distribution, interpretation and word order facts of Thai noun phrases. Similarly, VP raising takes place when a post-verbal modal is present. The analysis of the post-verbal modals as heads generated pre-verbally with VP movement supports the general claim that auxiliaries in an SVO language precede main verbs.

Concerning the phrasal categories, noun phrases and clauses allow both right adjuncts and (left) specifiers. Noun modifiers are either NP right-adjuncts (regular attributive adjectives, nominal modifiers) or specifiers of ClP (referential adjectives, demonstratives). Likewise, the post-verbal aspect markers are right-adjoined to different

functional projections above VP whereas a modal (modal of volition) and an aspect marker (the continuative marker) are generated in the specifier of $\text{ModP}_{\text{volition}}$ and $\text{AspP}_{\text{continuative}}$ respectively.

To conclude, I have shown that Thai is a well-behaved language although many of the structures in the language do not appear so. I have also shown that Thai is a uniformly head-initial language. In addition, since no study has ever considered the post-verbal modals as pre-verbal auxiliaries, my proposal that they are heads generated pre-verbally makes Thai clausal structures uniform with respect to the headedness of the auxiliaries.

Of course, there is much still to be done. I have not dealt with other types of noun modifiers such as possessives and relative clauses, and there is still much to be learned about aspect markers, especially the post-verbal ones which seem to display a variety of meanings. A number of residual problems have also been left unexplained and wait for further study. However, I hope my study can be the foundation for further research on the syntax of Thai.

REFERENCES

- Abney, S. (1987). *The English noun phrase in its sentential aspect*. Ph.D. thesis, MIT.
- Alexiadou, A. (1997). *Adverb placement: A case study in antisymmetric syntax*. John Benjamins Publishing Company, Amsterdam, Philadelphia.
- Bandhumedha, N. (1983). *wayyaak๑onthay [Thai grammar]*. Rungruangsaan, Bangkok.
- Belletti, A. (1990). *Generalized verb movement*. Rosenberg & Sellier, Torino.
- Benmamoun, E. (1991). Negation and V movement. *Proceedings of NELS*, 21(1):17-31.
- Bernstein, J. (1993). *Topics in the syntax of nominal structure across Romance*. Ph.D. dissertation. CUNY, New York.
- Bernstein, J. (1996). *Demonstratives and reinforcers in Romance and Germanic languages*. Ms., University of Southern Maine.
- Bisang, W. (1993). Classifiers, quantifiers and class nouns in Hmong. *Studies in Language*, 17(1):1-51.
- Boonyapatipark, T. (1983). *A study of aspect in Thai*. Ph.D. dissertation, University of London.
- Brown, K. (1992). Double modals in Hawick Scots. In Trudgill P. and Chambers J.K., eds., *Dialects of English: Studies in Grammatical Variation*, 74-103, Longman, London.
- Bybee, J., Perkins, R., and Pagliuca, W. (1994). *The evolution of Grammar: Tense, Aspect and Modality in the languages of the world*. University of Chicago Press, Chicago.
- Carlson, G. (1977). *Reference to kinds in English*. Ph.D. dissertation. University of Massachusetts, Amherst.
- Cheng, L., Huang, J.-C.T. and Tang, J. (1996). Negative particle questions: A dialectal comparison. *Amsterdam studies in the theory and history of linguistic science, Series IV, Current Issues in Linguistic Theory*, 139:41-78.
- Cheng, L. and Sybesma, R. (1999). Bare and not-so-bare nouns and the structure of NP. *Linguistic Inquiry*, 30(4):509-542 .
- Chierchia, G. (1998). *Reference to kinds across languages*. Ms., University of Milan.

