The Structure of Discontinuous Noun Phrases in Thai:

Right-dislocation and Quantifier Float

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Abstract of the Dissertation

The Structure of Discontinuous Noun Phrases in Thai:

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This dissertation investigates two phenomena related to discontinuous noun phrases in Thai: Right-dislocation and Quantifier Float. These phenomena involve a modifying constituent positioned at the right edge of a sentence, separate from its head noun. The first part of the dissertation addresses the question of which modifiers can or cannot undergo right-dislocation, distinguishing between classifier-headed modifiers and non-classifier-headed (stand-alone) modifiers. It illustrates that demonstratives and a specific indefinite numeral 'one' always require a classifier, explaining their inability to appear without a classifier in the right-dislocated position. It also explores the role of classifiers in facilitating right-dislocation, proposing three properties that enable classifier-headed modifiers to occur in the non-adjacent position. For non-classifier-headed modifiers, it is suggested that they must be structurally complex to be grammatical in the right-dislocated position. Additionally, it argues that there

is no clear structural difference between right-dislocated modifiers and extraposed relative clauses in Thai, as both constructions do not behave as if they were moved out of their host clause.

For the syntactic analysis of Thai right-dislocated modifiers, a version of the biclausal analysis proposed by Ott and de Vries (2012, 2016) is adopted. This analysis posits that right-dislocation constructions involve underlying biclausal structures, with the dislocated constituent being a remnant of ellipsis in the second clause. It is argued that right-dislocated modifiers in Thai can be classified as afterthoughts, serving to introduce discourse-new information. Two subtypes of afterthoughts are explored: specificational and predicative afterthoughts, with a focus on highlighting their distinctions and asymmetries. It is proposed that classifier-headed modifiers are ambiguous between specificational and predicative afterthoughts, while non-classifier-headed modifiers are analyzed as predicative afterthoughts. Furthermore, the specificational afterthought analysis is advocated for both classifier-headed and non-classifier-headed relative clauses in the right-dislocation construction.

The second part of the dissertation focuses on the phenomenon of Quantifier Float in Thai. Previous analyses are reviewed, and arguments are presented to support the claim that Thai quantifier float is driven by focus, and that it results from rightward movement to the dedicated position of FocusP. The dissertation also addresses the ambiguity between floating quantifiers and right-dislocated quantifiers, noting that the latter does not affect the semantic scope of the quantifier. Furthermore, it tackles the issue of the impossibility of forming a single constituent between floating quantifiers and their associates, attributing it to the requirement of a preposition. A proposed solution suggests that prepositions in Thai can be dropped, allowing for successful constituent formation between the floating quantifier and the demonstrative NP.

Dedicated to my parents.

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CHAPTER 1

INTRODUCTION

1.1 Discontinuous noun phrases

This dissertation investigates the structural aspects of *discontinuous noun phrases* in Thai, a construction where nominal modifiers are separated from the noun they modify. These *displaced* modifiers are typically shown in the literature to occupy the rightmost position in a sentence. This study specifically examines two types of discontinuous noun phrases: *Right-dislocation* and *Quantifier Float*. These phenomena are exemplified in (1b) and (2b), where the floated and right-dislocated modifiers appear at the end of the sentence, respectively. The (a) examples illustrate their canonical positions (*in-situ*).

(1) Right-dislocation

a. Canonical position

chán[1] hěn [$_{DP}$ nákrian [$_{AdjP}$ chalà:t]] lɛ́:w

I see student smart already

'I've seen the smart student already.'

b. Right-dislocated position

chán hěn [$_{DP}$ nákrian] lɛ́:w [$_{AdjP}$ chalà:t mâ:k]

[1] Aspiration is not superscripted and /tɕ/ is represented as /c/ throughout this dissertation.

I see student already smart much

'I've seen the student already, really smart.'

(2) Quantifier float

a. Canonical position

chán hěn [$_{DP}$ nákrian [$_{ClfP}$ [$_{QP}$ sǎ:m] khon]] lɛ́:w

I see student three CLF already

'I've seen three students already.'

b. Floated position

chán hěn [$_{DP}$ nákrian] lɛ́:w [$_{ClfP}$ [$_{QP}$ sǎ:m] khon]

I see student already three CLF

'I've seen three students already.'

While the right-dislocation and quantifier float constructions may appear similar on the surface, with both the adjective modifier and the quantifier positioned at the rightmost of the sentence. Structurally, however, while right-dislocated modifiers occur clause-externally, floating quantifiers seem to occur within a clause. Chapters 3 and 4 will demonstrate that these modifiers occupy distinct positions in the structure. As a result, they belong to different analyses. Before delving into their detailed discussions, let us now consider the various types of modifiers and examine the rigidity of word orders that involve nominal modifiers in Thai.

1.2 Thai modifiers and their co-occurrences with classifiers

Thai is considered a right-branching language with rigid word order since dependents strictly occur on the right of their head. For example, a verb precedes its compliments (3a), an auxiliary verb precedes main verbs (3b), a preposition precedes a noun complement (3c), a complementizer precedes clauses (3d), and, as expected, a head noun precedes all types of nominal modifiers (3e). These are all illustrated below. (The heads are shown in **bold**.)

(3) a. chán [$_{VP}$ **sứ:** [$_{NP}$ tho:rasàp]]

I buy telephone

'I bought a telephone.'

b. chán [$_{AuxP}$ **kamlaŋ** [$_{VP}$ sứ: tho:rasàp]]

I PROG buy telephone

'I am buying a telephone.'

c. tho:rasàp [$_{PP}$ **bon** [$_{NP}$ tó?]]

telephone on table

'the phone on the table'

d. mê: [$_{VP}$ **rúu** [$_{CP}$ wâ: chán sứ: tho:rasàp]]

mother know COMP I buy telephone

'My mother knew that I bought a telephone.'

e. **tho:rasàp**[$_{AP}$ màj]/[$_{QP}$ să:m khrûaŋ]/[$_{CP}$ thî: mê: sứ:]/[$_{PP}$ bon tó?]/[$_{DemP}$ ní:]

telephone new three CLF that mom buy on table this

'new phones/three phones/the phone that my mother bought/the phone on the table/ this phone

Since we are particularly interested in the discontinuity of a head noun and its *dis-placed* modifiers, the kind of modifiers explored will be similar to that in (3e). Iwasaki and Ingkaphirom (2005) posit that Thai modifiers can be divided into two types according to their ability to repeat within a single noun phrase. Type I modifiers can appear only once in a noun phrase, whereas Type II modifiers can appear more than once. The examples of the both types of Thai modifiers are illustrated below. It is noted that the repetition of the modifiers in Type I leads to sharp ungrammaticality (4ii) while it is more acceptable to repeat the modifiers in Type II (5ii).

(4) Type I

a. Numeral modifiers

(i) tho:rasàp [săːm khrûaŋ]

phone three CLF

'three phones'

(ii) *tho:rasàp [săːm khrûaŋ] [sìi khrûaŋ]

phone three CLF four CLF

b. Demonstrative modifiers

(i) tho:rasàp [khrûaŋ níː]

phone CLF this

'this phone'

(ii) *tho:rasàp [khrûaŋ níː] [khrûaŋ nán]

phone CLF this CLF that

c. Interrogative/indefinite modifiers

(i) tho:rasàp [khrûaŋ nǎj]

phone CLF any

'any phone'

(ii) *tho:rasàp [khrûaŋ nǎj] [khrûaŋ nǎj][2]

phone CLF any CLF any

(5) Type II

a. Genitive phrases

(i) tho:rasàp [khɔ̌:ŋ chán]

phone of me

'my phone'

(ii) tho:rasàp [khɔ̌:ŋ ɛ́ppə̂n] [khɔ̌:ŋ chán]

phone of Apple of me

'my Apple phone'

b. Adjectival modifiers

(i) tho:rasàp [màj]

phone new

'the new phone'

(ii) tho:rasàp [kě:] [màj]

phone cool new

'the new cool phone'

c. Prepositional phrases

[2] Repetition of *nǎj* is only possible when it is used to intensify the meaning rather than introducing a new meaning, as in *tho:rasàp khrûaŋ nǎj nǎj* 'ANY phone'. This form of repetition is just an instance of reduplication, however.

(i) tho:rasàp [bon tóʔ]

phone on table

'the phone on the table'

(ii) tho:rasàp [naj hôŋ] [bon tóʔ]

phone in room on table

'the phone in the room on the table'

d. Relative clauses

(i) tho:rasàp [thî: mɛ̂: sɯ́:]

phone that mom buy

'the phone that Mom bought'

(ii) tho:rasàp [thî: mɛ̂: sɯ́:] [thî: ʔɔ̀:k màj]

phone that mom buy that out new

'the phone that Mom bought that's just released'

Iwasaki and Ingkaphirom posit that such a classification is applicable to both Thai and English. The ability to repeat, however, is not the only difference between the two types of modifiers. Notice that in Type I, but not Type II, the classifiers must be present[3]. The presence of the classifiers plays a crucial role in the analyses of discontinuous noun phrases in Thai. We will discuss this matter again when we reach the next chapter.

[3] The original examples of demonstrative and interrogative/indefinite modifiers illustrated in Iwasaki and Ingkaphirom 2005 do not require the presence of a classifier. However, the classifiers are added here because their absence sometimes results in ungrammatical judgment by Thai speakers.

For now, it is important to introduce a so-called 'classifier-modifier construction'[4] as another category of nominal modification in Thai. Descriptively speaking, this construction is a sequence of a classifier followed by a nominal modifier. All modifiers in Thai, except quantifiers (and numerals)[5], can optionally occur with a classifier, yielding a *singular-and-specific* interpretation. Table (1) below compares the interpretations of the Thai modifiers in (4) and (5), and their counterparts containing a classifier. Note that the classifier must precede the modifiers.

Modifier type	**Modifier without classifier**	**Modifier with classifier**
Quantifiers	N/A	tho:rasàp [săːm khrûaŋ] phone three CLF '(the) three phones'
Demonstratives	?tho:rasàp [nán] phone that 'that/those phone(s)'	tho:rasàp [khrûaŋ nán] phone CLF that 'that (one and specific) phone'
Interrogative/ Indefinite modifiers	?tho:rasàp [năj] phone any 'any phone'	tho:rasàp [khrûaŋ năj] phone CLF any 'any phone'
Genitive phrases	tho:rasàp [khɔ̌ɔŋ chán] phone of me 'my phone(s)'	tho:rasàp [khrûaŋ khɔ̌ɔŋ chán] phone CLF of me 'my (one) phone'
Adjectives	tho:rasàp [màj] phone new '(the) new phone(s)'	tho:rasàp [khrûaŋ màj] phone CLF new 'the (one) new phone'

[4] The notion of 'classifier-modifier construction' varies depending only the analysis viewpoint. For example, Jenks (2011) includes only the classifier-modifier sequences that are complements to the null choice functional determiner (D_{CF}). I, however, consider all co-occurrences of a modifier and a classifier as classifier-modifier constructions in this dissertation.

[5] There is also a construction in Thai called 'bare classifier phrase' which consists of a head noun and a classifier to the exclusion of a numeral (Bisang 1999; Pichetpan and Post 2021). We will leave this topic aside as its structure and function are beyond the scope of this study.

Modifier type	Modifier without classifier	Modifier with classifier
Prepositional phrases	tho:rasàp [bon tó?] phone on table '(the) phone(s) on the table'	tho:rasàp [khrûaŋ bon tó?] phone CLF on table 'the (one) phone on the table'
Relative clauses	tho:rasàp [thĭ: phŏm sɯ́ɯ] phone REL I buy '(the) phone(s) that I bought'	tho:rasàp [khrûaŋ thĭ: phŏm sɯ́ɯ] phone CLF REL I buy 'the (one) phone that I bought'

Table (1): Interpretational differences across modifiers types[6]

In the table above, the bare noun *tho:rasàp* 'phone' is ambiguous between numbers and between specificities. That is, when the classifier is not present, the entire noun phrase can be interpreted as singular or plural as well as specific or non-specific. Piriyawiboon (2010), building on the Kind approach by Carlson (1977) and Chierchia (1998), proposes that Thai bare nouns are kind-referring expressions. Since the kind interpretation has no distinction between singular and plural entities, a classifier is required to individuate a level for counting. Therefore, when the classifier is present, the noun *tho:rasàp* is interpreted as a single, specific phone.

1.3 Rigidity and discontinuity of noun phrases

In the previous section, we have seen that nominal modifiers in Thai, both Type I and II, always appear on the right of their head. When there is only one modifier in the noun phrase, it usually occur adjacent to the head noun. When there are multiple modifiers, the order can be as in (6) (Piriyawiboon 2010, p. 123) or (7) (Simpson 2008, p. 1):

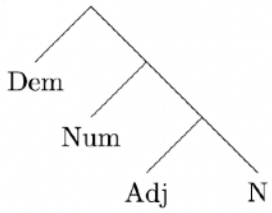
[6] See chapter 2.1 for the examples of right-dislocated modifiers

(6) Noun > Adjective > Numeral-Classifier > Relative Clause > Demonstrative

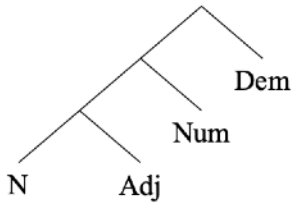
(7) Noun > Adjective > Relative Clause > Numeral-Classifier > Demonstrative

Although not identical, the proposed orders by Piriyawiboon and Simpson suggest that in Thai, the Adjective functions as the modifier closest to the head noun, while the Demonstrative closes off the noun phrase. The positions for Numeral and Relative Clause may be more flexible within the noun phrase. This in fact corresponds to what many linguists have argued for. For example, Adger (2003) and Abels (2015) argue that Adjective forms a syntactic constituent with Noun to the exclusion of Numeral and Demonstrative. One source of evidence for this comes from 'constituency tests'—a standard tool in theoretical syntax for detecting hierarchical structure. Hence, the basic constituency structure in English could look like (8a) while the one in Thai could look like (8b).

(8) a. English



b. Thai



Along the same lines, Culbertson and Adger (2014) suggest that this [Demonstrative Numeral Adjective Noun] structure (and other relevant orders) is motivated by considerations of semantic scope: Adjective first semantically combines with Noun. Then Numeral combines with the constituent [Adjective Noun] (or [Noun Adjective] in Thai) to form countable units. Finally, Demonstrative maps the entire constituent to individuals. Moreover, The exper-

imental results from Culbertson and Adger (2014); Martin et al. (2019); and Martin et al. (2020) confirm that there is psychological influence of hierarchical structure on speakers' word order preferences, using artificial languages as stimuli to show that the speakers combine Adjective with Noun first, then Numeral, and Demonstrative at last. As for the other (less frequent) word orders, Abels and Neeleman (2012) suggest that they could be derived via movement.

In Thai, such an order of combination has often been claimed to be rigid and considered as a canonical word order for elements within the noun phrase. Probably the most well-known exception for such rigidity is when quantifiers occur separated from the head noun they modify, commonly referred to as floating quantifiers, as seen in (1). The examples below compare the canonical position (9a) and floating position (9b) of a quantifier. The quantifier and its associated noun are in **bold**.

(9) a. Canonical position

kháw	sú:	**tho:rasàp**	**să:m**	**khrûaŋ**	mûawa:n
he	buy	phone	three	CLF	yesterday

'He bought three phones yesterday.'

b. Floating position

kháw	sú:	**tho:rasàp**	~~să:m khrûaŋ~~		mûawa:n	**să:m**	**khrûaŋ**
he	buy	phone	three	CLF	yesterday	three	CLF

'He bought three phones yesterday.'

This quantifier float phenomenon in Thai has received a fair amount of attention and proper analyses in the literature (e.g. Jenks 2011, 2013; Simpson 2004, 2011; Singhapreecha

and Sybesma 2015; Wongbiasaj 1979). The detailed analyses of Thai Q-float will be presented in chapter 4.

Besides, there are other cases of discontinuous modifiers mentioned in Iwasaki and Ingkaphirom 2005, but never received further scrutinized exploration. In that study, the authors show that there is a subtype of modifiers that can appear after a complete sentence. They dub these modifiers 'appended modifiers'. Consider the examples taken from Iwasaki and Ingkaphirom (2005, pp. 70-71) below.

(10) a. phǒm sɯ́ɯ: rót ma: lɛ́:w [khan lék]
I buy car ASP already CLF small
'I bought a car – a small one.'

b. chûaj ʔaw krapro:ŋ tua màj ma: nɔ́j [thî: khwɛ̌:n naj tû:]
help take skirt CLF new ASP ADV that hang in closet
'Can you bring me the skirt – the one hanging in the closet?'

On the surface, these examples bear resemblance to Thai floating quantifiers as the constituents associated with the head noun end up in the position outside of the noun phrase. In example (10a), the adjectival phrase headed by a classifier appears at the end of the sentence. Again, this type of modifiers i.e., the modifiers that are headed by a classifier, will be discussed when we get to 'right-dislocation' in chapter 2 and 3. On the other hand, the sentence in (10b) shows a similar pattern to 'Extraposition from NP' (henceforth EXNP) in which a relative clause is separated from the associated head noun and ends up in the sentence-final position. In English, the modifiers that can be extraposed include, but not limited to, relative clauses and prepositional phrases. The prenominal modifiers like adjectives can-

not be extraposed. Given this information, one can preliminarily hypothesize that probably only postnominal constituents can be separated from the noun but prenominal modifiers cannot. This is not surprising given that there is significantly more flexibility in the postnominal modifier order observed in the world's languages than the prenominal one (Abels and Neeleman 2012; Cinque 2005; Dryer 2018).

(11) Number of languages (N=576) of the noun phrase containing prenominal and postnominal modifiers from Dryer (2018):

a. All three modifiers precede the noun

Dem-Num-Adj-N	113
Adj-Num-Dem-N	0
Dem-Adj-Num-N	3
Num-Dem-Adj-N	2
Num-Adj-Dem-N	0
Adj-Dem-Num-N	0

b. All three modifiers follow the noun

N-Adj-Num-Dem	182
N-Dem-Num-Adj	8
N-Num-Adj-Dem	11
N-Adj-Dem-Num	36
N-Dem-Adj-Num	13
N-Num-Dem-Adj	1

The counts show that there are significantly more modification patterns for the postnominal modifiers than the prenominal ones. There are also more languages with postnominal modifiers. This suggests that modifiers might occur less rigidly after a head noun. Furthermore, it can be easily seen in languages with mixed modifier positions like English in which the order of prenominal modifiers (demonstratives, numerals, and adjectives) is rigid but that of postnominal modifiers (relative clauses and prepositional phrases) is relatively flexible. As mentioned above, relative clauses and prepositional phrases can be extraposed from a noun phrase. The examples of EXNP in English (indicated by ~~strikethrough~~) are shown below.

(12) a. Relative clause EXNP

The guy ~~who we met yesterday~~ stole a candy who we met yesterday

b. Prepositional phrase EXNP

The girl ~~with beautiful hair~~ was here yesterday with beautiful hair.

Because only postnominal modifiers in English can be extraposed, it gives rise to the fundamental question as to whether this form of extraposition could generally occur with any postnominal modifier. Specifically, since all modifiers in Thai are postnominal, could they all be displaced to a position further from the noun? And if they could, would they be accounted for under the same analysis as English EXNP? The rest of the dissertation will be dealing with all of these questions

1.4 Overview of the dissertation

The dissertation is basically divided into two parts. Part I consists of chapter 2 and chapter 3, which discusses right-dislocation in Thai and its analysis. Part II contains chapter 4, which presents a discussion of Thai quantifier float.

Part I

Chapter 2 of this dissertation examines the first type of discontinuous noun phrase constructions, namely, right-dislocation. It begins by introducing two types of modifiers that can undergo right-dislocation, which are distinguished based on the presence of a classifier head: classifier-headed modifiers and non-classifier-headed modifiers.

(13) a. Classifier-headed modifiers

chán hěn **dèk$_i$** mûawa:nní: **[$_{ClfP}$ khon [$_{AdjP}$ sŭ:ŋ]]$_i$ / [$_{ClfP}$ khon [$_{OneP}$ nɯŋ]]$_i$ /**

I see child yesterday Clf tall Clf one

[$_{ClfP}$ khon [$_{DemP}$ ní:]]$_i$ / [$_{ClfP}$ khon [$_{PP}$ cà:k ci:n]]$_i$ / [$_{ClfP}$ khon [$_{CP}$ thî: pâ: ti:]]$_i$

Clf this Clf from China Clf REL aunt hit

'I saw the child yesterday, the tall one/ just one/ this one/ the one from China/ the one whom my aunt hit.'

b. Non-classifier-headed modifiers

chán hěn **dèk$_i$** mûawa:nní: **[$_{AdjP}$ sŭ:ŋ mâ:k]$_i$ / [$_{AdjP}$ sŭ:ŋ.sŭ:ŋ]$_i$ / [$_{PP}$ cà:k ci:n]$_i$ /**

I see child yesterday tall very tall.tall from China

[$_{CP}$ thî: pâ: ti:]$_i$

REL aunt hit

'I saw the a/the child(ren) yesterday, very tall/ tall-ish/ from China/ whom my aunt hit.'

In this chapter, I address the question of which modifiers can or cannot undergo right-dislocation in Thai. While classifier-headed modifiers can all undergo right-dislocation, not all types of the non-classifier-headed ones can. I illustrate that the classifier in the classifier-headed modifier construction can license ellipsis of the noun and that it shares some properties with a focal element. As a result, the classifier-headed modifiers that appear at the right-dislocated position are not just standalone modifiers but rather modifiers with an elided head noun. In the case of the non-classifier-headed modifiers, right-dislocation can only take place when the modifiers are structurally complex. That is, the modifiers must contain at lease one other phrase or be contained within a larger phrase. This thus explains why stand-

alone adjectives cannot appear in the right-dislocated position, but reduplicated and intensified (adverbial-modified) adjectives, as well as prepositional phrases, can. As for the specific indefinite modifier and demonstratives, I illustrate that they form a natural class called deictic modifiers, following Jenks (2011). The reason why both of these modifier types cannot appear in the right-dislocated position alone, apart from being not structurally complex, has to do with the fact that deictic modifiers must always be accompanied by a classifier. Finally, I suggest that there is no clear structural difference between extraposed relative clauses and right-dislocated modifiers in Thai. I argue that both of these constructions do not behave as if they were moved out of their host clause, thus supporting a non-movement analysis.