- Chomsky, N. (1986a). *Barriers*. MIT Press, Cambridge.
- Chomsky, N. (1986b). *Knowledge of language: Its nature, origin and use*. Praeger, New York.
- Chomsky, N. (1991). Some notes on economy of derivation and representation. In Freidin, R., ed., *Principles and Parameters in Comparative Grammar*. MIT Press, Cambridge.
- Chomsky, N. (1993). A minimalist program for linguistic theory. In Kenneth Hale and Samuel Jay Keyser, eds., *The view from building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 1-52, MIT Press, Cambridge.
- Chomsky, N. (1995). *The minimalist program*. MIT Press, Cambridge.
- Cinque, G. (1993). *On the evidence for partial N-movement in the Romance DP*. Ms., Universita di Venezia.
- Cinque, G. (1995). Adverbs and the universal hierarchy of functional projections. *GLOW Newsletter*, 34:14-15.
- Cinque, G. (1999). *Adverbs and functional heads: A cross-linguistic perspective*. Oxford University Press, New York.
- Comrie, B. (1976). *Aspect*. Cambridge University Press, Cambridge.
- Croft, W. (1994). Semantic universals in classifier systems. *Word*, 45(2):145-171.
- Delsing, L. (1988). The Scandinavian noun phrase. *Working Papers in Scandinavian Syntax*, 42:57-79.
- Delsing, L. (1993). *The internal structure of noun phrases in the Scandinavian languages*. Ph.D. dissertation, University of Lund.
- Demirdache, H. and Uribe-Etxebarria, M. (1997). *The syntactic primitives of temporal relations*. Talk presented at Langues et Grammaires III, Paris.
- Ekniyom, P. (1977). The topic/comment distinction and passivization in Thai. *Working Paper in Linguistics University of Hawaii*, 11:55-65.
- Ekniyom, P. (1979). An internal reconstruction of auxiliaries in Thai. *Working Paper in Linguistics University of Hawaii*, 9:93-110.
- Ernst, T. (1991). On the Scope Principle. *Linguistic Inquiry*, 22(4):750-755.

- Ernst, T. (1992). The phrase structure of English negation. *The Linguistic Review*, 9(1):109-144.
- Ernst, T. (1995). Negation in Mandarin Chinese. *NLLT*, 13:665-707.
- Ernst, T. (1997). The scopal basis of adverb licensing. *NELS*, 28:1-15.
- Gao, Q. (1994). Chinese NP structure. *Linguistics*, 32:475-510.
- Goral, D. (1978). Numeral classifier systems: A Southeast Asian cross-linguistic analysis. *Linguistics of the Tibeto-Burman Area*, 4(1):1-72.
- Grimshaw, J. (1991). *Extended projections*. Ms., Brandeis University.
- Higginbotham, J. (1985). On semantics. *Linguistic Inquiry*, 16:547-593.
- Huang, C.-T.J. (1982). *Logical relations in Chinese and the theory of grammar*. Ph.D. dissertation, MIT.
- Huang, C.-T.J. (1988). Wo pao de kuai and Chinese phrase structure. *Language*, 64(2):274-311.
- Hudak, T. (1990). Thai. In Comrie, B., ed., *The major languages of East and South-east Asia*, 29-47, Routledge, London.
- Hundius, H. and Kölver, U. (1983). Syntax and semantics of numeral classifiers in Thai. *Studies in Language*, 7(2):165-214.
- Indrambarya, K. (1995). *Subcategorization of verbs in Thai: A lexicase dependency approach*. Ph.D. dissertation. University of Hawaii.
- Jackendoff, R. (1972). *Semantic interpretation in generative grammar*. MIT Press, Cambridge, Massachusetts.
- Kanchanawan, N. (1978). *Expressions for time in the Thai verb and its application to Thai-English machine translation*. Ph.D. dissertation, University of Texas.
- Kester, E. (1996). *The nature of adjectival inflection*. Ph.D. thesis, Utrecht University.
- Laka, I. (1990). *Negation in the syntax*. Ph.D. dissertation, MIT.
- Lobeck, A. (1990). Functional heads as proper governors. *Proceedings of NELS*, 20:348-362.

- Lobeck, A. (1995). *Ellipsis: Functional heads, licensing and identification*. Oxford University Press, Oxford.
- Löbner, S. (1989). German *schon-erst-noch*: An integrated analysis. *Linguistics and Philosophy*, 12:167-212.
- Longobardi, G. (1994). Reference and proper names: A theory of N-movement in syntax and logical form. *Linguistic Inquiry*, 25(4):609-665.
- López, L. (1999). *VP-ellipsis in English and Spanish and the features of auxiliaries*. *Probus*, 11(2):263-297.
- Martins, A. (1994). Enclisis, VP-deletion and the nature of Sigma. *Probus*, 6:173-206.
- Meepoe, T. (1996). *Imperfectivity in Thai: The distinction between kamlaŋ and yùu*. Masters thesis, University of California, Los Angeles.
- Miyagawa, S. (1988). Predication and numeral quantifier. In Poser, W.J., ed., *Papers from the second international workshop on Japanese syntax*, 157-192, Center for the Study of Language and Information, Stanford.
- Munn, A. (1992). A null operator analysis of ATB gaps. *The Linguistic Review*, 9:1-26.
- Munn, A. (1993). *Topics in the syntax and semantics of coordinate structures*. Ph.D. dissertation, University of Maryland.
- Needleman, R. (1973). *Tai verbal structures and some implications for current Linguistic theory*. Ph.D. dissertation, University of California at Los Angeles.
- Noss, R. (1964). *Thai reference grammar*. Foreign Service Institute, Washington, D.C.
- Ouhalla, J. (1990). Sentential negation, relativised minimality and the aspectual status of auxiliaries. *The Linguistic Review*, 7:183-231.
- Pacioni, P. (1996). Classifiers, specificity and typology in Asian languages. *Pan-Asiatic Linguistics Proceedings of the Fourth International Symposium on Languages and Linguistics*, 4:1987-1997.
- Palmer, F. (1986). *Mood and modality*. Cambridge University Press, Cambridge.
- Panupong, V. (1970). *Inter-sentence relations in modern conversation Thai*. Siam Society, Bangkok.
- Pesteky, D. (1998). *Phrasal movement and its kin*. Ms. MIT.