In chapter 3, I adopt a version of the "biclausal" analysis proposed by de Vries (2009a, 2013), Ott (2012; 2015), and Ott and de Vries (2012; 2016) to account for right-dislocation in Thai. I illustrate that there are two main types of right-dislocation — backgrounding and afterthought — and right-dislocated modifiers in Thai are of the afterthought type since it expresses discourse-new information. The analysis argues that right-dislocation constructions are underlying biclausal structures, in which two clauses are juxtaposed. Within the second clause, the dislocated peripheral XP (or dXP) is fronted to the edge of the clause and the remainder undergoes ellipsis. The host of the first clause (the "correlate") has a cataphoric (or anaphoric) relation to the dXP. The representation is schematized below.

(14) $[_{CP1}$ . . . correlate . . .] $[_{CP2}$ dXP_i [~~. . . t_i . . .~~]]

Furthermore, I propose that right-dislocated modifiers in Thai belong to different subtypes of afterthought, following the distinction made by Ott and de Vries (2016). Right-dislocated classifier-headed modifiers specify the meaning of the correlate and thus are called "specifi-

cational afterthoughts". On the other hand, right-dislocated non-classifier-headed modifiers act as predicates. They attribute some property to the referent of their correlate and are called "predicative afterthoughts".

Part II

Chapter 4 discusses a type of construction in Thai that involves IP-internal displacement of quantifiers, known as quantifier float.

(15) chán hěn **nákrian**$_i$ lέ:w **[**$_{ClfP}$ **[**$_{QP}$ **sǎ:m] khon]**$_i$

I see student already three CLF

'I've seen three students already.'

I begin by presenting three previous analyses of quantifier float in Thai: adverbial, stranding, and QR analyses, as well as their shortcomings. Building on the idea of Ross (1967), I propose that Thai quantifier float can be straightforwardly accounted for using the subextraction analysis similar to the one proposed for extraposed relative clauses. Additionally, I propose that the landing site for subtracted quantifiers is at the dedicated position of FocusP since the movement of quantifier float in Thai is driven by focus. The structure for both subject and object quantifier float is illustrated below.

(16) Rightward subextraction to FocusP

[$_{IP}$ [$_{DP}$ Subject *t*] [$_{vP}$ [$_{vP}$ *v* [$_{DP}$ Object *t*]] [$_{FocusP}$ Q-Clf]]]

Furthermore, I propose that rightward movement of the floating quantifier has a clear floated position. As a IP-internal movement, the landing site is located right above vP but lower than the position of high adverbs (e.g. temporal adverbs) and sentence-final particles. Since quantifier float involves IP-internal movement, it cannot be positioned above IP. However, I argue that quantifiers that appear at the edge of the clause are ambiguous between floating quantifiers and right-dislocated quantifiers, with the latter occurring IP-externally. Finally, I address some potential challenges to this analysis and provide solutions for them.

CHAPTER 2

RIGHT-DISLOCATED MODIFIERS IN THAI

This chapter investigates various types of nominal modifiers that occur at the outer right edge of a clause. These modifiers are considered 'displaced' or 'non-canonical' since their position is not local to their associated noun (their correlate) on the surface. The construction containing them is known as 'right-dislocation' (henceforth RD). I categorize right-dislocated nominal modifiers in Thai into two types based on their occurrence with a classifier. The following examples demonstrate that right-dislocated adjectives (in **bold**) can occur with a classifier, as in (1a), or without it, as in (1b). Note that in this particular example, the type of adjectives used is reduplicated adjectives.

(1) a. Right-dislocated classifier-headed adjectives

chán hěn dèk$_i$ mûawa:nní: [**khon sŭ:ŋ.sŭ:ŋ**]$_i$

I see child yesterday Clf tall.tall

'I saw a child yesterday, the pretty tall one.'

b. Right-dislocated non-classifier-headed adjectives

chán hěn dèk$_i$ mûawa:nní: [**sŭ:ŋ.sŭ:ŋ**]$_i$

I see child yesterday tall.tall

'I saw a child yesterday, (he is) pretty tall.'

As we continue, we will introduce other types of modifiers, including the indefinite modifier (post-classifier numeral 'one'), demonstratives, relative clauses, and prepositional phrases, in addition to adjectives (or adjectival phrases). It is important to note that these terms are used to refer to the complete constituent that may contain only a single phrase or other modifying phrases. On the other hand, when referring to the maximal projections of specific lexical or functional categories in a more technical sense, terms such as NP, DP, CP, PP, AdjP, ClfP, OneP, DemP, and so on will be used.

The main point of this chapter is to address the question of which modifiers can or cannot undergo right-dislocation in Thai. The chapter is outlined as follows. In section 2.1, I present in details the two types of Thai nominal modifiers that can undergo right-dislocation. These two types of right-dislocated modifier are distinguished based on the presence of a classifier head, thus referred to as “classifier-headed modifiers” and “non-classifier-headed modifiers”. We will observe that when a modifier is headed by a classifier, creating a classifier phrase, it can undergo RD with ease. However, if a modifier appears alone without a classifier, only certain types of modifiers may be placed in that position. Section 2.2 introduces the first two types of modifiers that cannot undergo right-dislocation, namely non-classifier-headed demonstratives and a non-classifier-headed indefinite modifier (deaccented numeral ‘one’). I illustrate that these modifiers form a natural class called deictic modifiers, following Jenks (2011). The reason why both of these modifier types cannot appear in the right-dislocated position alone has to do with the fact that deictic modifiers must always be accompanied by a classifier. Section 2.3 delves into the first type of right-dislocated modifiers, namely classifier-headed modifiers, in detail. It aims to explore the role of classifiers in facilitating the ease of right-dislocation in this construction. I illustrate that the classifier in the classifier-

headed modifier construction can license the ellipsis of the noun, that it exhibits certain properties akin to a focal element, and that it is a grammaticalized noun. Consequently, the classifier-headed modifiers appearing in the right-dislocated position are not merely standalone modifiers, but rather modifiers with an elided head noun. In Section 2.4, I investigate non-classifier-headed modifiers and discover that right-dislocation can only occur when the modifiers are structurally complex. In other words, the modifiers must contain at least one other phrase or be encompassed within a larger phrase. This clarification elucidates why standalone adjectives are unable to appear in the right-dislocated position, whereas reduplicated and intensified (adverbial-modified) adjectives, as well as prepositional phrases, can. Finally, in section 2.5, I suggest that there is no clear structural difference between extraposed relative clauses and right-dislocated modifiers in Thai. I argue that both of these constructions do not necessarily exhibit a direct connection with the noun correlate in the host clause and do not behave as if they were moved out of their host clause, thereby supporting a non-movement analysis.

2.1 The two types of right-dislocated nominal modifiers

It is important to first differentiate between Right-dislocation and Quantifier Float, even though both constructions appear at the rightmost position of the sentence. One key distinction is that floating quantifiers cannot appear after sentence-final particles, indicating that they should not be considered as occurring outside of a clause. Therefore, if we consider Q-float as occurring clause-internally, it becomes apparent that it requires a distinct analysis from any right-dislocation phenomenon. This is because right-dislocated constituents can ap-

pear outside of the clause, specifically after sentence-final particles or a prosodic break. Due to this distinction, Q-float and its analysis will not be included in this section. Instead, they will be postponed to Section 4. For this section, we will solely focus on the types of right-dislocated modifiers. As mentioned at the beginning of the chapter, these modifiers will be divided into two types based on their co-occurrence with a classifier: classifier-headed and non-classifier-headed modifiers.

Building on the idea of Ott and de Vries (2016), I propose that both of these types involve a "host clause" that is linearly followed by the "dislocated XP" (henceforth dXP). The correlate is an element of the host clause that is anaphorically (or cataphorically) linked to the dXP. The dislocated modifiers are schematized in (2).

(2) a. Classifier-headed modifiers

$$[_{CP}\ldots \text{Correlate}_i\ldots]\ \overbrace{[\text{Clf}\ [\text{XP}]]_i}^{\text{dXP}}$$

b. Non-classifier-headed modifiers

$$[_{CP}\ldots \text{Correlate}_i\ldots]\ \overbrace{[\text{XP}]_i}^{\text{dXP}}$$

The detailed analysis of RD will be provided in chapter 3. In that chapter, I will explain how these modifiers can be syntactically accounted for using the "biclausal" approach, following the analyses of Kuno (1978), Park and Kim (2009), Takita (2014), Tanaka (2001), Truckenbrodt (2013, 2016), Whitman (2000), and in particular, de Vries (2009a, 2013), Ott (2012, 2015), and Ott and de Vries (2012, 2016).

For the time being, I will provide examples of classifier-headed modifiers and non-classifier-headed modifiers in Thai in (3a) and (3b), respectively. The co-indexation between the head noun *dèk* 'child' and its modifiers illustrates that the latter modify the former. Note that the presence of a classifier affects the interpretation of the entire noun phrase, leading to

the singular-and-specific interpretation. Moreover, these right-dislocated modifiers (with the exception of quantifiers) tend to occur "outside" of a clause, specifically following sentence-final particles or a prosodic break[7].

(3) a. Classifier-headed modifiers

(i) Classifier + Adjective

chán hěn **dèk$_i$** mûawa:nní: **[khon sŭ:ŋ]$_i$**

I see child yesterday Clf tall

'I saw the child yesterday, the tall one.'

(ii) Classifier + Specific indefinite numeral 'one'

chán hěn **dèk$_i$** mûawa:nní: **[khon nɯŋ]$_i$**

I see child yesterday Clf one

'I saw the child yesterday, just one.'

(iii) Classifier + Relative clause

chán hěn **dèk$_i$** mûawa:nní: **[khon thĭ: chán khə:y cə:]$_i$**

I see child yesterday Clf REL I ASP meet

'I saw the child yesterday, the one I've met before.'

(iv) Classifier + Demonstrative

chán hěn **dèk$_i$** mûawa:nní: **[khon nán]$_i$**

I see child yesterday Clf that

'I saw the child yesterday, that one.'

(v) Classifier + Prepositional phrase

[7] To explore the contrast between modifiers with and without a prosodic break, refer to section 4.2.2, which discusses the floated position of Quantifier Float.

chán hěn **dèk$_i$** mûawa:nní: **[khon cà:k ci:n]$_i$**

I see child yesterday Clf from China

'I saw the child yesterday, the one from China.'

b. Non-classifier-headed modifiers

(i) Reduplicated or intensified adjective

chán hěn **dèk$_i$** mûawa:nní: **[sŭ:ŋ-sŭ:ŋ]$_i$ /[sŭ:ŋ khoot]$_i$ /*[sŭ:ŋ]$_i$**

I see child yesterday tall-tall tall very tall

'I saw a/the child(ren) yesterday, somewhat tall/very tall/*tall.'

(ii) Specific indefinite numeral 'one'

*chán hěn **dèk$_i$** mûawa:nní: **[nɯŋ]$_i$**

I see child yesterday one

'I saw a/the child(ren) yesterday, just one.' (intended)

(iii) Demonstrative

*chán hěn **dèk$_i$** mûawa:nní: **[nán]$_i$**

I see child yesterday that

'I saw a/the child(ren) yesterday, that one.' (intended)

(iv) Relative clause

chán hěn **dèk$_i$** mûawa:nní: **[thĭ: chán khəəy cəə]$_i$**

I see child yesterday REL I ASP meet

'I saw a/the child(ren) yesterday, who I've met before.'

(v) Prepositional phrase

chán hěn **dèk$_i$** mûawa:nní: **[cà:k ci:n]$_i$**

I see child yesterday from China

'I saw a/the child(ren) yesterday, from China.'

In (3a), the noun *dèk* 'child' is modified by classifier phrases (classifier-headed modifiers), it is thus interpreted as 'the child' or, more specifically, a certain/specific child. On the other hand, the noun *dèk* in (3b) is modified by regular modifiers (without classifiers), so it does not render the singular-and-specific interpretation. This noun is ambiguous between being singular and plural as well as being specific and non-specific, and can be interpreted as 'a child', 'the child', 'children', or 'the children'.

To summarize, While classifier-headed modifiers in (3a) can all undergo right-dislocation, not all types of the non-classifier-headed ones in (3b) can. The ability of these modifiers to be right-dislocated is summarized in the table below[8].

Modifier type		**Right-dislocation ability**
Classifier-headed modifiers	Classifier + Demonstrative	✔
	Classifier + numeral 'one'	✔
	Classifier + Adjective	✔
	Classifier + Prepositional phrase	✔
	Classifier + Relative clause	✔
Non-classifier-headed modifiers	Demonstrative	✘
	Numeral 'one'	✘
	Adjective (standalone)	✘
	Reduplicated/Intensified Adjective	✔
	Prepositional phrase	✔
	Relative clause	✔

Table (2): The summary of the nominal modifier types that can/cannot be right-dislocated

[8] We will continue to refer to these modifiers as 'right-dislocated modifiers' or 'RD' for the time being. Their classification as either backgrounding or ATs will be discussed in chapter 2.

The constituents appearing at the right sentence periphery have different functions depending on what occurs there, such as whether they provide old or new information. Before delving into the discourse functions and the structures of right-dislocated modifiers in Thai, which will be discussed in following chapter, it is crucial to first address the question of why not all types of modifiers can undergo RD. That is, according to table (2), RD only allows some types of the non-classifier-headed modifiers (i.e. reduplicated and intensified adjectives, relative clauses, and prepositional phrases), but not others (i.e. standalone adjectives, numeral 'one', and demonstratives). Furthermore, we aim to understand why all forms of the classifier-headed modifiers can undergo RD without any difficulty. We will observe what roles the classifiers play in allowing the classifier phrase (ClfP) to occur at the right periphery more easily compared to those modifying phrases not headed by a classifier. The rest of this chapter is devoted to answering all these questions. Here is a list of questions that will be addressed in each of the upcoming sections.

- Section 2.2 — Why is right-dislocation not possible for non-classifier-headed demonstratives and the specific indefinite numeral 'one'?
- Section 2.3 — What roles does a classifier play in facilitating the ease of right-dislocation for all classifier-headed modifiers?
- Section 2.4 — Why is it possible for all other types of non-classifier-headed modifiers to undergo right-dislocation, except for standalone adjectives?
- Section 2.5 — Can extraposed relative clauses be analyzed in the same manner as other right-dislocated modifiers?

The rest of this chapter is devoted to answering all these questions.

2.2 Deictic modifiers and their obligatory use of classifiers

According to table (2), there are three types of modifiers that cannot occur as RD when the classifier is absent: adjectives, demonstratives, and the specific indefinite numeral ‘one’. In this section, we explore the latter two and demonstrate that these types of modifiers cannot occur in the right sentence periphery because they always require a classifier even in their canonical positions. Jenks (2011) observes that both the demonstratives and the deaccented specific indefinite numeral ‘one’ in Thai form a natural class called ‘deictic modifiers’. The examples of the demonstratives and the deaccented specific indefinite numeral ‘one’ in Thai are illustrated below.

(4) a. chán rú:càk [$_{DP}$ nákrian *(khon) ní:/nán/nó:n]
I know student CLF this/that/yonder
‘I know this/that/yonder student’

b. chán rú:càk [$_{DP}$ nákrian *(khon) nɯŋ]
I know student CLF one
‘I know a (certain/specific) student’

Therefore, if the classifier is not present in the examples above, the phrase will sound odd or ungrammatical. Note that the requirement of the classifier is due to the presence of the modifiers, not the noun since the classifier cannot occur alone with the head noun.

(5) *nákrian khon
student CLF

On the other hand, the noun can be elided (represented by ~~strikethrough~~) when its identity is already known from the context, as exemplified below.

(6) ~~nákrian~~ khon ní:/nɯŋ chalà:t wɔ̂:
student CLF this/one smart very
'This (student) is very smart.'

The examples in (5) and (6), therefore, suggest demonstratives and the numeral 'one' should form a constituent with a classifier rather than a head noun.

Semantically, in the case of demonstratives, classifiers serve the function of picking out individuals from the nominal domain so that only definite and singular outputs will result. Without the presence of classifiers, bare nouns in Thai can lead to ambiguities in terms of definiteness (definite or indefinite) and number (singular or plural). These ambiguities are referred to as having "kind" interpretations (Piriyawiboon 2010), exemplified in (7a).

(7) a. nákrian chalà:t
student smart

‘A smart student/smart students/the smart student/the smart students’

Furthermore, the requirement of the classifier with the numeral 'one' could be attributed to the fact that this type of modifier functions as a quantified noun phrase, similar to cardinal numerals that precede classifiers. As a quantifier, the presence of a classifier is obligatory. To support this claim, I present both syntactic and historical evidence for the specific indefinite numeral 'one' in section 2.2.1, highlighting its strong connection with the cardinal numeral 'one'. As the specific indefinite numeral 'one' appears after the classifier, it will be referred to as the "post-classifier numeral 'one'" moving forward. Similarly, the cardinal numeral 'one' that occurs before a classifier will be referred to as the "pre-classifier numeral 'one'". In section 2.2.2, a unified syntactic analysis will be provided for both the demonstratives and the pre-classifier and post-classifier numerals.

2.2.1 The post-classifier numeral ‘one’

This section addresses the question of why the specific indefinite noun phrase[9], i.e. the post-classifier ‘one’, always requires a classifier in the right-dislocation construction. We establish a strong connection between the post-classifier ‘one’ and the pre-classifier cardinal numeral ‘one’ cross-linguistically. In addition, I present the historical evidence from Li (1978) to demonstrate that this specific indefinite noun phrase is in fact derived from the quantified NP containing a cardinal number ‘one’, i.e. the pre-classifier ‘one’. Given their shared quantifica-

[9] Earlier analyses by Li (1978), Goral (1978), Singhapreecha (2001), among others, suggest that the post-classifier ‘one’ is interpreted similar to English indefinite articles *a/an*. However, there are some cases that show that the post-classifier ‘one’ cannot take narrow scope below higher scopal operators and instead exhibits a specific reading (see Piriyawiboon 2010 or Jenks 2011 for details). These different meanings can be disambiguated contextually.

tional nature, both constructions allow the post-classifier 'one' to undergo floating or right-dislocation when accompanied by its obligatory classifier, similar to the behavior of the pre-classifier ‘one’.

To begin, let us consider the distributional, phonological, and interpretational differences between the specific indefinite noun phrase and the quantified NP containing a cardinal number ‘one’, exemplified below.

(8) a. Post-classifier ‘one’

dèk khon **nɯŋ**

child CLF one

‘a certain/specific child’ *Specific indefinite reading*

b. Pre-classifier ‘one’

dèk **nùŋ** khon

child one CLF

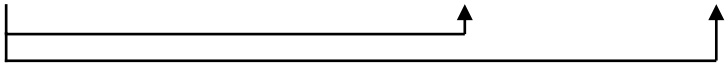
‘one child’ *Enumerated reading*

The numeral ‘one’ in (8a) occurs in a post-classifier position, exhibiting the specific indefinite reading. Note that such a position is unique for the numeral ‘one’ and no other numerals can occur here. The ‘one’ in (8b), like other cardinal numerals in Thai, occurs in the pre-classifier position and exhibits the enumerated reading. Apart from their syntactic and semantic differences, the ‘one’ in (8a) and (8b) are also phonologically distinct. While the numeral ‘one’ in (8b) carries a low tone, the one in (8a) usually has a mid tone. However, it is important to note that in formal register or written text, some Thai speakers may use the low and mid tones interchangeably for the post-classifier 'one' in (8a).

2.2.1.1 A close relation between a numeral *one* and an indefinite article

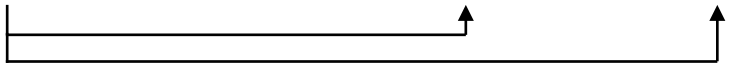
By comparing the post-classifier 'one', the pre-classifier 'one', and other classifier-headed modifiers, we found that the first two constructions pattern together in both the floating and right-dislocation constructions. The example below, taken from Singhapreecha and Sybesma (2015, pp. 10-11), shows all the positions where floating quantifiers can occur in Thai.

(9) [N [Q-Clf]] V (N) … (Aspect) **Q-Clf** ('already') **Q-Clf** (Final particle)

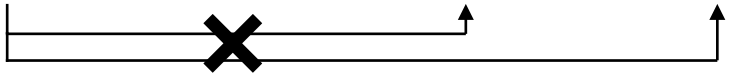


As expected, only the specific indefinite noun phrase (the post-classifier 'one'), but not other types of classifier-headed modifiers (classifier-adjective, classifier-demonstrative, classifier-relative clause, and classifier-prepositional phrase), can be floated:

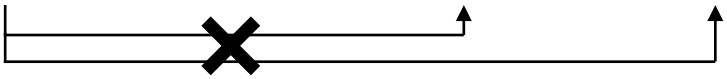
(10) a. [N [Clf-one]] V (N) … (Aspect) **Clf-one** ('already') **Clf-one** (Final particle)



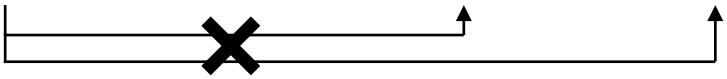
b. [N [Clf-Adj]] V (N) … (Aspect) **Clf-Adj** ('already') **Clf-Adj** (Final particle)



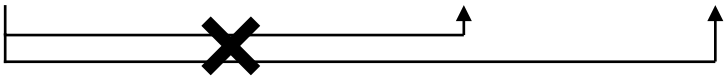
c. [N [Clf-Dem]] V (N) … (Aspect) **Clf-Dem** (‘already’) **Clf-Dem** (Final particle)



d. [N [Clf-RC]] V (N) … (Aspect) **Clf-RC** (‘already’) **Clf-RC** (Final particle)



e. [N [Clf-PP]] V (N) … (Aspect) **Clf-PP** (‘already’) **Clf-PP** (Final particle)



Thus, we can simply conclude that the fact that only the post-classifier ‘one’ and the pre-classifier ‘one’ can occupy the positions where floating quantifiers occur is because both of these constructions involve quantification where as the others do not.

But how come the two constructions are really similar? Previous analyses of the numeral ‘one’ in Thai by Haas (1942); Piriyawiboon (2010) and in particular Jenks (2011, 2012) treat the post-classifier ‘one’ and pre-classifier ‘one’ as two distinct elements. Even though these linguists do not deny that there is a close relation between the two elements, their syntactic analyses do not reflect that fact. Here, I emphasize the idea that the post-classifier ‘one’ and pre-classifier ‘one’ should be thought of as the same element. One reason is because numeral *one* and the indefinite article are homophonous cross-linguistically. In many languages, they have the same form, as illustrated in the following examples.

(11) a. un homme *French*

one/a man

‘one/a man’

b. un libro *Spanish*

one/a book

'one/a book'

Even in English, where numeral *one* and the indefinite article are usually thought of as distinct elements, Kayne (2017, 2019) suggests that *one* is actually bi-morphemic and that it contains *a/an* as part of its morphology. Particularly, *one* consists of /wʌ + n/ where /wʌ/ is a singular classifier and /n/ is an indefinite article, following from Perlmutter's (1970) idea that English *a/an* is a reduced form of *one*. Consider the English example of a DP containing *a* (12a) and *one* (12b) from (Kayne 2017, p. 4) below.

(12) a. A spider has eight legs and many eyes.

b. One spider has eight legs and many eyes.

Only the DP in (12a) can have a generic reading. When *one* is used, as in (12b), it engenders a specificity inference, signaling that only a single referent is intended. The idea that *one* contains a singular classifier and that the generic reading is lost in (12b) corresponds to the fact from Chinese that a DP containing a singular classifier cannot be interpreted as generic (Cheng and Sybesma 1999, 2012, as cited in Kayne 2017).

Turning to Thai, unlike English, the post-classifier 'one' and pre-classifier 'one' are usually thought of as the same element. Regardless of their positional difference, the numeral 'one' in Thai can be analyzed on par with the word *un* in French and Spanish. The fact that *un* only has one form and can be interpreted as enumerated or indefinite suggests that there must be a close relation between its status as the numeral 'one' and indefinite article. Such behav-

iors can be seen in the case of the post-classifier ‘one’ and pre-classifier ‘one’ in Thai and thus lead us to analyze them as the same element. Moreover, their orthography appears to be the same in writing. The low-tone ‘one’ spelling is used in both pre-classifier and post-classifier positions although they are usually pronounced with different tones. This discrepancy in tones, however, is arguably a relatively minor one. In fact, in a more formal register such as speech from news anchors or television hosts, the low-tone ‘one’ can be used in both pre-classifier and post-classifier positions. Given the fact about their identical orthography, the use of the low tone in both positions and a close semantic relation between them, it is more sensible to treat the post-classifier ‘one’ and pre-classifier ‘one’ as the same element.

2.2.1.2 The history of the Thai numeral ‘one’

We begin with the observation by Li (1978) that the post-classifier ‘one’ is used predominantly in early Thai grammar books (e.g. Pallegoix 1850; Wershoven 1892). He also presents the data from the third side of the Ram Kamhaeng inscription of the 13th century, the earliest example of the Thai script, in which the numeral ‘one’ is used only in the post-classifier position. The examples modified from Li (1978) (13a) and from other lines in the inscription (13b) are shown below.

(13) a. mi: sǎ:la: sŏ:ŋ ʔan ʔan nùŋ chûː sǎ:la: phráʔmâ:t
have pavilion two CLF CLF one name pavilion Phra Mas
‘There are two pavilions, one is named Phra Mas pavilion…’

b. ca:rúk ʔan nùŋ mi: naj mɯaŋ châliaŋ

inscription CLF one has in city Chaliang

'One inscription is in the city of Chaliang.'

From all the four sides of the inscription, no any usage of the pre-classifier 'one' has been found. Only the numerals bigger than one occur in this pre-classifier position. The prevalent usage of the post-classifier 'one' is also seen in other inscriptions and many other documents. The one that clearly shows the word order distinction between the enumerated 'one' and other numerals is a document of 1784. It is a list of gifts offered to the Chinese Emperor (Li 1978, p. 143). In this list, it shows that the numeral 'one' is placed after a classifier while their combination, say the numeral 'two', occurs after a classifier.

(14)

	Phaai Chaaŋ 1	
	male CLF one	
Chaaŋ		2 Chaaŋ
elephant		two CLF
	Phaŋ Chaaŋ 1	
	female CLF one	

Moreover, there is a document of 1782 that shows a list containing various kinds of satin offered as gifts to the Siamese King. The original Chinese version of this list has not been found. In its latest Thai translated version published in 1964, it is found that the numeral 'one' is placed before a classifier. This list is presented with the English gloss in (15).

(15) dragon-design satin 2 bolt

brocaded satin 2 bolt

glossy satin 1 bolt

Phian-brocaded satin 1 bolt

white-colored satin 4 bolt

together 10 bolt

However, the use of the numeral ‘one’ before a classifier like in (15) only appears in a more modern version of the publication. In the original translated manuscript found in the National Public Library in Bangkok, this numeral ‘one’ is placed after the classifier ‘bolt’, as in (16).

(16) glossy satin bolt 1

Phian-brocaded satin bolt 1

Li assumes that perhaps the editor of the 1964 version has changed the position of the numeral ‘one’ so that it conforms with the other numerals. This could probably be considered as one of the most recent syntactic shift within Thai DPs.

All the pieces of evidence above suggest that the thai numeral ‘one’ might originally occurs in the post-classifier position, and that the pre-classifier ‘one’ is a recent development since the ‘one’ in the pre-classifier position is not found in Older Thai. We have summarized such differences in (17) together with the data containing the numerals bigger than ‘one’. These numerals are represented with *Num*.

(17) a. Older Thai	b. Modern Thai
N-Clf-One	N-Clf-One
	N-One-Clf
N-Num-Clf	N-Num-Clf

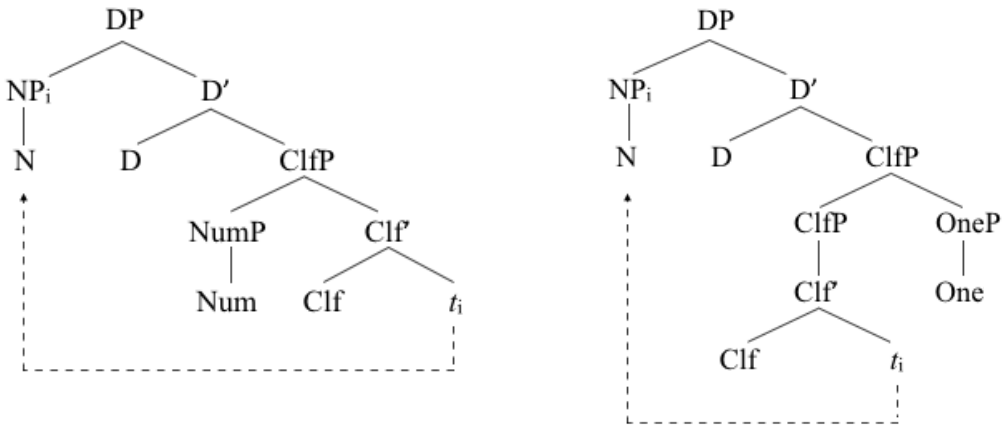
In summary, despite the semantic and phonological differences that exist in the present-day usage, the numeral 'one' in both the pre-classifier and post-classifier constructions function as quantificational noun phrases. Within a sentence, the post-classifier 'one' behaves similarly to a floating quantifier, as it can occur in the same positions as other quantifiers in Thai. When positioned at the right sentence periphery, after the sentence-final particle, it functions as a type of right-dislocation.

2.2.2 The unifying analysis of Thai deictic modifiers

The marked linguistic behaviors of the post-classifier numeral ‘one’ lead to two divergent syntactic analyses in the literature. The first analysis considers the post-classifier ‘one’ as an indicator or a deictic modifier (Haas 1942; Jenks 2011, 2012; Piriyawiboon 2010). This view makes a clear syntactic distinction between the pre-classifier ‘one’ and the post-classifier ‘one’. Their syntactic structures reflect no relation between the two positions: the pre-classifier ‘one’, like other numerals, originates in the Spec of the ClfP projection (the view adopted by Chierchia 2010; Piriyawiboon 2010; Saito et al. 2008; Watanabe 2006), while the post-classifier ‘one’ is analyzed on par with adjectives, adjoined to the ClfP projection (see Jenks 2011, 2012 for detailed analyses). The examples in (18) show the structural difference be-

tween the pre-classifier 'one' as well as other cardinal numbers, represented by NumP (18a), and the post-classifier 'one', represented by OneP (18b)[10]. Note that there is an NP movement to the Spec of DP in order to derive the word order in Thai in both cases[11].

(18) a. Pre-classifier 'one' (Spec of ClfP) b. Post-classifier 'one' (Adjunct to ClfP)

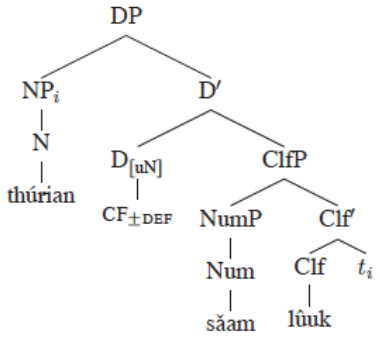


This view successfully accounts for the individual structures of the numeral 'one' in Thai. What it does not show, however, is a syntactic relation between the pre-classifier and post-classifier positions. Although they occupy the different structures and are interpreted dif-

[10] In both cases, the D^0 is empty. Chierchia (2001) argues that this empty D^0 can be utilized as a source of definite and specific interpretations. There is a choice functional operator that encodes uniqueness and familiarity, which Jenks (2011) calls D_{CF}. The presence of an existential operator is regulated by a feature on D_{CF}, [±def]. Definiteness arises due to the pragmatic restriction of the CF domain; definiteness arises when the context only contains a single individual (or plural individual) (Jenks 2011, p. 222):

(i) thúrian săːm lúːk
durian three CLF
'(the) three durians'

(ii)

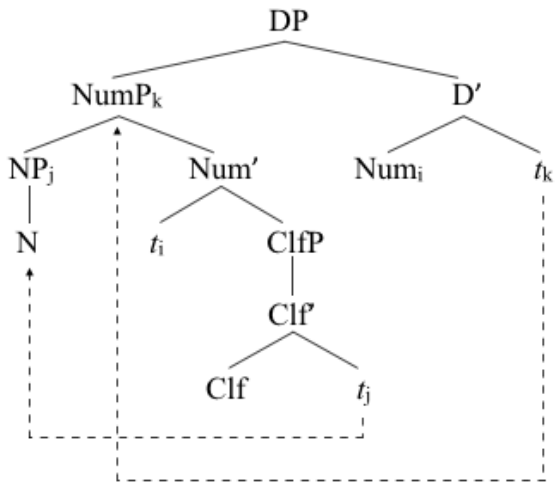


[11] See Visonyanggoon (2000); Kookiattikoon (2001); Singhapreecha (2001); Simpson (2008) and Piriyawiboon (2010) for the motivation for the NP-movement in Thai.

ferently, Thai speakers do not think of them as two distinct elements. In the following section, we will provide evidence that this analysis is problematic because both of the positions in (20) can be occupied by a *null* numeral 'one' when it co-occurs with a demonstrative.

The second view, on the other hand, reflects this idea that there is only one numeral 'one' and the discrepancies can be accounted for by movements (Simpson 2008). Simpson proposes that the underlying structure for the DP containing a numeral has the order of Num-Clf and that there is movement of an NP and Clf over 'one' to derive the order of Clf-Num. Note that in his analysis, numerals are not specifiers of the ClfP projection but instead they head functional projections of the noun. The detailed structure is shown in (19).

(19)



Simpson assumes [$_{DP}$ D [$_{NumP}$ Num [$_{ClfP}$ Clf [$_{NP}$ N]]]] as the underlying structure of (19). In the absence of the demonstrative, D^0 is empty. The derivations begin with the movement of the numeral 'one' from the Num^0 to D^0 position. The reason why it moves to D^0 is because the post-classifier 'one' and the demonstrative in Thai compete for the same position, as shown in (20c) below.

(20) a. dèk khon nɯŋ

child CLF one

'a (certain/specific) child'

b. dèk khon nán

child CLF Dem

'that child'

c. *dèk khon nɯŋ nán

child CLF one Dem

'that one child'

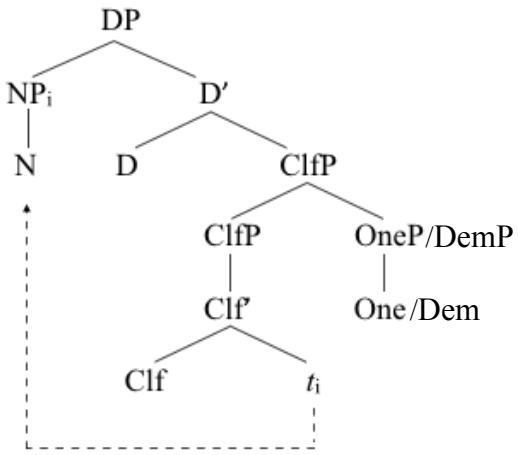
Next, there is regular movement of the NP over Num and Clf to the Spec of NumP[12]. This step of movement is assumed again in order to derive the N-initial word order in Thai. The final step is the movement of the entire NumP over D^0 (the position where Num^0 has moved into), resulting in the order in which the numeral 'one' follows the classifier.

Because the post-classifier numeral 'one' is in a complementary distribution with the demonstrative and that they both belong to to the deictic modifier category, we would expect similar analyses for both of these modifier types. The two analyses are illustrated below for both the numeral 'one' and demonstrative. Note that, in the OneP movement analysis by Simpson (2008), there is a One^0-to-D^0 (or Num^0-to-D^0) movement at the beginning of the derivation, followed by the NP and OneP (or NumP) movements, exemplified in (21b(i)). In the case of the demonstrative, the movement to D^0 does not occur since the demonstrative is base-generated in D^0. Moreover, in the case where numerals are not present, the NP should

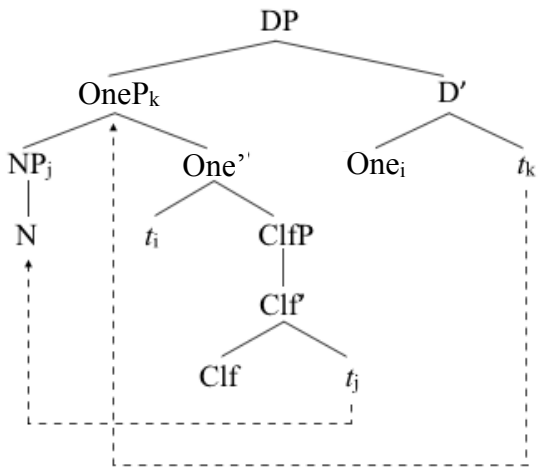
[12] For the arguments between base-generation and movement analyses of NP, see Jenks (2011, Ch. 3.2.3)

move to the Spec of ClfP instead of OneP (or NumP), and the entire ClfP moves to the Spec of DP, exemplified in (21b(ii)). The tree with the OneP/DemP adjuncts in (21a) is repeated from (18b).

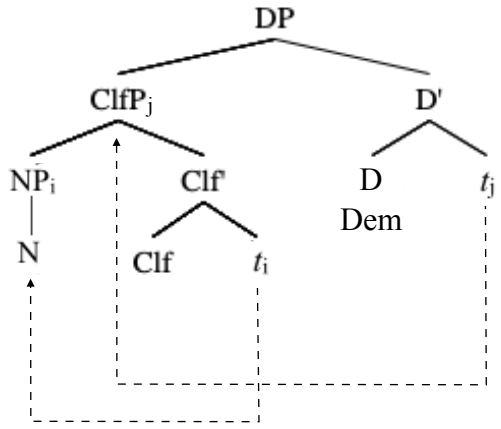
(21) a. OneP/DemP as adjunct to ClfP



b. (i) OneP movement over D^0



(ii) ClfP movement over D^0



The adjunct analysis, represented in (21a), treats OneP and DemP as adjuncts to the ClfP. However, we have seen earlier that these modifiers always require a classifier and they must be adjacent to it. In addition, the example in (20c) shows that only one deictic modifier

can occur in the post-classifier position. Based on these observed properties, it is reasonable to conclude that OneP and DemP should not be analyzed as adjuncts to ClfP since they mandatorily occur with a classifier and that they cannot occur more than once. Moreover, the adjunct analysis of the numeral 'one' treats the pre-classifier 'one' and post-classifier 'one' as two separate elements belonging to different syntactic categories (a cardinal numeral vs. a deictic modifier), and there is no syntactic relation between them. However, we see that there is a significant relation between numeral *one* and an indefinite article cross-linguistically which is not shown in the syntactic structures proposed within the adjunct analysis, and that the historical evidence suggests that the numeral 'one' in Thai originally occupies the post-Clf position while the pre-Clf position is a recent development. Therefore, the adjunct analysis does not seem to provide an inclusive representation for these modifiers.

The movement analysis, on the other hand, treats both the post-Clf 'one' and demonstrative as located in D^0. While the demonstrative is base-generated as D^0, the post-Clf 'one' is derived through movement from One^0 to D^0, having originally occupied the position as the head of its own projection (OneP). For the case of the demonstrative in 21b(ii), D^0 takes ClfP as its complement. Then, the ClfP moves over D^0 to the Spec of DP, followed by the mandatory NP movement. The fact that the post-Clf 'one' and the demonstrative must be located in D^0 highlights the idea that they both belong to the same syntactic class and are in complementary distributions. Moreover, to emphasize the requirement of the classifier, I follow Simpson (2008) in proposing that both the post-Clf 'one' and the demonstrative are located in D^0, which takes ClfP as a complement. This way, we can uniformly account for why deictic modifiers always occur with a classifier.

However, I argue that Simpson's proposed $[_{DP}$ D $[_{NumP}$ Num $[_{ClfP}$ Clf $[_{NP}$ N]]]] structure should not be posited as the underlying structure of the deictic modifiers in Thai. The

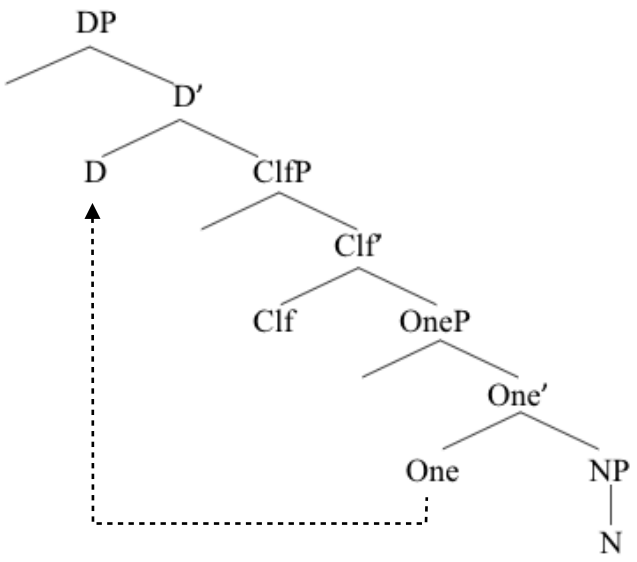
main reason comes from the historical evidence that illustrates that the numeral ‘one’ in Thai originally occupies the post-Clf position and that the pre-Clf position is a recent development. To emphasize this fact, I propose that the structure in (22) below, where the demonstrative is base-generated in D^0 and One^0 must move to D^0. These deictic modifiers take ClfP as their complement.

(22) The underlying structure of Thai deictic modifiers

a. Post-Clf numeral ‘one’ (via One^0-to-D^0 movement)

(i) $[_{DP}$ D $[_{ClfP}$ Clf $[_{OneP}$ One $[_{NP}$ N]]]]

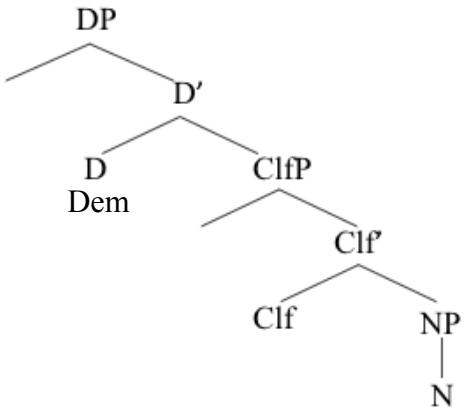
(ii)



b. Demonstratives (base-generation)

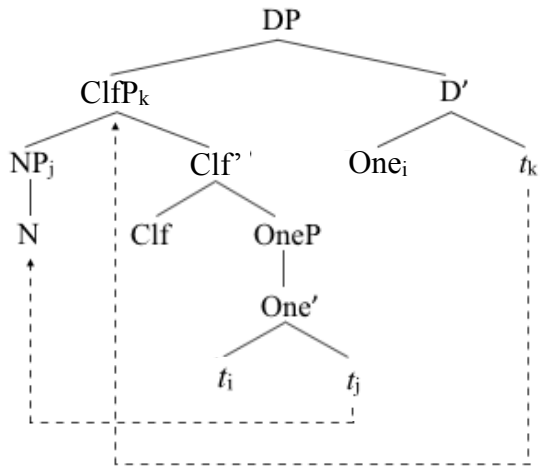
(i) $[_{DP}$ D $[_{ClfP}$ Clf $[[_{NP}$ N]]]

(ii)

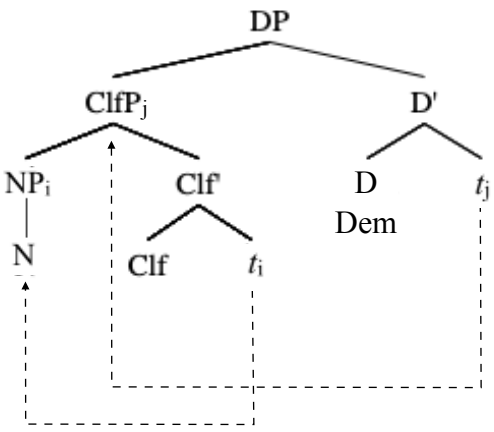


To derive the word order in Thai, two other derivational steps are required: the NP movement from the complement position of One^0/Clf^0 to the Spec of ClfP, and the movement of the entire ClfP from the complement position of D^0 to the Spec of DP. These steps are illustrated below for the post-Clf 'one' and demonstratives.

(23) a. Post-Clf numeral 'one'



b. Demonstratives



Another advantage of positing this underlying structure is that we can represent the pre-Clf cardinal numeral ‘one’ and the post-Clf numeral ‘one’ as also having the same underlying structure. Additionally, the structure of the pre-Clf cardinal numeral ‘one’ is derived from the post-Clf numeral ‘one’, corresponding to the evidence we have seen in the previous sections. This same underlying structure between the pre- and post-Clf numeral ‘one’ emphasizes the fact that there is a significant relation between the numeral one and an indefinite article cross-linguistically. Additionally, the historical evidence above suggests that the numeral ‘one’ in Thai originally occupies the post-Clf position, while the pre-Clf position is a recent development. The semantic differentiation between the two positions in today's speech appears to be a secondary development that occurred after both positions became acceptable for ‘one’[13]. To derive the structure of the pre-Clf cardinal numeral ‘one’, we begin the derivation by moving the NP to the Spec of OneP. The entire OneP then moves to the Spec of ClfP and then that ClfP chunk moves over the D^0 to the Spec of DP. The derivation steps are provided below.