- Pollock, J. (1989). Verb movement, universal grammar and the structure of IP. *Linguistic Inquiry*, 20:365-424.
- Postal, P. (1969). On so-called 'pronouns' in English. In Reibel, D. and Schane, S., eds., *Modern studies in English*, 201-224, Prentice-Hall, Englewood Cliffs, N.J.
- Savetamalya, S. (1987). A reanalysis of auxiliaries in Thai. *Working Papers in Linguistics University of Hawaii*, 19:1-43.
- Savetamalya, S. (1989). *Thai nouns and noun phrases: A lexicase analysis*. Ph.D. dissertation, University of Hawaii.
- Savetamalya, S. and Reid, L. (1997). An explanation for inconsistent word order typologies in some Southeast Asian languages. In Abramson, A., ed., *Southeast Asian Linguistic Studies in Honor of Vichin Panupong*, 221-236, Chulalongkorn University Press, Bangkok.
- Scovel, T. (1970). *A grammar of time in Thai*. Ph.D. dissertation, University of Michigan.
- Sereechareonsatit, T. (1984). *Conjunct verbs and verbs-in-series in Thai*. Ph.D. dissertation, University of Illinois, Urbana-Champaign.
- Shaer, B. (1998). Adverbials, functional structure, and restrictiveness. *NELS*, 28:1-15.
- Sindhvananda, K. (1970). *The verb in modern Thai*. Ph.D. dissertation, Georgetown University.
- Smith, C. (1997). *The parameter of aspects*. Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Sookgasem, P. (1990). *Morphology, syntax and semantics of auxiliaries in Thai*. Ph.D. dissertation, University of Arizona.
- Sriphen, S. (1982). *The Thai verb phrase*. Ph.D. dissertation, University of Michigan.
- Sproat, R. & Shih, C. (1988). Prenominal adjectival ordering in English and Mandarin. *NELS*, 18:465-489.
- Starosta, S. (1988). *The case for lexicase*. Pinter Publishers, New York.
- Szabolcsi, A. (1989). *Noun phrases and clauses: Is DP analogous to IP or CP?* Paper presented at the Colloquium on Noun Phrase Structure, University of Manchester.
- Tang, C. (1990). A note on the DP analysis of the Chinese noun phrase. *Linguistics*, 28: 337- 354.

- Thepkanjana, K. (1986). *Serial verb construction in Thai*. Ph.D. dissertation, University of Michigan.
- Travis, L. (1984). *Parameters and effects of word order variation*. Ph.D. thesis, MIT.
- Uppakitsinlapasarn, Phya. (1964). *Wayyaakonthay: waaciiwiphaak (Thai grammar: Morphology)*. Thai Wattana Phanit, Bangkok.
- van der Auwera, J. (1993). 'Already' and 'Still': Beyond duality. *Linguistics and Philosophy*, 16:613-653.
- van der Auwera, J. (1998). Phasal adverbials in the languages of Europe. In van der Auwera, J. and Baoill, D. P., eds., *Adverbial constructions in the languages of Europe*, 25-145, Mouton de Gruyter, Berlin.
- Warotamasikkhadit, U. (1972). *Thai syntax: An outline*. Mouton, The Hague.
- Warotamasikkhadit, U. (1996). *Thai reference grammar*. Ramkamhaeng University Press, Bangkok.
- Wilawan, S. (1994). *A reanalysis of so-called serial verb constructions in Thai, Khmer, Mandarin Chinese, and Yoruba*. Ph.D. dissertation. University of Hawaii.
- Zanuttini, R. (1997). *Negation and clausal structure. A comparative study of Romance languages*. Oxford University Press, New York.
- Zhou, X. (1998). *Mandarin negations as negative aspectual elements*. Ms. State University of New York at Stony Brook.

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