(24) Pre-Clf numeral ‘one’

a. Underlying structure: $[_{DP}\ D\ [_{ClfP}\ Clf\ [_{OneP}\ One\ [_{NP}\ N]]]]$

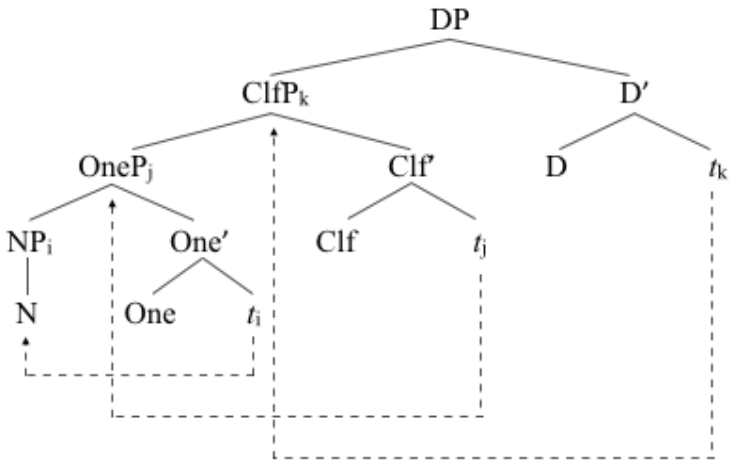
NP movement over One: $[_{DP}\ D\ [_{ClfP}\ Clf\ \mathbf{[_{NP}\ N\ ]_i}\ [_{OneP}\ One\ \boldsymbol{t_i}\ ]]]$

OneP movement over Clf: $[_{DP}\ D\ \mathbf{[[_{NP}\ N\ ]_i\ [_{OneP}\ One\ t_i\ ]]_j}\ [_{ClfP}\ Clf\ \boldsymbol{t_j}\ ]]$

Movement over D^0: $\mathbf{[[[_{NP}\ N\ ]_i\ [_{OneP}\ One\ t_i\ ]]_j\ [_{ClfP}\ Clf\ t_j\ ]]_k}\ [_{DP}\ D\ \boldsymbol{t_k}\ ]$

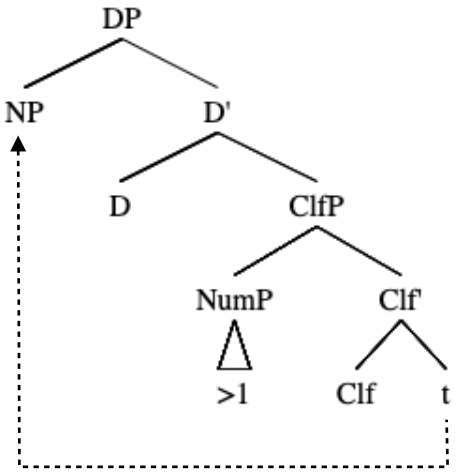
[13] One could argue that the structures of the pre-Clf and post-Clf ‘one’ should be different since they exhibit different interpretations. Moreover, while the tone on the post-Clf ‘one’ can alternate between low and mid/reduced tones, the tone on the pre-Clf ‘one’ must be low. While these statements are correct, they do not emphasize the above facts about the relation between the numeral one and an indefinite article as well as the historical development of the the pre-Clf and post-Clf ‘one’, which I consider as primary when proposing the structures of the Thai numeral ‘one’.

b.



Notice that such movement is unique to the numeral ‘one’ in Thai as it is the only numeral that can occupy in both positions. Other cardinal numerals only occur before a classifier. Therefore, for the numerals bigger than one, I propose that they are base-generated in the Spec of ClfP. The NP initial order in this case is achieved by moving the NP, which is base-generated as a complement of Clf^0, to the Spec of DP.

(25) The structure of the cardinal numerals bigger than 1



The idea that the numeral ‘one’ has such a unique structure is not so far-fetched. Following Kayne (2019), I propose that ‘one’ does not form a homogeneous class with other numerals. We have seen in the previous section the numeral *one* in English is associated with a singular classifier. It is actually bi-morphemic, consisting of /wʌ + n/ where /wʌ/ is a singular classifier and /n/ is an indefinite article. We have seen the fact in Thai that the numeral ‘one’, unlike other numerals, can occur either before or after the classifier. French also displays a similar asymmetry with additive compound numerals 21, 31, 41, 51, 61 and 71. An overt coordinator *et* ‘and’ is required as in *vingt-et-un livres* ‘twenty-and-one books’ while such an element is not used with the other numerals (Kayne 2019, p. 5). Moreover, suppletion in small ordinals in many languages seems to set ‘one’ (and maybe other smaller numerals) apart from other numerals[14]. Thai is one of such languages that has a suppletive ordinal *rêɛk* ‘first, as shown in (26) below.

(26)

Cardinal		Ordinal	
nɯ̀ŋ	‘one’	rêːk	‘first’
sɔ̌ːŋ	‘two’	thîːsɔ̌ːŋ	‘second’
săːm	‘three’	thîːsăːm	‘third’
sìː	‘four’	thîːsìː	‘fourth’
sìp	‘ten’	thîːsìp	‘tenth’
nɯ̀ŋrɔ́ːj	‘one hundred’	thîːnɯ̀ŋrɔ́ːj	‘one-hundredth’

[14] Kayne (2019) actually proposes that there are three major subclasses for numerals. The numeral ‘one’ is the only member in its subclass. ‘Two’, ‘three’ and ‘four’ together form their own subclass. ‘Five’ and above also belong to another subclass.

When the numerals bigger than one are used as ordinals, they are formed by the word *thîː* 'place' followed by a cardinal number. However, the word *rêːk* 'first' is suppletive and does not conform with other numerals in Thai. All these pieces of evidence suggest that the numeral 'one' probably requires a structure distinct from the other numerals. My proposed underlying structure is thus unique the numeral 'one'.

2.3 The roles of classifiers in right-dislocation

In this section, I explore the roles that classifiers play in facilitating the ease of right-dislocation for all classifier-headed modifiers. I propose that there are three properties of classifiers that enable classifier-headed modifiers to occur in the right-dislocated position, even though it is non-adjacent to the head noun. First, following Jenks (2011), I illustrate that the classifier in the classifier-headed modifier construction can license the ellipsis of the noun. Consequently, the classifier-headed modifiers appearing in the right-dislocated position are not merely standalone modifiers, but rather modifiers with an elided head noun. Second, building on ideas of Warotamasikkhadit (1979), I propose that the classifier head (Clf) contains a [+FOCUS] feature when occurring with a nominal modifier, resulting in the entire noun phrase being emphasized. In other words, classifiers act as focal elements which enables the classifier phrase to be focused. I further show that other focal elements in Thai also ease RD, allowing more elements to be right-dislocated. Finally, I demonstrate that most classifiers in Thai are grammaticalized nouns, so they have the ability to function as if they were full DPs on their own.

2.3.1 Classifiers lincense NP-ellipsis

Thai is considered a numerical classifier language, meaning it is a language that employs classifiers to use with quantified noun phrases. Hence, a classifier always appears with a quantifier rather than a noun alone.

(27) a. tho:rasàp sǎ:m khrûŋ

phone three CLF^{MACHINE}

'three phones'

b. *tho:rasàp sǎ:m

phone three

c. ??sǎ:m tho:rasàp

three phone

Moreover, if the classifier and the head noun do not agree, i.e. the classifier does not classify the correct noun, the phrase will become semantically awkward, as in (28).

(28) dèk hâ: khon

child five CLF^{PERSON}

'five children'

(29) #dèk hâ: tua

child five CLF^{ANIMAL}

‘five children’ (intended)

The noun phrase in (28) contains a classifier *khon* which is a classifier for human being while the one in (29) contains *tua*, a classifier for animal. Thus, the classifier must agree with the noun it classifies.

However, a classifier must still classify its head noun even when the noun is omitted. The answer in (30) shows that when numeral-classifier sequence is in focus, i.e. represents new information, it can appear alone without the head noun. The classifier for phone (or any mechanical equipment) must be used even the noun does not appear on the surface.

(30) Q: kɛ: mi: tho:rasàp thâwràj
you have phone how-many
‘How many phones do you have?’
A: mi: săːm khrûŋ
have three CLF^{MACHINE}
‘I have three.’

The reason why the quantifier-classifier pair can occur without its head noun is that NP-ellipsis can be licensed by classifiers. This can be illustrated by the fact that NP-ellipsis is impossible if the classifier is not present (adapted from Jenks 2011, pp. 91-92)

(31) a. Nát chôːp thúrian sùk bon tóʔ
Nat like durian ripe on table
‘Nat likes ripe durians.’

b. sùan Nít chôːp *(thúrian) dìp bon tóʔ

but Nit like durian unripe on table

‘Though Nit likes unripe (ones).’ (intended)

c. sùan Nít chôːp (thúrian) lúːk dìp bon tóʔ

but Nit like durian CL$^{\text{round object}}$ unripe on table

‘Though Nit likes the unripe one.’

Example (31a) provides information about the specific type of durian that Nat likes, which are the ripe ones on the table. The sentence in (31b) becomes ungrammatical if the noun *thúrian* is omitted. None of the elements in (31a) would allow for NP-ellipsis in (31b), even if the noun can be inferred from the context. On the other hand, the example in (31c) demonstrates that the use of a classifier allows for NP-ellipsis to be licensed. Therefore, the examples in (31) collectively serve as compelling evidence that NP-ellipsis cannot be licensed by a modifier alone, but rather requires the presence of a classifier to be licensed.

Recall that there are two positions that classifiers can occur in Thai, one after quantifiers and the other before all other types of nominal modifiers. The two positions can be exemplified again below, using the pre-classifier and post-classifier numeral 'one' to highlight the contrast between the two positions.

(32) Pre-classifier numeral ‘one’

chán rúːcàk [(dèk) nʉ̀ŋ khon]

I know child one CLF

‘I knew one child.’

(33) Post-classifier numeral ‘one’

chán rú:càk [(dèk) khon nɯŋ]

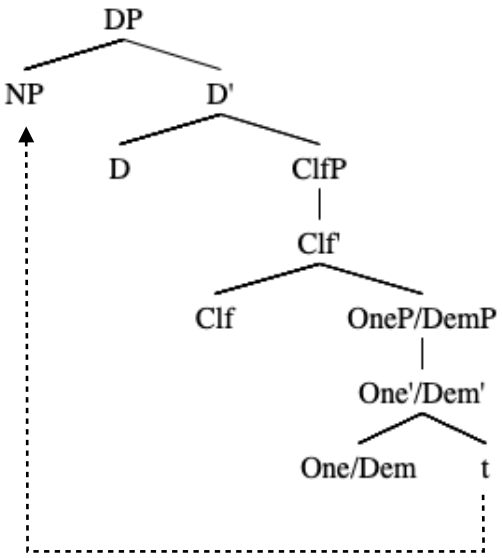
I know child CLF one

‘I knew a (specific) child’

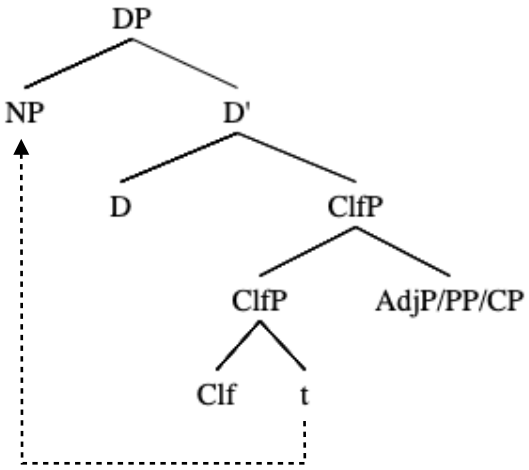
As expected, the noun *dèk* can be optional in both of these constructions. This indicates that NP-ellipsis can be licensed regardless of whether the classifier precedes or follows the modifier, and the noun is recoverable from the context.

As for the structures of classifier-headed modifiers, I propose that they consist pf ClfPs, which contain a Clf^0 that takes demonstratives and the post-classifier numeral ‘one’ as their complements. On the other hand, other modifier types such as adjectival phrases, prepositional phrases, and relative clauses function as adjuncts to ClfP. I assume that ClfP is a complement of the D^0, following Jenks (2011). Furthermore, as we observed in the previous section, NP-movement occurs from different positions depending on the base position of the NP. In the case of demonstratives and the post-classifier numeral ‘one’, NP is base-generated as a complement of Dem^0 and One^0, respectively. For other modifiers, NP moves from the complement position of Clf^0. In the case of standalone modifiers (non-classifier-headed modifiers), the ClfP is not present in the structure. Therefore, the NP directly serves as a complement of D, and the modifiers are adjuncts to the NP. As a result, there is no NP-movement in this structure. All of these three structures are illustrated below.

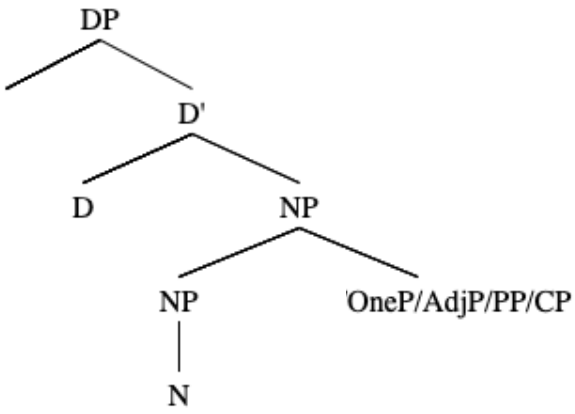
(34) a. Classifier-headed modifiers (DemP and OneP)



b. Classifier-headed modifiers (AdjP, PP, and CP)



c. Non-classifier-headed modifiers



2.3.2 Classifiers as focal elements

Recall that unlike the non-classifier-headed modifiers, the classifier-headed modifiers can be right-dislocated more easily, as shown in table 2. There are reasons as to why the classifier-headed adjuncts, but not the non-classifier-headed ones, can occur in a wide range of positions in Thai. One comes from the fact that the classifier can behave as if it were a head noun itself. Since most classifiers in Thai are grammaticalized nouns, they can sometimes appear together with their identical head nouns. The example in (35) shows that the two identical words serve as different functions within the same noun phrase.

(35) a. khon sŏ:ŋ khon

person two CLF^{PERSON}

'two people'

b. thawî:p cèt thawî:p

continent seven continent

‘seven continents’

Second, the classifier-headed modifiers can occur freely without their head noun as long as interlocutors know the entity they refer to in the context. In the absence of the head noun, the classifier somehow functions like a pronominal referring back to that noun.

(36) a. kèp na:líka: phɛ:ŋ wáj naj tû:
keep watch expensive PRT in closet
‘Keep an/the expensive watch(es) in the closet.’

b. kèp an phɛ:ŋ wáj naj tû:
keep CLF^{INANIMATE} expensive PRT in closet
‘Keep the expensive one in the closet.’

Of course, the head noun *na:líka:* can occur together with the classifier *an*, and is unambiguously interpreted as a singular and specific watch, as in (37).

(37) kèp na:líka: an phɛ:ŋ wáj naj tû:
keep watch CLF^{INANIMATE} expensive PRT in closet
‘Keep the expensive watch in the closet.’

The sentence above is in fact similar to the construction presented in the pioneering study of Thai information structure by Warotamasikkhadit (1979). In that study, he shows that the head noun can be followed by a third person pronoun when it contains a [+FOCUS] feature in the deep structure. In (38a), the head noun *phô:* ‘father’ occurs alone and hence is not

focused. In (38b), the third person pronoun *kháw* 'she/he' is used to refer to the head noun in (38a). Finally, when the head noun *phɔ̂:* contains the [+FOCUS] feature, it is followed by the third person pronoun, as in (38c) (Warotamasikkhadit 1979, pp. 314-315, adapted).

(38) a. **phɔ̂:** chɔ̂:p sûa màj
father like shirt new
'Dad likes the new shirt.'

b. **kháw** chɔ̂:p sûa màj
he like shirt new
'He likes the new shirt.'

c. **phɔ̂:**$_{[+FOCUS]}$ **kháw** chɔ̂:p sûa màj
father he like shirt new
'DAD likes the new shirt.'

The attachment of the pronoun *kháw* allows the head noun *phɔ̂:* to be emphasized (focused). Moreover, just like the classifier, this "attached pronoun" adds the specificity interpretation to the noun — it emphasizes which entity the speaker intends to identify in the discourse.

Therefore, if preposing or dislocation takes place, the attached pronoun will help specify the head noun that is generic or indefinite so that its identity becomes clear. It also behaves like a focal element, so the preposed or dislocated material containing such a pro-

noun can easily occur in a focus position, such as the left or right sentence periphery[15]. The example in (39) illustrates the canonical sentence containing the attached pronoun. The co-occurrence of the attached pronoun suggests that the noun *phîː* 'brother' is in focus and that the identity of the noun is clear among the interlocutors.

(39) phîː$_{[+FOCUS]}$ kháw máj chôːp kin phàk ləːj
brother he NEG like eat vegetable at-all
'The brother doesn't like to eat vegetables at all.'

The sentences in (40) illustrate the case in which RD takes place. The contrast between (40a) and (40b) shows that only the noun with the attached pronoun is preferred when RD takes place.

(40) a. *máj chôːp kin phàk ləːj [phîː]
NEG like eat vegetable at-all brother
b. máj chôːp kin phàk ləːj [phîː$_{[+FOCUS]}$ kháw]
NEG like eat vegetable at-all brother he
'He doesn't like to eat vegetables at all, the brother.'

[15] However, when left-dislocation takes place, the preposed material receives the [+FOCUS] feature instead while the noun phrase in the host clause will become defocused. The sentence in (i) shows that when the object noun phrase *sûa tua nán* 'that shirt' is preposed, the head noun *phôː* is no longer in focus despite the presence of the attached pronoun *kháw*.

(i) [sûa tua nán]$_{[+FOCUS]}$ phôː kháw chôːp
shirt CLF that father he like
'That shirt, Dad likes.'

Nevertheless, with the help of a focal element, i.e. *àʔ* (41a), or a noun with a clear identity, e.g. a combination of a kinship term and a name (41b), RD can also be possible.

(41) a. máj chôːp kin phàk ləːj [phîː$_{[+FOCUS]}$ àʔ]
NEG like eat vegetable at-all brother FOC
'He doesn't like to eat vegetables at all, the brother.'

b. máj chôːp kin phàk ləːj [phîː nít]
NEG like eat vegetable at-all brother Nit
'He doesn't like to eat vegetables at all, (brother) Nit.'

We can see that the classifier that heads different kinds of nominal modifiers shares some properties with the attached pronoun in Thai. These properties are summarized below.

(42) a. **Both the classifier and attached pronoun must agree with the head noun**:
the classifier agrees with the noun in terms of class (noun type) while the attached pronoun agrees with the noun in terms of gender, number, and person.

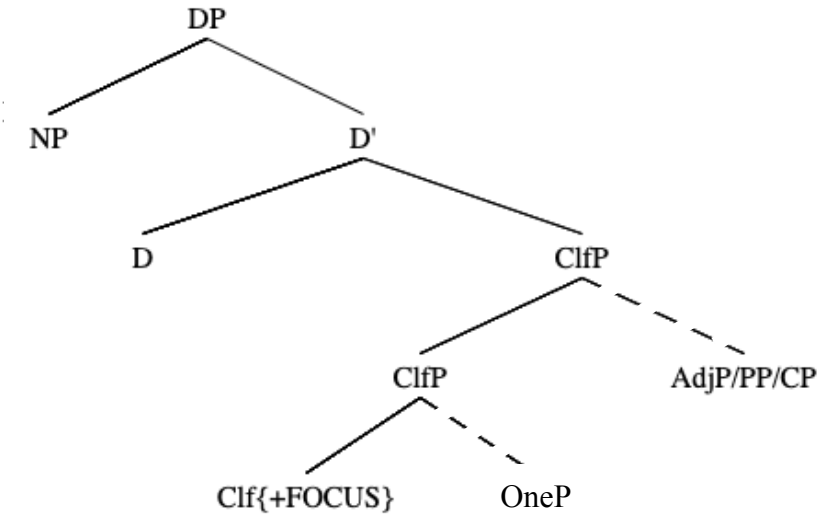
b. **Both the classifier and attached pronoun specify the identity of the head noun**:
their co-occurrence with the head noun turns a generic or indefinite noun phrase into a specific one.

c. **Both the classifier and attached pronoun serve as focal elements:**
their co-occurrence with the head noun allow dislocation to take place with ease.

Because of all these properties shared between classifiers and attached pronouns, I follow Warotamasikkhadit in proposing that there is a [+FOCUS] feature marking the fo-

cused/emphatic phrase in the clause. However, instead of positing that [+FOCUS] is on the noun, I propose that it is the focal element (i.e. the classifier) that bears this feature (NP movement is assumed but not shown in this structure):

(43)



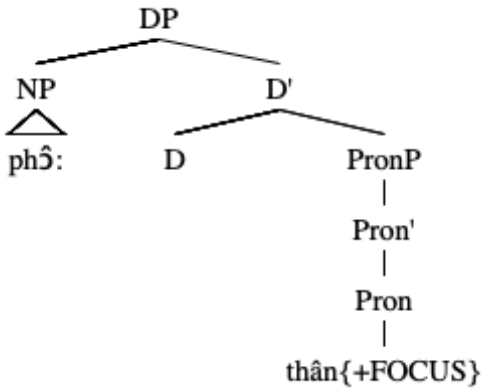
The structure for the noun phrase *phô: thân* 'father he' in (44) is illustrated in (45a). Notice that this is similar to the structure of the noun phrase containing a classifier phrase where the Clf head itself can contain the [+FOCUS] feature, exemplified in (45b).

(44) **phô: thân**$_{[+FOCUS]}$ chɔ́:p sûa màj

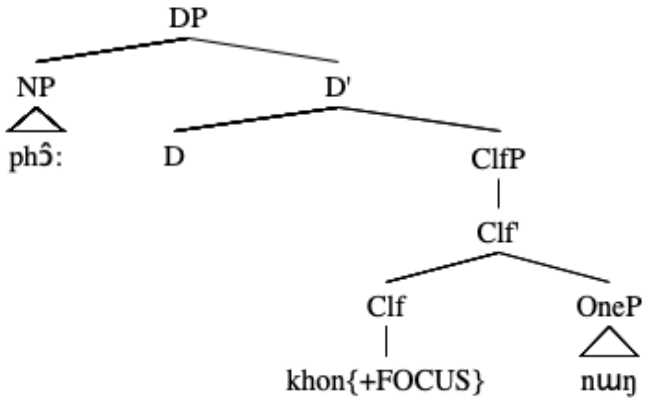
father he like shirt new

'DAD likes the new shirt.'

(45) a. Pronominal phrase



b. Classifier phrase



2.3.3 Classifiers are grammaticalized nouns

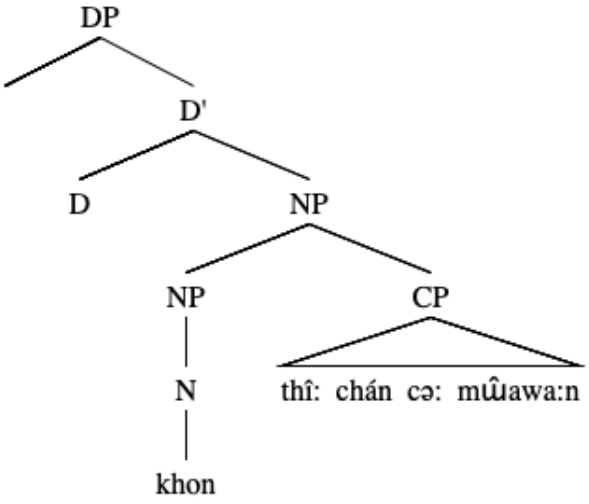
As mentioned above, classifiers license NP-ellipsis, and this elided NP is easily recoverable from the context. In terms of semantics, the reason why they can appear alone in the RD construction without being semantically awkward is that they are grammaticalized nouns. Some words such as *khon* 'person' can be used as either a noun or a classifier. Although they can occur at the same position on the surface, they belong to different positions in the syntactic

structure. Since they do not function the same in the sentence, their interpretations are different, as exemplified below. Again, NP-movement is assumed but not shown here.

(46) a. [[$_N$ khon] thî: chán cə: mûawa:n] khɯ: phûan chán

person REL I met yesterday COP friend me

'The person who I met yesterday was my friend.'

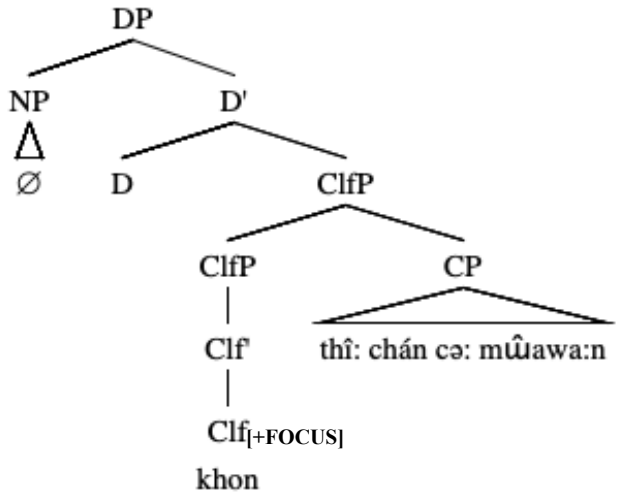


b. [[$_{N}$ ∅][$_{Clf}$ khon] thî: chán cə: mûawa:n] khɯ: phûan chán

Clf^{person} REL I met yesterday COP friend me

'The one who I met yesterday was my friend.'

(*khon* refers to a singular and specific human in the discourse)

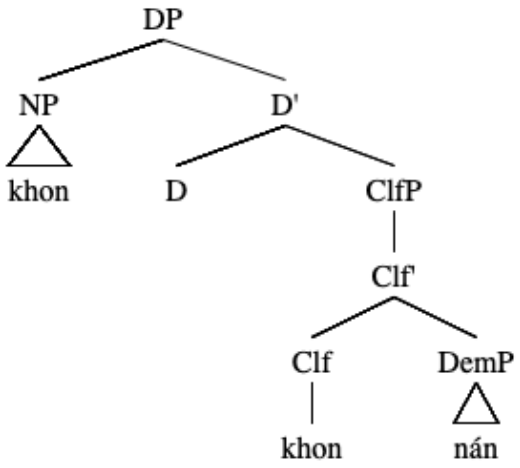


The last example illustrates the case in which identical N and Clf occur together within the same DP, confirming that they are two separate elements despite their similar position when occurring alone on the surface.

(47) [[$_{N}$ khon] [$_{Clf}$ khon] nán] khɯ: phûan chán

person Clf^{person} DEM COP friend me

'That person is my friend.'



In conclusion, the classifier in classifier-headed modifier constructions exhibits three properties that enable it to facilitate the ease of right-dislocation. First, it is common for nominals to occur in dislocated positions. Since the classifier-headed modifiers appearing in the right-dislocated position are not standalone modifiers but full nominals containing an elided head noun, it is not surprising that they can undergo right-dislocation with ease. Second, the right peripheral position serves as a locus for constituents expressing discourse-new information. The classifier, behaving like a focal element, can occupy this position without causing semantic awkwardness. Finally, certain classifiers are grammaticalized nouns, which can be be interpreted similarly to their head nouns. This characteristic allows them to effectively serve as placeholders in the right-dislocated position.

2.4 The complex structure requirement of right-dislocation

In this section, I address the question of why reduplicated and intensified adjectives as well as relative clauses and prepositional phrases can be right-dislocated without the presence of the classifier or any focal markers. I propose that all right-dislocated modifiers in Thai must obey the complex structure requirement, as illustrated in (48). The definition of structurally complex modifiers is given in (49). This explains why single adjectives or prepositions cannot undergo RD. The condition is stated below.

(48) The complex structure requirement

Only structurally complex modifiers can be right-dislocated without focal elements.

(49) Structurally complex modifiers:

A modifier XP is structurally complex iff it contains another phrase or is contained within a larger phrase.

This condition excludes irrelevant right-dislocated constituents in terms of structural complexity. I propose that right-dislocated constituents are structurally complex if they contain embedded phrases. Therefore, this condition precludes the structurally 'simple', i.e. non-embedded, constituents in the right-dislocation construction (the right-dislocated constituents are bracketed):

(50) a. *chán hěn **dèk** mûawa:nní: [$_{AdjP}$ **sŭ:ŋ**]

I see child yesterday tall

'I saw a child yesterday, tall.' (lit.)

b. *chán hěn **dèk** mûawa:nní: [$_{AdjP}$ **khajăn**]

I see child yesterday diligent

'I saw a child yesterday, diligent.' (lit.)

c. *chán hěn **dèk** mûawa:nní: [$_{AdjP}$ **talòk**]

I see child yesterday funny

'I saw a child yesterday, funny.' (lit.)

Therefore, if the right-dislocated constituents in (50) are embedded, the first condition will be met, as exemplified in (51).

(51) a. chán hěn **dèk** mûawa:nní: [$_{ClfP}$ **khon** [$_{AdjP}$ **sŭ:ŋ**]]

I see child yesterday CLF tall

'I saw a child yesterday, the tall one.'

b. chán hěn **dèk** mûawa:nní: [$_{ClfP}$ **khon** [$_{AdjP}$ **khajăn**]]

I see child yesterday CLF diligent

'I saw a child yesterday, the diligent one.'

c. chán hěn **dèk** mûawa:nní: [$_{ClfP}$ **khon** [$_{AdjP}$ **talòk**]]

I see child yesterday CLF funny

'I saw a child yesterday, the funny one.'

In (51), the right-dislocated adjectives are embedded within the classifier phrase, hence satisfying the condition in (48). Likewise, the reduplicated adjective contains an adjective that is embedded in another one, as in (52a). Moreover, the intensified adjective contains an embedded adverb, as in (52b).

(52) a. chán hěn **dèk** mûawa:nní: [[$_{AdjP}$ **sŭ:ŋ**] $_{AdjP}$ **sŭ:ŋ**]

I see child yesterday tall tall

'I saw a child yesterday, pretty tall.'

b. chán hěn **dèk** mûawa:nní: [[$_{AdvP}$ **khô:t**] $_{AdjP}$ **sŭ:ŋ**]

I see child yesterday very tall

'I saw a child yesterday, very tall.'

The complex structure requirement can also explain why prepositional phrases can be right-dislocated without the classifier: they consist of a preposition and an embedded NP.

(53) chán hěn **dèk** mûawa:nní: [$_{PP}$ [$_{P}$ **cà:k**] [$_{NP}$ **ci:n**]]

I see child yesterday from China

'I saw a child yesterday, from China.'

As expected, if there was no embedded NP in this phrase, then it would be ungrammatical. Some prepositions, such as *bon* 'on', illustrate ungrammaticality when their structures are not complex, i.e. when used without an NP object (54a). However, if an NP object (54b) or a classifier (54c-d) is added, it makes the structure more complex and the phrase containing those prepositions becomes grammatical.

(54) a. *jìp sûa hâj chàn nɔ̀j [$_{PP}$ [$_{P}$ **bon**]]

get shirt for me please on

'Please get that shirt for me, the one above.' (intended)

b. jìp sûa hâj chàn nòj [PP [P **bon**] [NP **tó?**]

get shirt for me please on table

'Please get that shirt for me, the one on the table.'

c. jìp sûa hâj chàn nòj [ClfP **tua** [PP [P **bon**]]]

get shirt for me please Clf on

'Please get that shirt for me, the one above.'

d. jìp sûa hâj chàn nòj [ClfP **tua** [PP [P **bon**] [NP **tó?**]]]

get shirt for me please Clf on table

'Please get that shirt for me, the one on the table.'

The reason why the structures of right-dislocated constituents have to be complex might have to do with the fact that intonational main contour only arises in structurally complex constituents. In other words, structurally complex constituents, regardless of their syntactic forms, demand a sentence-like intonational contour for naturalness. Without this intonational main contour, they may sound odd. The example in (55) illustrates the right-dislocated prepositional phrase in Dutch where a second intonational main contour arises, containing its own pitch accent (de Vries 2016, p. 644, building on the idea of Truckenbrodt 2015). Sentence accents are indicated by small caps indicate, and a major rise or fall in pitch are represented by slash (/) and backslash (\), respectively.

(55) Joop had iets interessants gelezen: een ar/TIkel over TAAL\kunde

Joop had sth. interesting read an article on linguistics

'Joop had read something interesting, an article on linguistics.'

Turning back to Thai, if the right-dislocated constituents are not structurally complex, no intonational contour will be present.

(56) a. jìp sûa hâj chàn nɔ̀j [$_{PP}$ [$_{P}$ b/on] [$_{NP}$ tó\ʔ]

get shirt for me please on table

'Please get that shirt for me, the one on the table.'

b. jìp sûa hâj chàn nɔ̀j [$_{ClfP}$ t/ua [$_{PP}$ [$_{P}$ bon] [$_{NP}$ tó\ʔ]]]

get shirt for me please Clf on table

'Please get that shirt for me, the one on the table.'

c. *jìp sûa hâj chàn nɔ̀j [$_{PP}$ [$_{P}$ bon]]

get shirt for me please on

'Please get that shirt for me, the one above.' (intended)

Likewise, structurally simple adjectives cannot be right-dislocated because they also lack the intonational contour[16].

(57) *sûa khɔ̌:ŋ thə: sŭaj mâ:k [$_{AdjP}$ [$_{Adj}$ dɛ:ŋ]

shirt of you beautiful very red

'*Your shirt is really beautiful, red.'

[16] On the other hand, the exception occurs if the structurally simple adjective *dɛ:ŋ* is emphasized. When this occurs, the intonational contour arises and the vowel becomes longer. I leave the topic on the role of prosody in the structure of Thai right-dislocation for future research.

sûa khɔ̌:ŋ thə: sŭaj mâ:k [$_{AdjP}$ [$_{Adj}$ /dɛ::ŋ\]
shirt of you beautiful very red
'Your shirt is really beautiful, RED.'

All of the data above have pointed to one conclusion: reduplicated/intensified adjectives, and prepositional phrases can be right-dislocated without their accompanying classifiers because they are structurally complex; and the reason behind this complex structure requirement has to do with the presence of the intonational contour[17].

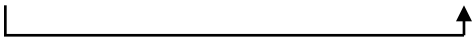
2.5 Relative clauses at the edge

2.5.1 Extraposition vs. Right-dislocation

Previous studies of RD provide a clear distinction between right-dislocated and extraposed constituents: while dislocation is concerned with a constituent that appears at the outer edge of a 'gap-less' clause, extraposition features a displaced constituent that leaves behind a gap in the matrix (host) clause. Therefore, since a relative clause that appears at the right edge of the clause leaves behind the gap in the host clause, it is usually categorized as a form of extraposition rather than dislocation. That is to say, extraposed relative clauses involve movement out from the host DP to the right sentence periphery. Below, the extraposed relative clause is illustrated in the bracket while the empty category (*e*) represents the gap in the host clause.

[17] This, in turn, offers prosodic evidence to back my assertion that right-dislocated modifiers should be analyzed as afterthoughts rather than backgrounded constituents. According to Truckenbrodt (2015), the intonational distinction between afterthought and backgrounding lies in the former carrying sentence stress and requiring an obligatory pause before the dislocated constituent, whereas the latter does not.

(58) chûaj du: [$_{DP}$ dèk e_1] hâj nɔ́j [$_{CP}$ thî: kamlaŋ wîŋ lên naj khrua]$_1$



help watch kid ASP ADV that PROG run play in kitchen

'Please watch the kids __ for me, who are running around in the kitchen.'

This way of analysis is known as the subtraction analysis first proposed by Ross (1967). In this analysis, the extraposed constituent is extracted out of its host and right adjoins to what Ross called the first cyclic node, i.e. CP.

If instead we analyze the construction in (58) using the non-movement approach, we would expect no gap inside the matrix clause. If there was no gap, the extraposed relative clause would not be derived via movement from the host clause, in contrast to Ross' analysis of extraposition above. One of the recent non-movement analyses of RD — the biclausal analysis — treats the right-dislocated constituent as occurring in a juxtaposed semantic-equivalent clause and hence unrelated to the noun in the host clause (Kuno 1978; Park and Kim 2009; Takita 2014; Tanaka 2001; Truckenbrodt 2013, 2016; Whitman 2000, among others). The initial attempt to apply this analysis to the Thai sentence in (58) is illustrated in (59) below.

(59) [$_{CP1}$ chûaj du: [$_{DP}$ dèk] hâj nɔ́j]

help watch kid ASP ADV

[$_{CP2}$ ~~chûaj du: [$_{DP}$ dèk~~ [$_{CP}$ thî: kamlaŋ wîŋ lên naj khrua] ~~hâj nɔ́j~~]

help watch kid that PROG run play in kitchen ASP ADV

'Please watch the kids for me, who are running around in the kitchen.'

In (59), the relative clause in the second clause (CP_2) is not associated with the noun *dèk* in the first clause (CP_1). Instead, it directly modifies the same noun in the second clause, which consecutively undergoes ellipsis[18]. Therefore, given the problem regarding VP-fronting in Ross' approach, this RD analysis seems to be an alternative to analyze the kind of relative clauses we see above. This, however, begs the question about the terminological difference between extraposition and RD, whether the idea we see above — extraposition leaves a gap but dislocation does not — is really accurate. Perhaps, the analysis of extraposition that does not involve movement from the host clause (i.e. does not leave a gap) is just not different from that of RD.

There are also other reasons to believe that Thai extraposed relative clauses might not involve movement from the host clause. Since they are not directly associated with their head noun in the host clause, there is no gap to leave, hence resembling the analysis of RD rather than extraposition. Before we determine whether this type of relative clauses should be considered as RD or extraposition, let us collectively call them "right-periphery relative clauses". Thus, throughout this section, the term right-periphery relative clauses refers to relative clauses that occur at the end of the sentence, regardless of whether they are right-dislocated or extraposed.

The first reason that right-periphery relative clauses might not involve movement from the host clause is that Thai relative clauses can appear "headless", i.e. without the associated head noun. If the identity of the head noun is already known by the interlocutors, it can be omitted completely. In the example below, the omitted constituent could be any DP that is referential with 'that child' such as 'the girl', 'the student', etc.

[18] The detailed analysis of RD is provided in the following section (section 3).

(60) [*e* thî: chán rú:càk] khɯ: dèk khon nán

REL I know BE child CLF Dem

‘__ that/who I know is that child.’

Therefore, while other kinds of nominal modifiers such as adjectives generally occur close to the head noun, relative clauses can occur on their own and the reference of the head noun can be recovered from the context. Because native speakers can easily process headless relative clauses when the proper context is given, right-periphery relative clause (with an omitted head) should not be processed with much difficulty. The reason why some speakers do not like right-periphery relative clauses might have to do with the adequacy of the context given, as well as, just as extraposed constituents in general, the weight of the relative clause. We still need more empirical evidence to ensure that Thai speakers really permit extraposition, however.

Second, the movement account of extraposition usually associates the moved element (extraposed relative clause) with its head noun in the host clause. This seemingly clear picture, however, is blurred by the fact languages such as Thai can omit the head noun anywhere when the proper context is given. For example, if the interlocutors know which kids they are referring to in the context, the sentence below can be used naturally.

(61) chûaj du: hâj nɔ́j [thî: kamlaŋ wîŋ lên naj khrua]

help watch ASP ADV that PROG run play in kitchen

‘Please watch (the kids) for me, who are running around in the kitchen.’

In this sentence, the noun 'the kids' is dropped within the matrix clause. It makes natural sense to assume that this noun undergoes *pro*-drop, whereas the one that heads the relative clause is omitted, resulting in the headless relative construction, as illustrated in (62). This fact confirms that there need not be a gap inside the matrix clause.

(62) chûaj du: *pro* hâj nɔ́j [~~dèk~~ thî: kamlaŋ wîŋ lên naj khrua]
help watch ASP ADV kid that PROG run play in kitchen
'Please watch the kids for me, who are running around in the kitchen.'

Lastly, the movement facts between complement and adjunct extraposition that hold in many languages suggest that right-periphery relative clauses in Thai do not seem to involve movement. Fox and Nissenbaum (1999) propose that complement extraposed constituents involve movement. They show that there exists a distinction between complement and adjunct extraposition with regards to movement: only constituents of the former behave like moved constituents. Because of this difference, adjunct extraposition cannot have the same derivation as complement extraposition. Fox and Nissenbaum analyze adjunct extraposition as the result of post QR merger of an adjunct.

Below I show that such a discrepancy between complement and adjunct extraposition does not hold in Thai by using the diagnostics presented in Fox and Nissenbaum 1999. The results show that the complement relative clauses and complement prepositional phrases in Thai behave different from their English counterparts.

The first type of restriction imposed on extraposition has to do with the extraction effect on definite NPs. Fox and Nissenbaum illustrate that while complement extraposition in English shows the definiteness restriction when the extraposed constituent is extracted, ad-

junct extraposition behaves like it has not been extracted out of the source NP, as in (63a). On the other hand, complement extraposition and adjunct extraposition in Thai both result in ungrammaticality (63b). Note that in both languages, the prepositional phrases are associated with the noun *the (best) picture* or *phaap nán*, not the verb.

(63) Definiteness

a. English

Complement extraposition

??I saw the (best) picture yesterday of the museum.

Adjunct extraposition

I saw the (best) picture yesterday from the museum.

b. Thai

Complement extraposition

chán hĕn phâ:p nán mûawa:n khɔ̆:ŋ phíphítthaphan

I see picture DEM yesterday of museum

'I saw that picture yesterday of the museum.'

Adjunct extraposition

chán hĕn phâ:p nán mûawa:n cà:k phíphítthaphan

I see picture DEM yesterday from museum

'I saw that picture yesterday from the museum.'

In the Thai examples, no ungrammaticality has been found, implicating that movement might have not taken place in these examples.

Second, extraction of a constituent is possible out of coordination only if it occurs across the board (ATB). Fox and Nissenbaum show that displacement is attested ATB in complement extraposition but not in adjunct extraposition. Thus, the constituent is moved only in complement extraposition but not in adjunct extraposition. On the other hand, both of the Thai examples below are ungrammatical, similar to the English adjunct extraposition. This thus indicates that there is no ATB extraction and that the constituent might not move.

(64) Coordination

a. English

Complement extraposition

I wanted to [present an argument__] and [discuss evidence__]

very badly that what John told me is right.

Adjunct extraposition

*I wanted to [present an argument__] and [discuss evidence__]

very badly that John told me about.

b. Thai

Complement extraposition

*chán jà:k [sanə̌: hè:tphŏn __] lɛ́ʔ [phítca:rana: làkthă:n __]

I want present argument and discuss evidence

jà:ŋmâ:k thî:wâ: cɔ:n bɔ̀:k chán wâ: man thù:k

badly that John tell me that it right

'I wanted to present an argument and discuss evidence very badly that what John told me is right.'

Adjunct extraposition

*chán jà:k [sanə̌: hè:tphɔ̌n __] lɛ́ʔ [phítca:rana: làkthă:n __]

I want present argument and discuss evidence

jà:ŋmâ:k thî: cɔ:n phû:tthŭŋ

badly that John mention

'I wanted to present an argument and discuss evidence very badly that John talked about.'

Finally, complement extraposition licenses Parasitic Gaps, suggesting that it is derived by movement of the extraposed constituent. Adjunct extraposition, on the other hand, cannot license Parasitic Gaps and must be derived by some other manner (i.e. late merger, according to Fox and Nissenbaum). However, the ungrammaticality shown in the Thai examples suggests that both the complement and adjunct PPs do not license Parasitic Gaps.

(65) Parasitic Gaps

a. English

Complement extraposition

I read [a book __] before reading [an article __] about John

Adjunct extraposition

*I read [a book __] before reading [an article __] from John's library

b. Thai

Complement extraposition

*chán ʔà:n [năŋsŭ: __] kɔ̀:n ʔà:n [bòtkhwa:m __]

I read book before read article

kiawkap coon

kìawkàp cɔ:n

'I read a book before reading an article about John.'

Adjunct extraposition

*chán ʔà:n [nǎŋsŭ: __] kɔ̀:n ʔà:n [bòtkhwa:m __]

I read book before read article

cà:k hôŋsamùt cɔ:n

from library John

'I read a book before reading an article from John's library.'

The data above suggest that English and Thai may need different approaches of analyzing extraposition. While English needs two separate analyses for complement and adjunct extraposition, it could be that extraposition in Thai does not involve movement or it is not employed at all in the definite, coordinate, and parasitic gap constructions. Because all these facts about the right-periphery relative clauses seem to favor the non-movement approach rather than the movement one, the picture regarding the difference between extraposition and RD now become clear: if movement does not take place, then there is no difference between extraposed relative clauses and RD. In chapter 3, I will demonstrate that both extraposition and RD can be analyzed using the same approach, namely the biclausal approach.

2.5.2 No evidence of movement from other types of extraposition

We have seen in chapter 2 that Thai is claimed to lack extraposition in general. However, the right-periphery (non-classifier-headed) relative clause like (66) is not ungrammatical.

(66) chán hěn **dèk** mûawa:nní: **[thǐ: kèŋkèŋ]**
I see child yesterday REL smart.smart
'I saw a child yesterday, who is pretty smart.'

Putting aside the possibility of the RD analysis, would it be adequate to say that Thai does not entirely lack extraposition but allows it to some certain degree? If so, why extraposed relative clauses are not as bad as other kinds of extraposed constituents in Thai? The examples from the previous chapter are reproduced below.

(67) a. Comparative clause extraposition
pâ: thamŋa:n [nàk t_i] tâŋtɛ̀: sǎ:wsǎ:w ***[kwà:** **phûan]**$_i$
aunt work hard since young more.than friend
'My aunt has worked harder since she was young than her friends.' (Intended)

b. Second conjunct extraposition
chán hěn [luŋ t_i] thî: hâ:ŋ mûawa:nní: ***[lɛ́ʔ** **pâ:]**$_i$
I see uncle at mall yesterday and aunt
'I saw my uncle at the mall yesterday and my aunt.' (Intended)

c. PP complement extraposition
pâ: [nɯ̀aj t_i] tâŋtè:: sǎ:wsǎ:w ***[kàp** **lǎ:n]**$_i$

aunt tired since young with grandchildren

'My aunt has been tired since she was young of her grandchildren.' (Intended)

The examples in (67) are uncontroversially ungrammatical, suggesting that movement cannot take place in these constructions. This fact thus accounts straightforwardly for the unavailability of the movement analysis of extraposed relative clauses.

On the other hand, one could argue that the source of ungrammaticality does not involve movement but comes from the weight of the extraposed constituents. That is, if the extraposed constituents are too light, whether syntactic or phonological, the sentence will become ungrammatical. However, adding weight to the extraposed constituents in (67) does not ameliorate the grammaticality of those sentences. The instances of "heavy" extraposed constituents are illustrated in (68). Note that the sentences are still considered ungrammatical by native speakers. Because there is no evidence for movement from these extraposed clauses, it points to the conclusion that movement from the host clause is not a necessary ingredient for the analysis of extraposition in Thai.

(68) a. Comparative clause extraposition

pâ: thamŋa:n [nàk t_i] tâŋtɛ̀: sǎ:wsǎ:w

aunt work hard since young

***[kwà: phûan thúk khon thî: thə: mi:]**$_i$

more.than friend all CLF REL she have

'My aunt has worked harder since she was young than all the friends that she has.'

(Intended)

b. Second conjunct extraposition

chán hěn [luŋ t_i] thî: hâ:ŋ mûawa:nní:

I see uncle at mall yesterday

***[lɛ́ʔ lû:klû:k thî: phôŋ rian còp cà:k mahă:laj]**$_i$

and children REL just study end from university

'I saw my uncle at the mall yesterday and his children who have just graduated from a university.' (Intended)

c. PP complement extraposition

pâ: [nùaj t_i] tâŋtè: săawsăaw

aunt tired since young

***[kàp lă:n thî: tɔ:nní: pen selép chûː daŋ khɔ̌:ŋ mɯaŋthaj]**$_i$

with grandchild REL now COP celebrity famous of Thailand

'My aunt has been tired since she was young of her grandchild who is now a famous celebrity of Thailand.' (Intended)

2.6 Summary

In this section, the two types of right-dislocated nominal modifiers — classifier-headed and non-classifier-headed modifiers — were investigated. First, we observed that when a modifier is headed by a classifier, creating a classifier phrase, it can undergo RD with ease. However, if a modifier appears alone without a classifier, only certain types of modifiers may be placed in that position. Second, I illustrated that non-classifier-headed demonstratives and a non-classifier-headed indefinite modifier (deaccented numeral 'one') form a natural class

called deictic modifiers, following Jenks (2011). The reason why both of these modifier types cannot appear in the right-dislocated position alone has to do with the fact that deictic modifiers must always be accompanied by a classifier. Third, I illustrated that the classifier in the classifier-headed modifier construction can license the ellipsis of the noun, that it exhibits certain properties akin to a focal element, and that it is a grammaticalized noun. Consequently, the classifier-headed modifiers appearing in the right-dislocated position are not merely standalone modifiers, but rather modifiers with an elided head noun. Next, I investigated non-classifier-headed modifiers and discovered that right-dislocation can only occur when the modifiers are structurally complex. This clarification elucidates why standalone adjectives are unable to appear in the right-dislocated position, whereas reduplicated and intensified (adverbial-modified) adjectives, as well as prepositional phrases, can. Finally, I suggested that there is no clear structural difference between extraposed relative clauses and right-dislocated modifiers in Thai. I argue that both of these constructions do not necessarily exhibit a direct connection with the noun correlate in the host clause and do not behave as if they were moved out of their host clause, thereby supporting a non-movement analysis.

CHAPTER 3

THE BICLAUSAL ANALYSIS OF RIGHT-DISLOCATED MODIFIERS

In this chapter, I adopt a version of the "biclausal" analysis proposed by de Vries (2009a, 2013), Ott (2012, 2015), and Ott and de Vries (2012, 2016) to account for right-dislocation in Thai. The goal is to demonstrate whether the properties of right-dislocation observed in Germanic languages can be applied to a non-related language like Thai. I will illustrate that there are two main types of right-dislocation — backgrounding and afterthought — and right-dislocated modifiers in Thai are of the afterthought type since they express discourse-new information. The biclausal analysis argues that right-dislocation constructions are underlying biclausal structures, in which two clauses are juxtaposed. Within the second clause, the dislocated peripheral XP (or dXP) is fronted to the edge of the clause and the remainder undergoes ellipsis. The host of the first clause (the "correlate") has a cataphoric (or anaphoric) relation to the dXP. The representation is schematized below.

(1) $[_{CP1}$ . . . correlate . . .] $[_{CP2}$ dXP_i [~~. . . t_i . . .~~]]

The chapter is outlined as follows. In section 3.1, I discuss the interface between the syntactic structure and meaning of linguistic utterances, namely information structure. I in-

troduces various discursive terms and demonstrate how word order and sentence structure are influenced by the communicative goals and intentions of speakers. Section 3.2 introduces two types of right-dislocation: "backgrounding" and "afterthought", as well as two subtypes of afterthought: "specificational afterthought" and "predicative afterthought". It also highlights the asymmetries between backgrounding and afterthought, as well as specificational and predicative afterthoughts. Section 3.3 presents the previous analyses of right-dislocation, with a focus on the biclausal analysis. The biclausal analysis explains that right-dislocated constituents or dXPs are "fragments", meaning remnants resulting from the subsequent deletion of redundant material in CP2, as shown in structure (1). This section also presents arguments that support the idea that right-dislocated constituents exhibit clause-external properties and demonstrates that they are underlyingly clausal. Section 3.4 examines the Thai right-dislocated data, considering the distinction made by Ott and de Vries (2016). I suggest that right-dislocated classifier-headed modifiers in Thai can be categorized as specificational ATs because they provide specific information that clarifies or specifies the meaning of the correlate. On the other hand, right-dislocated non-classifier-headed modifiers can be considered predicative ATs since they function as predicates, attributing a certain property or characteristic to the referent of their correlate. Section 3.5 provides a conclusion.

3.1 Information structure

One of the most fundamental criteria in classifying languages concerns the distribution of basic elements within a sentence. In linguistic typology, the word order that is unmarked (i.e. pragmatically neutral) is typically referred to as the *canonical* word order. For example, while

the canonical word order in Thai and English is SVO, that in Japanese and Burmese is SOV. In daily conversations, however, interlocutors barely use sentences that are pragmatically neutral. When they converse, they share a *common ground* — the set of propositions that are presumed to be common knowledge among all the interlocutors in a conversation (Stalnaker 1974) — at a particular moment. Because the interlocutors keep updating this common knowledge when they communicate, i.e. keep adding information to certain referents or events, sentences are not always uttered in a canonical order. The packaging of information, i.e. the set of linguistic mechanisms that organize and convey an information in a discourse, is called *information structure* (Lambrecht 1994). Two relevant concepts claimed to play a role in the study of information structure are *givenness* and *focus*[19] (Krifka 2007; Krifka and Féry 2008; Ladd 1980; Rooth 1992, among others). Focus is typically associated with new, non-presupposed information and can also indicate alternatives relevant for the interpretation. Ladd (1980) proposes that there are three types of focus structures: broad, narrow and contrastive focus. The examples are given below. The domain where the focus constituent occurs is represented with the subscript F.

(2) Focus structures

a. Broad focus: What happened? — [Nit ate a grasshopper.]$_F$

b. Narrow focus: What did Nit eat? — She ate [a grasshopper.]$_F$

c. Contrastive focus: Did Noi eat a grasshopper? — [Nit]$_F$ ate a grasshopper.

[19] Givenness and focus are not the only notions that are crucial in explaining information structure. In fact, *topic* and *comment* appear to be used widely as well in the previous studies related to the right-dislocation phenomenon. In this dissertation, the terms focus and comment will be used interchangeably to refer to old or given information, while givenness and topic will refer to new information.

We can see that the focused constituents in all of the above answers represent new information as they have never been mentioned before. The notion of focus must be distinguished from that of givenness in that the latter refers to the background of an utterance, i.e. a constituent that has been mentioned before or given in a context (i.e. old information). This term has been used interchangeably with *topic* (Erteschik-Shir 1997; Erteschik-Shir 2007; Lambrecht 1994; Rizzi 1997, among others)[20]. The answer to the question below shows that it is a background/given information since it has already been mentioned in the question and hence is assumed to be familiar with the interlocutors. The domain of the background constituent is represented with the subscript BG.

(3) Background: Did Nit eat a grasshopper? — Yes, [Nit ate a grasshopper.]$_{BG}$

Information structure has been argued to have an impact on word order, meaning that the notions of givenness (topic) and focus can often alter the canonical word order of a particular language. Below is an example of how word order can change through the process of topicalization (or fronting) in Thai (Warotamasikkhadit 1979, p. 303).

(4) a. SVO

dichán klìat [phû:cha:j khon nán] mâ:k

I hate man CLF that much

'I hate that man a lot.'

[20] However, some linguists such as Fábregas (2016), Fanselow (2006), López (2009), and Rubio (2014), have argued that the definition of topic (and comment) is not precise and thus falls short in capturing a broad range of natural phenomena.

b. OSV

[phû:cha:j khon nán] dichán klìat mâ:k

man CLF that I hate much

‘That man I hate a lot.’

The sentence in (70a) illustrates the canonical SVO word order in Thai, whereas in (70b), the object ‘that man’ is topicalized to the position at the left sentence edge. Topicalization and other related left-edge phenomena have been extensively explored in Thai syntax literature, but only a handful of studies have delved into the phenomenon of RD.When RD is mentioned, it is typically introduced with only a few examples and little elaboration. For instance, Warotamasikkhadit (1979, p. 304) discusses the movement of arguments to the end of the sentence, dubbing it “backing topicalization”. Depending on the level of emphasis, an argument can be relocated to the end or middle of a sentence. In sentence (5b), the subject ‘father’ is right-dislocated to the end of the sentence, where it gets emphasized.

(5) a. Canonical word order

phɔ̂: cà paj nǎj

father will go where

‘Where are you going?’

b. RD

cà paj nǎj phɔ̂:

will go where father

‘Where are you going, Father?

Furthermore, Iwasaki and Ingkaphirom (2005) provide a couple of examples of "appended modifiers", which are nominal modifiers that occur in the position after a complete sentence. While these amount to the existence of the right-dislocated modifiers in Thai, the true question lies in the syntactic relationship between the right-dislocated constituents and the noun they are associated with (the correlate). Do these constituents simply appear further away from their head noun within the clause, or is there something different about their placement?

3.2 Two types of RD: backgrounding and afterthought

3.2.1 An overview from Ott and de Vries (2016)

The term RD has been used somewhat confusingly in the literature as a cover term for various phenomena related to discontinuous noun phrases. In this chapter, we adopt the distinctions made by Ott and de Vries (2016), Kalbertodt (2019), Averintseva-Klisch (2009), among others, classifying RD into two subtypes: backgrounding and afterthought (henceforth AT)[21]. The AT type of RD can be further classified into two subtypes: specificational and predicative ATs, depending on their semantic relationship with the head noun. All of them are schematized below.

[21] These phenomena have been differentiated both phonologically and syntactically from extraposition. We will discuss this matter in section 3.6 when we cover relative clauses.

(6)

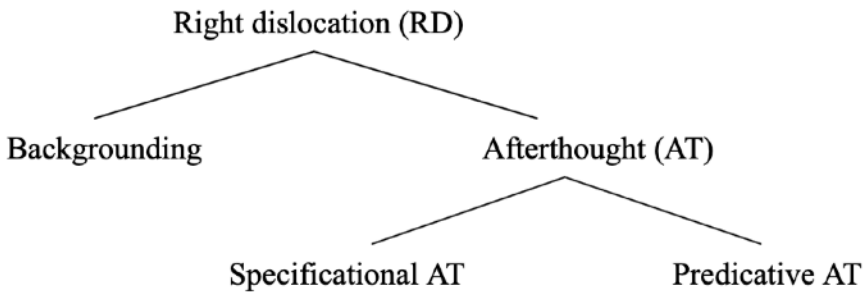


Figure (1): Right-dislocation classification

Backgrounding is used to shift non-prominent or less important information to the right periphery, indicating a lower degree of relevance or prominence. It helps to set the background context or provide additional details that are not crucial to the main message of the sentence. AT, on the other hand, involves placing a constituent at the right edge of the sentence as an afterthought or added information. It can be further classified into two subtypes: specificational AT and predicative AT. Specificational AT is used to provide additional specification or clarification about a specific entity or referent mentioned earlier in the sentence. It helps to narrow down the reference or provide more details about a particular element. Predicative AT, on the other hand, involves adding a predicative element at the right periphery of the sentence. It serves to provide additional information about the subject or object of the sentence, often in the form of a predicative adjective or phrase.

All these types of RD are classified based on their differences in discourse functions, but they look quite similar on the surface. They all involve the "host clause" followed linearly by the dislocated constituent (dislocated XP or dXP). The element inside the host clause that is cataphorically linked to the dXP is called the “correlate”. The basic syntactic representation is illustrated below (Ott and de Vries 2016, p. 642).

(7) $\overbrace{[_{CP} \ldots \text{correlate}_i \ldots]}^{\text{host clause}}$ dXP_i

In the backgrounding construction, a host-internal pronoun is a correlate which resumes a discourse topic, and a coreferent deaccented XP is a dXP located at the right sentence edge. German (8a) and Dutch (8b) examples below are taken from Ott and de Vries (2016, p. 643) (low and level intonation is indicated by small italics):

(8) a. A: Kennst du den Peter? — B: Ja, den kenne ich, *den Peter*.
know you the Peter yes him know I the Peter
A: 'Do you know Peter?' — B: 'Yes, I know him, Peter.'

b. Tasman heeft ze gezien, *die Maori's*.
Tasman has them seen those Maoris
'Tasman saw them, those Maoris.'

Note that this backgrounded dXP is discourse-given. The correlate in backgrounding resumes a discourse topic and thus is typically a pronoun or epithet. In AT, on the other hand, the dXP expresses discourse-new information about the referent of its correlate and is consequently realized with focal stress (represented by capital letters). The example from Dutch is shown below (Ott and de Vries 2016, p. 643):

(9) Jan heeft iets moois gebouwd: EEN GOUDEN IGLO
Jan has something beautiful built a golden igloo
'Jan built something beautiful: a golden igloo.'

According to Ott and de Vries, this afterthought type of RD is called “specificational AT”. It should be distinguished from “predicative AT” in that the former is always specificational within the anaphoric juxtaposition of the correlate and dXP while the latter attributes some property to the referent of their correlate rather than specifying it. Another example of specificational ATs is provided in (10a) and a predicative AT is in (10b) (Ott and de Vries 2016, p. 682):

(10) a. Specificational AT

Ich habe einen Star getroffen: DEN JOHN TRAVOLTA!

I have a star met the.ACC John Trovolta

‘I met a star: John Travolta!’

b. Predicative AT

Ich habe den John Travolta getroffen, EIN BERÜHMTER STAR!

I have the John Travolta met a.NOM famous.NOM star

‘I met John Travolta, a famous star!’

3.2.2 Asymmetries between Backgrounding and ATs

A number of asymmetries between ATs and backgrounded dXPs that lead Ott and de Vries to assume that the former are plausibly taken to be structurally unconnected expressions, whereas the latter bear a syntactic relation to their host. Ott and de Vries illustrate that ATs but not backgrounded dXPs permit sentence adverbs and discourse particles, as observed by Averintseva-Klisch (2009) and Truckenbrodt (2016), as cited by Ott and de Vries (2016).

(11) a. Maria hat einen Star getroffen, {vermutlich / wohl} DEN JOHN TRAVOLTA.
Maria has a star met presumably PRT the John Travolta
'Maria met a star, presumably John Travolta.'

b. Maria hat ihn getroffen, (*{vermutlich / wohl}) *den John Travolta*.
Maria has him met presumably PRT the John Travolta
'Maria presumably met John Travolta.' (intended)

Truckenbrodt also shows that elements of this kind are licensed only in environments that constitute speech acts, and concludes from this that ATs are speech acts separate from the host clause, whereas backgrounded dXPs and their hosts together constitute a single speech act. Ott and de Vries contribute to this with two observations that uphold this conclusion. First, ATs, unlike backgrounded dXPs, have the ability to diverge from their hosts in illocutionary force. Consider the German example below.

(12) a. Peter hat offenbar irgendeinen berühmten Star getroffen — DEN
Peter has apparently some famous star met the
JOHN TRAVOLTA (vielleicht)?
John Travolta perhaps
'Apparently Peter met a famous star — (perhaps) John Travolta?'

b. *Peter hat ihn offenbar getroffen, *den John Travolta (vielleicht)*?
Peter has him apparently met the John Travolta perhaps
'*Peter apparently met him, (perhaps) John Travolta?'

Furthermore, the propositional meaning of an AT can be negated without affecting the proposition put forth by the host clause:

(13) A: Peter hat einen berühmten Star getroffen: DEN JOHN TRAVOLTA.
Peter has a famous star met the John Travolta
'Peter met a famous star: John Travolta.'
B: Nein, (das war) Bruce Willis (den er getroffen hat).
no that was Bruce Willis who he met has
'No, (it was) Bruce Willis (who he met).'

In this case, B's response doesn't negate the proposition conveyed by A's CP1 (Peter met a famous star), but solely the content of the elliptical CP2 (Peter met John Travolta). Such independent negation is not achievable with backgrounded dXPs.

Because of such asymmetries, Ott and de Vries propose that backgrounding and AT should exhibit two different structures. Under the "biclausal" approach, which analyzes the RD construction as having underlyingly biclausal structures with elided constituents, the CP_1–CP_2 juxtaposition in backgrounding is an instance of specifying coordination in this sense. The two clauses are grammatically equivalent, but stand in an asymmetrical semantic relationship, the linearly second clause specifying the first by adding relevant information to it. The structure of backgrounding from (8b), repeated in (14a) is roughly shown in (14b). This contrasts with the purely discursive anaphoric juxtaposition of host clauses and ATs in (15b), reproduced from (10a) in (15a). The triangle symbol "△" represents an elided structure.

(14) a. Tasman heeft ze gezien, *die Maori's*.

Tasman has them seen those Maoris

'Tasman saw them, those Maoris.'

b. [$_{:P}$ [$_{CP1}$ … ze$_i$ …] [**:** [$_{CP2}$ *die Maori's*$_i$ △]]]

(15) a. Ich habe einen Star getroffen: DEN JOHN TRAVOLTA!

I have a star met the.ACC John Trovolta

'I met a star: John Travolta!'

b. [$_{CP1}$ … einen Star$_i$ …] [$_{CP2}$ DEN JOHN TRAVOLTA$_i$ △]

The coordinated structure in (14b) inherently forms a singular prosodic unit along with a unitary speech act. In contrast, the juxtaposed clauses in the structure of (15b) form distinct speech acts and separate prosodic units. The full derivation of (14) and (15) will be discussed when we cover the biclausal approach in section 3.3.2 and the application of this analysis to Thai will be discussed in section 3.4.

Therefore, the syntactic difference between ATs and backgrounded dXPs in (14) and (15) explains why only ATs can be used by a different speaker: since the host clause and dXP are not structurally connected, they do not represent a unitary speech act. Consider the example in (16), which can be used by speaker B:

(16) A: Maria hat einen Star getroffen — B: DEN JOHN TRAVOLTA!

Maria has a.ACC star met the.ACC John Travolta

A: 'Maria met a star.' — B: '(She met) John Travolta!'

On the other hand, the conversation would be infelicitous if the backgrounded dXP is used by a different speaker, say speaker B. B's response in (17) is peculiar even when the dXP is a discourse topic:

(17) A: Tasman heeft ze gezien. — B: #Die Maori's.
Tasman has them seen those Maoris
A: 'Tasman saw them.' — B: '(He saw) Those Maoris.'

Therefore, the assumption put forth by Ott and de Vries, which posits that backgrounded dXPs are structurally connected with their host clauses, yielding a unified speech act, and that ATs stand independently from their host clauses as instances of "discourse-anaphoric juxtaposition", is ultimately supported by the data presented above.

Given such a distinction above, it is likely that right-dislocated modifiers in Thai are of the AT type since they always express new information rather than resuming discourse topics. In section 3.4, I propose that the two types of right-dislocated modifiers, classifier-headed and non-classifier-headed modifiers, belong to the AT type of RD since both of them express discourse-new information. However, determining which AT subtype they belong to depends on whether they are interpreted as specifications or predicates.

3.2.3 Specificational vs. predicative ATs

Recall that there are two subtypes of ATs: specificational and predicative. The former is always specificational within the anaphoric juxtaposition of the correlate and dXP while the

latter attributes some property to the referent of their correlate rather than specifying it. The sentences below show the difference between these two types.

(18) a. Specificational AT

Ich habe einen Star getroffen: DEN JOHN TRAVOLTA!

I have a star met the.ACC John Trovolta

'I met a star: John Travolta!'

b. Predicative AT

Ich habe den John Travolta getroffen, EIN BERÜHMTER STAR!

I have the John Travolta met a.NOM famous.NOM star

'I met John Travolta, a famous star!'

Ott and de Vries propose that these two subtypes of AT differ in their underlying structures. Specificational ATs (e.g. (18a)) are remnants of a redundant repetition since their meaning is largely redundant except for the discourse-new constituent inside the dXP. On the other hand, predicative ATs (e.g. (18b)) are remnants of predicational copular clauses. The dXP of this type of AT derives from the predicational copular clause in (19a), and its underlying structure and derivation are shown in (19b).

(19) a. Er ist ein berühmter Star.

he is a.NOM famous.NOM star

'He is a famous star.'

b. [$_{CP1}$ ich habe den John Travolta getroffen] [$_{CP2}$ ein berühmter Star$_i$ ~~ist er t_i~~]]

Furthermore, according to Ott and de Vries, the specificational and predicative ATs like (18a) and (18b) yield different interpretations. In (18a), the dXP *den John Travolta* 'John Travolta' is interpreted as a specification. It serves as a referential phrase which identifies *einen Star* 'a star' (*den John Travolta = einen Star*). It is used if the hearer does not know who *einen Star* is, who is then identified as John Travolta. On the other hand, in (18b), the dXP *ein berühmter Star* 'a famous star' is a predicate and is interpreted as a property of John Travolta. It is used if the referent is contextually given: the hearer knows John Travolta, perhaps only by name, but does not know that he is a famous star. In the context of RD in Thai, which will be addressed in section 3.4, I suggest that right-dislocated classifier-headed modifiers can be categorized as specificational ATs. This is because they provide specific information that clarifies or specifies the meaning of the correlate. On the other hand, right-dislocated non-classifier-headed modifiers can be considered predicative ATs. This is because they function as predicates, attributing a certain property or characteristic to the referent of their correlate.

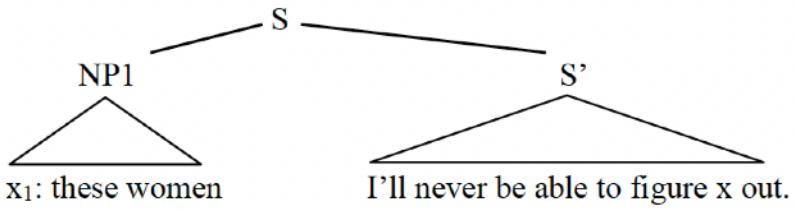
3.3 The previous analyses of RD

3.3.1 The monoclausal analyses

Gundel (1977) proposes that RD is derived from LD (left-dislocation) since the two constructions are similar and hence should share the underlying syntax. She proposes that LD be base-generated in the logical structure of a sentence. According to the *logical structure hypothesis*, left-dislocated phrases are hypothesized to originate in their surface structure position. Assuming the structure in (20) as the underlying logical structure for LD, it follows that the fea-

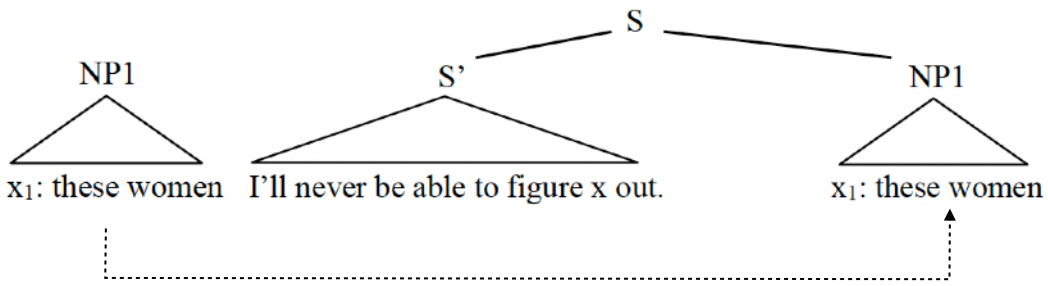
tures of NP1 are copied to the placeholder in S', and this placeholder is pronominalized based on those copied features.

(20) Logical structure of LD (Gundel 1977, p. 55)



To derive RD, NP1 moves to the right of S'. Since this movement occurs after the stress placement rule has already applied, it explains why right-dislocated phrases do not bare stress. The derived structure of RD is presented below.

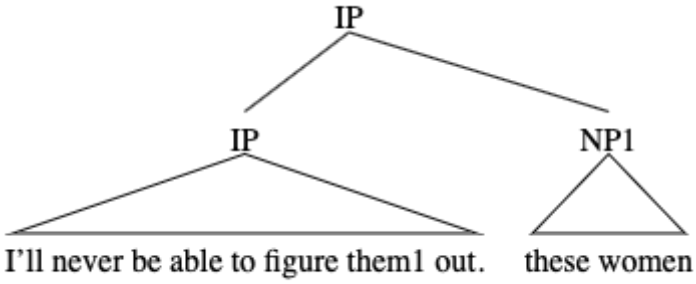
(21) The structure of RD



In contrast to Gundel (1977), Averintseva-Klisch (2009, p. 54) argues against the derivation of RD from LD, citing distinct discursive functions between the two constructions. She argues that while RD marks the discourse topic, whereas LD marks the sentence topic. Instead, she analyzes RD as an adjunct to IP, as illustrated in (22). However, it is unclear

whether Averintseva-Klisch assumes that this dislocated NP1 is base-generated in the adjunct position of IP or it is moved there.

(22) RD as adjunct to IP (modified from Averintseva-Klisch 2009, p. 54)



The monoclausal approaches suggest that the right-dislocated constituents should be connected to the correlate within the same clause. However, as we will explore in the following section, this assumption leads to several problematic issues. We will also observe that analyzing the correlate NP and its dislocated constituent as generated in different clauses can provide more comprehensive explanations and address all the issues that the monoclausal approaches may encounter.

3.3.2 The biclausal analysis

The fact that discontinuous modifiers in Thai appear after a sentence-final particle strongly suggests that they locate outside of the clause. The most accurate way to analyze right-dislocated modifiers in Thai, therefore, is to treat the dislocated constituent as a material that occurs in a different clause. One of such accounts is known as the biclausal analysis (Kuno

1978; Park and Kim 2009; Takita 2014; Tanaka 2001; Truckenbrodt 2013, 2016; Whitman 2000, among others). In particular, de Vries (2009a, 2013), Ott (2012, 2015), Ott and de Vries (2012, 2016) manifest that RD is underlying biclausal, meaning that the dislocated constituent is in a separate clause from the host clause. Then, the clause containing the dislocated constituent undergoes clausal ellipsis, leaving the dislocated constituent as a "remnant" of the ellipsis process.

In the following sections, I present supporting arguments for the biclausal analysis of RD as discussed in Ott and de Vries 2016. The main arguments are in an order below:

- The right-dislocated constituent is a fragment: it is a remnant of the ellipsis operation.
- The right-dislocated constituent is in a separate clause from the clause hosting its antecedent (the host clause): it exhibits the properties incompatible with the movement account, and as such is external to the host clause.
- RD in Thai (both arguments and adjuncts) shares the same properties with those in Germanic languages, as discussed in Ott and de Vries 2016.
- The two subtypes of RD (backgrounding and ATs) have different properties, hence subject to different analyses.

3.3.2.1 Dislocated constituents as fragments

According to the biclausal approach, right-dislocated constituents are fragments (Merchant 2005). These fragments are also called *remnants*, which refers to constituents that survive the ellipsis operation. This biclausal analysis includes RD as part of *clausal ellipsis* phenomena.

van Craenenbroeck and Merchant (2013) define clausal ellipsis as a subtype of ellipsis in which a complete clause is absent, encompassing both the standard subject position and the agreement domain, often while leaving out specific components within the clause. Clausal ellipsis phenomena include sluicing (Merchant 2001; Ross 1967) (23a); stripping (Depiante 2000; Wurmbrand 2017) (23b); fragment answers (Merchant 2005; Temmerman 2013) (23c); or split questions (Arregi 2010) (23d) (all the examples are cited in Fernández-Sánchez 2020, p. 73:

(23) a. John said something, but I couldn't hear what ~~John said~~.

b. Hillary collects stamps and Bill ~~collects stamp~~s too.

c. A: Which exotic fruit did John buy?

B: ~~John bought~~ a kiwano.

d. Which exotic fruit did John buy, ~~did John bu~~y a kiwano?

All of the phenomena in (23a-d) share similar properties. To illustrate, the split question in (23d) involves two structurally similar clauses: CP_E is the elided clause which hosts the remnant; and CP_A for is a host or antecedent clause. Notice that CP_A is semantically similar to CP_E, except that the object in CP_E is a DP, while it is a *wh*-word in CP_A (Arregi 2010). This element in CP_A is called *correlate*, which has a semantic link to the remnant in CP_E. The abstract structure of split questions is represented in (24):

(24) [CP_A correlate …] [CP_E … remnant]

In the case of RD, the remnant is a dislocated constituent, and the correlate is a noun or pronoun that is anaphorically linked to the remnant. Following Ott and de Vries (2016), our analysis for Thai will also follow the two-step derivation. First, the two clauses, called CP_1 and CP_2, are juxtaposed. CP_1 is the host clause containing the correlate and CP_2 contains the dXP, which is anaphorically linked to the correlate in the host clause. Their structures are schematized below.

(25) $[_{CP1}$ . . . correlate . . .] $[_{CP2}$ . . . dXP . . .]

The dXP in CP_2 is fronted to the clause periphery to escape deletion[22], as in (26a). Subsequently, the remainder of the clause is elided at PF, as in (26b):

(26) a. $[_{CP1}$ . . . correlate . . .] $[_{CP2}$ dXP_i [. . . t_i . . .]] → PF-deletion

b. $[_{CP1}$ . . . correlate . . .] $[_{CP2}$ dXP_i ~~[. . . t_i . . .]~~]

To illustrate, consider the examples of backgrounding and specificational ATs given in the preceding section, repeated in (27a) and (27a). According to this proposal, these are represented as shown in (28b) and (28b), respectively (Ott and de Vries 2016, pp. 645-646):

(27) a. Tasman heeft ze gezien, *die Maori's*.
Tasman has them seen those Maoris
'Tasman saw them, those Maoris'.

b. $[_{CP1}$ Tasman heeft ze gezien] $[_{CP2}$ die Maori's$_i$ [~~heeft Tasman t_i gezien~~]]

[22] See Fernández-Sánchez (2020) for an argument against dXP fronting.

(28) a. Ich habe einen Star getroffen: DEN JOHN TRAVOLTA.

I have a star met the John Trovolta

'I met a star, John Travolta'.

b. [$_{CP1}$ Ich habe einen Star getroffen] [$_{CP2}$ den John Travoltas$_i$ [~~habe Ich t_i getroffen~~]]

In these examples, The dXP is fronted to the clause periphery within CP_2. Then, the redundant material in that clause is elided, revealing the surface pattern of RD. Ellipsis creates an anaphoric link between CP_1 and CP_2, in addition to the cataphoric link between the correlate and dXP.

3.3.2.2 The clause-external properties of dXP

According to Ott and de Vries (2016), right-dislocated constituents (dXPs) are traditionally analyzed as internal to the host clause (CP_1). In this subsection, we will explore the clause-external properties exhibited by the dXP, which are not necessarily connected to its correlate in the host clause. Additionally, we will demonstrate that all the clause-internal properties of the dXP can be adequately captured by the biclausal approach.

The monoclausal approaches we have previously encountered syntactically analyze dXPs as being connected to the correlate in the host clause. The explanations for this claim are, for example, the right-dislocated constituent gets assigned a theta-role within the host clause, so it must be originated within that clause. Likewise, the right-dislocated constituent is marked with the same case as the correlate in the host clause. This case matching may suggest that they are actually inside the same clause, and the right-dislocated constituent proba-

bly undergoes movement to the right sentence periphery. The examples below illustrate the case matching (in bold) between the correlate and the dXP in German (p. 658).

(29) a. Ich habe **ihm** geholfen, { **der* / **den* / ***dem***} *Peter*.
I have him.DAT helped the.NOM the.ACC the.DAT Peter
'I helped him, Peter.'

b. Ich habe heute **einen** Star getroffen: **DEN** JOHN TRAVOLTA!
I have today a.ACC star met the.ACC John Travolta
'I met a star today, John Travolta!'

Moreover, RD is argued to have reconstruction effects and island sensitivity, hence implying movement from the host clause. Consider the bound pronouns inside the dXPs in the following examples from German (p. 660).

(30) a. Backgrounding
Die hat doch [jeder Lehrer]$_i$ gerne, *seine$_i$ Schüler*.
them is PRT every teacher likes his students
'Every teacher likes them, his students.'

b. AT
[Jeder Lehrer]$_i$ mag einen Schüler ganz besonders: SEINEN$_i$ KLASSENPRIMUS.
every teacher likes one student very especially his best.in.the.class
'Every teacher likes one student especially: his best student.'

In both cases, the bound readings are available, suggesting the dXPs' traces are c-commanded by the binding correlates in the host clauses.

While these reasonings seem to support the idea that dXPs are syntactically internal to their host clauses, Ott and de Vries argued the biclausal approach can also capture all these facts. Within this approach, theta-role and case assignments do not necessarily occur within the host clause. The assignments can take place in both clauses — the host clause (CP_1) and dXP (CP_2) — because they enter into parallel grammatical relations in each CP. Since ellipsis is part of the biclausal approach, the two clauses must be semantically identical in order for ellipsis to be licensed. The example from Icelandic in (31b) shows that the case assignment in CP_1 and CP_2 occurs in parallel both clauses exhibit parallel syntactic structures (p. 658-659).

(31) a. Ég þekki hana ekkert, *dóttur hans*.
he know her.ACC nothing daughter.ACC his
'I don't know her at all, his daughter.'

b. [$_{CP1}$ ég þekki hana$_{ACC}$ ekkert] [$_{CP2}$ ég þekki ekkert dóttur hans$_{ACC}$] →
[$_{CP1}$ ég þekki hana$_{ACC}$ ekkert] [$_{CP2}$ dóttur hans$_{ACC}$ [~~þekki ég ekkert~~ *t*]]

As for reconstruction effects, positing that the RD is biclausal explains why the c-command relation holds, yielding coreference between the correlate and the right-dislocated anaphor within the elided clause. Likewise, movement out of islands can take place within the elided clause, explaining locality restriction and island sensitivity.

Besides the arguments from Ott and de Vries above, Fernández-Sánchez (2020) argues for the clause-external properties of dXP. First, there is a c-command paradox in the

case of reconstruction. It has been claimed that the principle C violation can be accounted if the dislocated constituent is originated within the host clause (López 2009). Here, the matrix subject *pro* cannot corefer with the R-expression inside the object dXP. The violation is shown in the Spanish example below (Fernández-Sánchez 2020, p. 31).

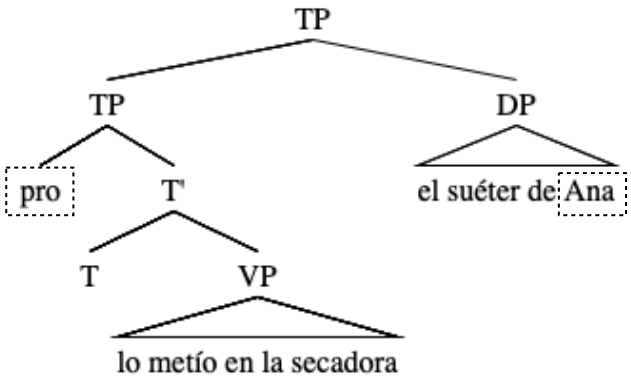
(32) *pro_i lo metío en la secadora, el suéter de [Ana]$_i$

it put in the dryer the sweater of Ana

'(*)She$_i$ put it in the dryer, Ana$_i$'s sweater.

Here, the sentence is ungrammatical because the dislocated constituent *el suéter de Ana* 'Ana's sweater' is interpreted within the host clause and is c-commanded by the preverbal subject *pro*, hence a binding principle C violation. If the dXP *el suéter de Ana* were attached to a position higher than *pro*, as exemplified below, we would expect the coreference to be grammatical.

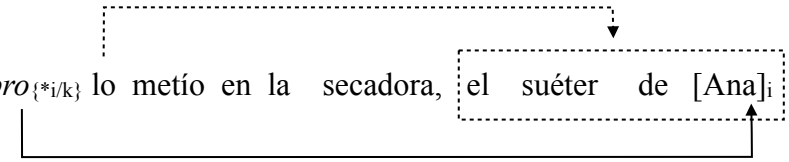
(33)



Therefore, the dXP must be located within the c-command domain of the host clause which contains *pro*. Nevertheless, if this is true, it means that any dislocated constituent

would violate principle C because it is also in the c-command domain of the host clause. This, however, goes against the general fact about right-dislocation, where correlates typically corefer with R-expression dXPs. In (34), although the coreference between the subject *pro* and the R-expression *Ana* leads to ungrammaticality, the correlate *lo* can still refer cataphorically to the dXP *el suéter de Ana*:

(34) *pro*$_{\{*i/k\}}$ lo metío en la secadora, el suéter de [Ana]$_i$



Under the biclausal approach this problem is solved. The correlate does not c-command the dislocated constituent for the obvious reason that they belong in two different clauses. In turn, the reconstruction effects arise in the elided clause, which contains the dislocated constituent, i.e. CP_2.

Second, there does not seem to be any kind of derivation link between the correlate and the dislocated constituent. It has been observed that the host clause should be a complete clause from a syntactic, semantic and prosodic point of view. Thus, the correlate (in this case, a pronoun) is compulsory and must be present. In some languages, however, the correlate may be absent. One such case would be when a language does not have the relevant weak pronoun that would refer to the dislocated constituent. The evidence that shows a link between the correlate and the dislocated constituent could come from Catalan (Fernández-Sánchez 2020, p. 32).

(35) a. Ja hem anat al mercat

already have gone to market

'We've already been to the market.'

b. Ja hi hem anat, al mercat

already have PREP.CL gone to market

'We've already been to the market.'

In this case, the prepositional clitic *hi* is an element that fills a gap in the host clause. In other words, it shows that the host clause is complete despite the absence of a pronoun. Nevertheless, Spanish dislocated prepositions do not employ the prepositional clitic and therefore there is no link between the correlate and the dislocated constituent in this language.

(36) a. Ya hemos ido al mercado

already have gone to market

'We've already been to the market.'

b. Ya ___ hemos ido, al mercado

already have gone to market

'We've already been to the market.'

Finally, apart from the fact that the host clause must be complete, another problem to the claim that the dislocated constituent undergoes movement is that it does not behave like other types of movement. A standard claim within the advocates of a movement analysis of right-dislocation is that the operation involves Ā-movement. However, as noted by several authors (Villalba 2000, among others), right-dislocation does not seem to involve Ā-movement because it does not give rise to weak crossover effects (37a) and because it does not li-

cense parasitic gaps (37b), as shown by the following two examples in Italian (Frascarelli 2002, p. 102, as cited in Fernández-Sánchez 2020):

(37) a. Sua$_i$ madre l$_i$' ha sempre apprezzato, *Gianni*$_i$
his mother him has always appreciated Gianni
'His mother has always appreciated him, Gianni.'

b. *L' ho cercato senza trovare *e*, *quel libro*
it have searched without finding this book
'(*)I've searched it without finding, this book.

However, the impossibility to license parasitic gaps and the non-existence of weak crossover effects are expected under the biclausal approach. First, a parasitic gap is possible as long as the gap is interpreted as a trace of an Ā-movement chain. Obviously, in the host clause where the parasitic gap is there is no chain at all, as the dislocated constituent is crucially in an independent clause:

(38) [L'ho cercato senza trobare *e*] [~~ho cercato senza trovare~~ quel libro]

Similarly, the dislocated constituent does not cross any variable in the elided clause where it belongs, so no weak crossover effect is expected.

(39) [Sua madre l'ha sempre apprezzato] [~~sua madre ha sempre apprezzato~~ Gianni]

3.4 The analysis of Thai right-dislocated modifiers

3.4.1 The Thai constructions

In this section, we will explore and categorize the Thai RD constructions. Like many other languages, Thai exhibits both types of RD (backgrounding and ATs) for any types of DPs. We have seen the German and Dutch examples in the previous section that the main difference between backgrounded and afterthought dXPs is that the former bear a syntactic relation to their host while the latter are structurally unconnected expressions. Below, I provide comparative examples between the Germanic languages (from Ott and de Vries 2016, pp. 643-644) and Thai. The Thai examples also show that the dXPs can be both subject (40b & 41b) and object (40c & 41c) arguments. Here, the backgrounded dXPs are indicated by *small italics* (40) and the (specificational) ATs are <u>underlined</u> (41).

(40) Backgrounding

a. Tasman heeft ze gezien, *die Maori's*
Tasman has them seen those Maoris
'Tasman saw them, those Maoris.' (Dutch)

b. kháw hěn pûakraw lɛ́:w *nákrian khon sŭ:ŋsŭ:ŋ*
he see us already student CLF tall.tall
'He saw us already, the pretty tall student.' (Thai: subject RD)

c. chán hěn kháw lɛ́:w *nákrian khon sŭ:ŋsŭ:ŋ*
I see him already student CLF tall.tall
'I saw him already, the pretty tall student.' (Thai: object RD)

(41) Afterthought

a. Jan heeft iets moois gebouwd: een gouden iglo

Jan has something beautiful built a golden igloo

'Jan built something beautiful: a golden igloo.' (German)

b. miusikɔ̂ thî: niujɔ̀:k phâŋ dâ:j ra:ŋwan tho:nî: mu:lɛŋ rú:t

musical in New York just get award Tony Moulin Rouge

'A musical in New York has just won the Tony Award: Moulin Rouge.'

(Thai: subject RD)

c. paj du: miusikɔ̂ thî: niujɔ̀:k kan mu:lɛŋ rú:t

go watch musical in New York together Moulin Rouge

'Let's go to watch a musical in New York: Moulin Rouge.' (Thai: object RD)

The syntactic representations below illustrate that the pronouns *ze* (42a), *kháw* (subject) (42b), and *kháw* (object) (42c) are the correlates of the host clause that are cataphorically linked to the backgrounded dXP. In (43), on the other hand, the correlates are the focused indefinite DPs with their meanings being specified by the afterthought dXP.

(42) Backgrounding

a. [$_{\text{Host Clause}}$ Tasman heeft [$_{\text{Correlate}}$ ze] gezien], [$_{\text{dXP}}$ *die Maori's*] = (45a)

b. [$_{\text{Host Clause}}$ [$_{\text{Correlate}}$ kháw] hěn pûakraw lɛ́:w] [$_{\text{dXP}}$ *nákrian khon sŭ:ŋsŭ:ŋ*] = (45b)

c. [$_{\text{Host Clause}}$ chán hěn [$_{\text{Correlate}}$ kháw] lɛ́:w] [$_{\text{dXP}}$ *nákrian khon sŭ:ŋsŭ:ŋ*] = (45c)

(43) Afterthought

a. [Host Clause Jan heeft [Correlate iets moois] gebouwd]: [dXP een gouden iglo] = (46a)

b. [Host Clause [Correlate miusikɔ̂ thî: niujɔ̀:k] phɔ̂ŋ dâ:j ra:ŋwan tho:nî:] [dXP mu:lɛŋ rú:t] = (46b)

c. [Host Clause paj du: [Correlate miusikɔ̂ thî: niujɔ̀:k] kan] [dXP mu:lɛŋ rú:t] = (46c)

Recall that the analysis for RD we are adopting here is the biclausal analysis by de Vries (2007, 2009a, 2009b, 2011) and Ott and de Vries (2016)[23]. The biclausal structures and derivation steps are schematized again below.

(44) a. Step 1: Create a biclausal structure

[CP1 . . . correlate . . .] [CP2 . . . dXP . . .]

b. Step 2: Front the dXP to the edge of the clause

[CP1 . . . correlate . . .] [CP2 dXP_i [. . . t_i . . .]]

c. Step 3: PF-deletion (except for the dXP)

[CP1 . . . correlate . . .] [CP2 dXP_i ~~[. . . t_i . . .]~~]

Furthermore, we have seen that backgrounding and AT constructions also differ in their discursive roles. The backgrounded dXP (CP_2) constitutes a single speech act together with its host (CP_1): it specifies its host by adding relevant information to it. The afterthought dXP (CP_2), on the other hand, is a speech act that is separate from the host clause (CP_1): it is

[23] Treating the dXP as part of the (elided) identical clause to the host clause explains why there is no structural interaction between the dXP and the host clause. However, we see that the dXP does interact with its host clause anaphorically. Ott and de Vries explain that the binding effects, in fact, do not occur between clauses since the c-command relation does not hold across sentences. Rather, c-command occurs within the elided clause (i.e. the dXP).

the purely discursive anaphoric juxtaposition of the host clause. Therefore, the juxtaposition of CP_1 and CP_2 in backgrounding is analyzed as an instance of specifying coordination, whereas that in AT manifests separate speech acts. Their schematized representations are illustrated again below ('Δ' = elided structure).

(45) a. Backgrounding

$[_{:P}\ [_{CP1}\ \ldots\ \text{correlate}_i\ \ldots]\ [\mathbf{:}\ [_{CP2}\ \text{dXP}_i\ \Delta\ ]]]$

b. Afterthought

$[_{CP1}\ \ldots\ \text{correlate}_i\ \ldots]\ [_{CP2}\ \text{dXP}_i\ \Delta\ ]$

Before departing from this section, it is important to point out that the AT we are dealing with is the specificational AT. We have seen earlier that there is also another sub-type of ATs called predicative ATs, as exemplified below.

(46) Hij kwam binnen, <u>doodsbleek</u>
he came inside pale white
'He came in, pale white.' (German)

In (46), *doodsbleek* does not specify the meaning of the pronoun *hij*, but rather attributes some property to it. Thai also exhibits such a construction with the dXP being both an AdjP and a PP. The examples below illustrate that these modifiers can occur after a high adverb *mûawa:n* and a sentence-final politeness marker *khrâp*, respectively, suggesting that they occur after complete utterances.

(47) Predicative AT in Thai

a. chán paj du: miusikɔ̂ ma: mûawa:n sanùk mâ:k

I go watch musical ASP yesterday fun very

'I watched a musical yesterday, very fun.' (AdjP AT)

b. phŏm jà:k du: miusikɔ̂ thî: niujɔ̀:k khrâp chûaŋchûaŋ nâ:nă:w

I want watch musical in New York POLITE around winter

'I really want to watch a musical in New York, around the winter time.' (PP AT)

Following Ott and de Vries (2016), I assume that the AdjP and PP above can function as ATs. The underlying structure of the dXP containing the AdjP *sanùk mâ:k* 'very fun' is a predicative copular clause where it is used predicatively[24]:

(48) Underlying structure

[$_{CP1}$ chán paj du: miusikɔ̂$_i$ ma: mûawa:n] [$_{CP2}$ man$_i$ [sanùk mâ:k]][25]

I go watch musical ASP yesterday it fun very

'I watched a musical yesterday, it was very fun.'

Then, this predicative AT follows the steps of derivation in (49): the dXP *sanùk mâ:k* 'very fun' is fronted to the edge of the clause and the redundant material — the subject of CP_2 — undergoes ellipsis, as exemplified below.

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[24] See examples in section 4.4.3 where AdjPs and PPs are used as main predicates in Thai.

[25] The lack of a copula in this sentence has led some researchers to analyze APs like *sanùk mâ:k* as a sub-type of verbs. In modern Thai, a specificational copula can be used to mark emphasis on such APs, as in the example below. We will therefore continue to regard them as adjectives rather than verbs throughout this dissertation.

(i) khɔnsə̀:t ní: sanùk mâ:k
concert this fun very
'This concert is very fun.'

(ii) khɔnsə̀:t ní: khɯ: sanùk mâ:k
concert this COP fun very
'This concert is very fun.'

(49) Derivation: dXP fronting & PF-deletion

[$_{CP2}$ man [sanùk mâ:k]] → [$_{CP2}$ [sanùk mâ:k]$_i$ [~~man t_i~~]]

it fun very fun very it

Moreover, the fact that the AdjP and PP in (47) occur after high adverbs and sentence-final particles strongly supports our biclausal approach, which analyzes right-dislocated modifiers as base-generated in CP2. This is because the high adverbs and sentence-final particles already close off the first clause (CP1), preventing the right-dislocated AdjPs and PPs from being located within the same clause. Additional evidence for the biclausal analysis comes from the disfavor of having multiple AdjPs or PPs within the same noun phrase without coordination or relativization, as is the case in English[26]. (Chaiphet 2021, p. 39, adapted).

(50) Adjective

a. Adjective

Thai: ʔthúʔrian [$_{AdjP}$ [$_{Adj}$ mĕn]] [$_{AdjP}$ [$_{Adj}$ jàj]] phɛ:ŋ mâ:k

durian smelly big expensive very

thúʔrian [$_{AdjP}$ [$_{Adj}$ mĕn]] lɛ́ʔ [$_{AdjP}$ [$_{Adj}$ jàj]] phɛ:ŋ mâ:k

durian smelly and big expensive very

English: The [$_{AdjP}$ [$_{Adj}$ big]] [$_{AdjP}$ [$_{Adj}$ smelly]] durian is very expensive.

[26] Right-dislocation of stacked modifiers is also not possible unless they appear with a classifier. Nevertheless, the sequences of stacked classifier-modifier have been analyzed as apposition rather than right-peripheral dislocation. For a more detailed discussion, refer to Chaiphet (2021).

b. Preposition

Thai: ?thuriian [PP [P caak] suan] [PP [P naaj] thuŋ] phɛ:ŋ mâ:k

durian from farm inside bag expensive very

thuriian [PP [P caak] suan] thî: jù: [PP [P naaj] thuŋ] phɛ:ŋ mâ:k

durian from farm REL BE inside bag expensive very

English: The durian [PP [P from] the farm] [PP [P inside] the bag] is expensive.

When one of the AdjPs/PPs undergoes RD, occurring as an AT, the sentences above become fully grammatical. We cannot assume a movement operation here since the two AdjPs/PPs cannot form constituents at their original positions. On the other hand, analyzing the right-dislocated modifiers as located in a different clause will eradicate such discrepancy.

Alternatively, we can analyze right-dislocated AdjPs and PPs as having (reduced) relative structures, following Cinque (2010). His relative clause analysis accounts for the predicative readings of these modifiers by positing relative structures as a source and the modifiers are derived from those structures. While this seems to be a plausible analysis, analyzing afterthought AdjPs and PPs as reduced relative clauses needs an additional explanation regarding their parenthetical status. Since the afterthought dXP has a parenthetical status relative to its host, these reduced relative clauses should be analyzed as right-peripheral parenthetical clauses, similar to appositive or non-restrictive relatives. However, as discussed by de Vries (2007), ATs, right-peripheral parentheticals, and dislocated parenthetical phrases or clauses (e.g. appositive relative clauses) are all the same: they occur non-restrictively in the right periphery and provide new information. Therefore, whether afterthought AdjPs and PPs are underlyingly predicative copular clause or reduced relative clauses, their properties can be captured by the biclausal analysis.

In the following sections, two main issues regarding the existence of RD (both backgrounding and ATs) for the nominal modifiers in Thai will be discussed. The first one lays out the analysis of the classifier-headed modifiers, showing that their behaviors at the right sentence edge could be analyzed as both specificational ATs and the predicative ones. The second concerns the analysis of the non-classifier-headed modifiers in Thai, arguing that they should be considered as predicative ATs.

3.4.2 Right-dislocated classifier-headed modifiers

In this section, I show that the classifier-headed modifiers in Thai can undergo RD, and that they occur as discourse-new information, hence categorized as ATs. In (51a), the classifier-headed modifier has been argued to occur adjacent to the head noun it modifies in its canonical position. The example in (51b) shows that it can have a form of RD.

(51) a. Canonical word order

chán hěn [$_{DP}$ nákrian [$_{ClfP}$ khon sŭ:ŋsŭ:ŋ]] lɛ́:w

I see student CLF tall.tall already

'I saw the pretty tall student already.'

b. Right-dislocated word order

chán hěn [$_{DP}$ nákrian] lɛ́:w [$_{ClfP}$ khon sŭ:ŋsŭ:ŋ]

I see student already CLF tall.tall

'I saw the student already, the pretty tall one.'

The question arises as to how we would analyze the right-dislocated classifier-headed modifiers (technically ClfPs), as in (51b). For one thing, we know that this kind of construction is not backgrounding because we do not have a pro-form correlate which resumes a discourse topic. On the other hand, the dXP (the ClfP *khon sŭ:ŋsŭ:ŋ* in this case) expresses discourse new information about the referent of its correlate (the DP *nákrian*), hence the AT. Moreover, the dXP in (51b) seems to behave like an AT in that it constitutes an independent speech act separate from the host clause. One piece of evidence comes from the observation by Averintseva-Klisch (2009) and Truckenbrodt (2015) that only ATs can permit sentential adverbs and discourse particles, which are licensed only in environments that yield speech acts. The German examples taken from Ott and de Vries (2016, p. 647) are presented along with the Thai examples (my examples) below.

(52) German

a. Maria hat ihn getroffen, (*{vermutlich / wohl}) *den John Travolta*
Maria has him met presumably PRT the John Travolta
'Maria presumably met John Travolta.' (intended) (Backgrounding)

b. Maria hat einen Star getroffen, {vermutlich / wohl} den John Travolta
Maria has a star met presumably PRT the John Travolta
'Maria presumably met a star, presumably John Travolta.' (AT)

(53) Thai

a. mɛ̂: cə: kháw lɛ́:w *nákrian khon sŭ:ŋsŭ:ŋ* *{làʔmáŋ}
mom met him already student CLF tall.tall probably
'Mom probably met the relatively tall student.' (intended) (Backgrounding)

b. mɛ̂: cə: nákrian lɛ́:w khon sŭ:ŋsŭ:ŋ {làʔmáŋ}

mom met student already CLF tall.tall probably

'Mom met the student already, probably the relatively tall one.' (AT)

Furthermore, Ott and de Vries observe that the dXPs of backgrounding and ATs differ in their ability to be negated independently of the host clause: only the propositional meaning of ATs can be negated without negating the proposition expressed by the host clause, as illustrated below.

(54) AT

a. A: Peter hat einen berühmten Star getroffen: den John Travolta.

Peter has a famous star met the John Travolta

Peter met a famous star: John Travolta.

B: Nein, (das war) Bruce Willis (den er getroffen hat).

no that was Bruce Willis who he met has

'No, (it was) Bruce Willis (who he met).' (German)

b. A: mɛ̂: cə: nákrian lɛ́:w khon sŭ:ŋsŭ:ŋ

mom met student already CLF tall.tall

'Mom met the student already, the pretty tall one.'

B: mâjchâj, khon khî:kìat

no CLF lazy

'No, the lazy one.' (Thai)

In both German and Thai, B's responses are not negating what is said in the host clause (CP_1), but are so only in CP_2. That is, the propositions expressed by A's CP_2 are independent of the one expressed in CP_1.

Given that the right-dislocated classifier-headed modifiers behave like ATs rather than backgrounded dXPs, one could raise a question concerning the type of ATs they are. It is not so clear whether we should analyze these modifiers as specificational or predictive ATs. Following Ott and de Vries (2016)'s proposal which distinguishes the syntactic structures between the specificational and predictive ATs, the Thai counterparts could potentially have the following underlying structures.

(55) Underlying structures (preliminary)

a. Specificational AT

[$_{CP1}$ chán hěn nákrian$_i$ lɛ́:w] [$_{CP2}$ [~~nákrian$_i$~~ khon sŭ:ŋsŭ:ŋ]$_j$ [~~chán hěn t_j lɛ́:w~~]]

I see student already student CLF tall.tall I see already

‘ I just met a student, (I met) a pretty tall one.

b. Predicative AT

[$_{CP1}$ chán hěn nákrian$_i$ lɛ́:w] [$_{CP2}$ [~~nákrian$_i$~~ khon sŭ:ŋsŭ:ŋ]$_j$ [~~kháw pen t_j~~]]

I see student already student CLF tall.tall she COP

‘I met the student already, (she is) a pretty tall one.’

Notice that the structures in (55a) and (55b) differ in their underlying forms, which replicate those Germanic examples in Ott and de Vries 2016. Recall that classifier-headed modifiers are not just modifiers, but full DPs containing an elided head noun. Therefore, there must be an additional ellipsis operation for the NP *nákrian* within the fronted dXP. This

elided NP, which could be thought of as a dropped *pro*, is anaphorically linked to the correlate (represented with the same subscript *i*), but it survives the first ellipsis operation because it gets fronted as part of the dXP. Note that the additional ellipsis operation is not licensed by the anaphoric link between the two clauses, but by the presence of the classifier itself. These detailed derivation steps are provided in (56). All the steps are repeated from the derivations in example (44) except for the additional step (step d), which is created for right-dislocated classifier-headed modifiers in Thai.

(56) a. Step 1: Create a biclausal structure

[$_{CP1}$ . . . correlate . . .] [$_{CP2}$ . . . dXP . . .]

b. Step 2: Front the dXP to the edge of the clause

[$_{CP1}$ . . . correlate . . .] [$_{CP2}$ dXP$_i$ [. . . t_i . . .]]

c. Step 3: PF-deletion (except for the dXP)

[$_{CP1}$ . . . correlate . . .] [$_{CP2}$ dXP$_i$ ~~[. . . t_i . . .]~~]

d. Step 4: PF-deletion (NP-ellipsis licensed by a classifier)

[$_{CP1}$ . . . correlate . . .] [$_{CP2}$ [$_{dXP}$ ~~NP~~ ClfP]$_i$ ~~[. . . t_i . . .]~~]

By applying all the derivation steps outlined in (56) to the specificational AT structure in (55a), we obtain:

(57) a. Step 1: Create a biclausal structure

[$_{CP1}$ chán hěn nákrian$_i$ lɛ́:w] [$_{CP2}$ chán hěn <u>nákrian$_i$ khon sŭ:ŋsŭ:ŋ</u> lɛ́:w]

I see student already I see student CLF tall.tall already

b. Step 2: Front the dXP to the edge of the clause

[$_{CP1}$ chán hěn nákrian$_i$ lɛ́:w] [$_{CP2}$ [<u>nákrian$_i$ khon sŭ:ŋsŭ:ŋ</u>]$_j$ [chán hěn t_j lɛ́:w]]

c. Step 3: PF-deletion (except for the dXP)

[$_{CP1}$ chán hěn nákrian$_i$ lɛ́:w] [$_{CP2}$ [<u>nákrian$_i$ khon sŭ:ŋsŭ:ŋ</u>]$_j$ [~~chán hěn t_j lɛ́:w~~]]

d. Step 4: PF-deletion (NP-ellipsis licensed by a classifier)

[$_{CP1}$ chán hěn nákrian$_i$ lɛ́:w] [$_{CP2}$ [~~nákrian~~$_i$ <u>khon sŭ:ŋsŭ:ŋ</u>]$_j$ [~~chán hěn t_j lɛ́:w~~]]

Moreover, we have seen that specification and predicative ATs like (55a) and (55b) yield different interpretations. In (55a), the dXP serves as a referential phrase which identifies *nákrian* 'student'. It is used if the hearer does not know the student, who is then identified as the pretty tall person. In (55b), the dXP is a predicate and is interpreted as a property of the student. It is used if the referent is contextually given: the hearer knows the student, perhaps only by name, but does not know that this student is pretty tall. Both of these interpretations are clearly available for the right-dislocated classifier-headed modifiers in Thai. We have also seen that in German, the two interpretations can be distinguished by different cases on the DP at the surface, as below.

(58) a. Specificational AT

Ich habe den Jan getroffen, <u>meinen Nachbarn</u>

I have the Jan met my.ACC neighbor.ACC

'I met Jan, (I met) my neighbor.'

b. Predicative AT

Ich habe den Jan getroffen, <u>mein Nachbar</u>

I have the Jan met my.NOM neighbor.NOM

'I met my neighbor Jan.' *or* 'I met Jan, who is my neighbor.'

The matching accusative case between the correlate *den Jan* and the dXP *meinen Nachbarn* in (58a) gives rise to the specificational interpretation: they both are the object arguments of the verb. However, the dXP in (58b) is marked with the normative case, suggesting that it could underlyingly be the subject of a (copular) clause, as seen above. Although such a case distinction is not employed in Thai, the type of copulas can tell us whether the dXP should be interpreted as specificational or predicative. In a specificational (or equative) copular clause, *khɯ:* is the head of the clause, whereas *pen* is a copula that heads a predicative copular clause. While the classifier-headed modifier is compatible with both copula types, yielding different interpretations depending on the context, the object noun *nákrian* 'student' cannot be present in the predicative copular construction, as in (59b).

(59) a. Specificational copula *khɯ:*

Nít khɯ: (nákrian) khon sŭ:ŋsŭ:ŋ

Nit COP^{Spec} student CLF tall.tall

'Nit is a tall student.'

b. Predicative copula *pen*

Nít pen (???nákrian) khon sŭ:ŋsŭ:ŋ

Nit COP^{Pred} student CLF tall.tall

'Nit is a tall student.' (intended)

The reason why the presence of *nákrian* degrades the grammaticality of (59b) is due to the fact that the noun phrase *nákrian khon sŭ:ŋsŭ:ŋ* does not denote a property of the proposition. Instead, it picks out a specific entity in the discourse, which in turn explains why

the interpretation of the specificational copular clause in (59a) is felicitous. As stated at the beginning of the chapter, the combination of a noun and a classifier phrase (classifier-headed modifier) leads to a definite interpretation. Here, when the head noun *nákrian* combines with the classifier phrase *khon sŭ:ŋsŭ:*ŋ, it denotes a specific student who is somewhat tall, known to the speaker. On the other hand, if there is only *khon sŭ:ŋsŭ:ŋ* without the presence of *nákrian*, it will be interpreted as generic or non-specific, just like the interpretation of bare nouns in Thai. The examples below illustrate this difference.

(60) a. do:jthûapajlé:w nákrian sŭ:ŋsŭ:ŋ mâk mi: thá:w jàj
generally student tall.tall usually have feet big
'Generally tall students have big feet.'

b. do:jthûapajlé:w khon sŭ:ŋsŭ:ŋ mâk mi: thá:w jàj
generally CLF^{human} tall.tall usually have feet big
'Generally tall people have big feet.'

c. ?do:jthûapajlé:w nákrian khon sŭ:ŋsŭ:ŋ mâk mi: thá:w jàj
generally student CLF^{human} tall.tall usually have feet big
'Generally the (specific) tall student has big feet.' (literally)

Like other bare nouns, the noun phrase *nákrian sŭ:ŋsŭ:ŋ* in (60a) is interpreted as generic, meaning tall students in general. Likewise, in (60b), the classifier phrase *khon sŭ:ŋsŭ:ŋ* means tall people in general and thus receives the generic interpretation in this context. The sentence in (60c), on the other hand, is infelicitous because the specific noun phrase *nákrian khon sŭ:ŋsŭ:ŋ* fails to be interpreted as generic in this particular context. Piriyawiboon (2010, pp. 42-43) illustrates that the interpretations of bare nouns in Thai are four-way

ambiguous. Therefore, when nouns occur without a classifier, they can also be interpreted as generic as below.

(61) a. nŭ: klâj sŭ:nphan (Kind)
mouse almost extinct
'Mice are almost extinct.'

b. nŭ: ʔa:săj ta:m thô:ná:m (Generic)
mouse live in sewer
'Mice live in the sewer.'

c. mûawa:n nŭ: khâw ma: naj khrua (Indefinite)
yesterday mouse enter come in kitchen
wanní: nŭ: hă:j paj lɛ́:w (Definite)
today mouse disappear ASP already
'Yesterday, a mouse/mice came in the kitchen. Today, the mouse/mice disappear.'

If we modify the bare noun *nŭ:* with a classifier-headed modifier *tua chalà:t* 'CLF smart', then all of the interpretations in (61) will become definite, as exemplified in (62).

(62) a. nŭ: tua chalà:t klâj sŭ:nphan (Definite)
mouse CLF smart almost extinct
'The smart mouse is almost extinct.'

b. nŭ: tua chalà:t ʔa:săj ta:m thô:ná:m (Definite)
mouse CLF smart live in sewer
'The smart mouse lives in the sewer.'

c. mûawa:n nŭ: tua chalà:t khâw ma: naj khrua (Definite)

yesterday mouse CLF smart enter come in kitchen

wanní: nŭ: tua chalà:t hă:j paj lɛ́:w (Definite)

today mouse CLF smart disappear ASP already

'Yesterday, the smart mouse came in the kitchen. Today, the smart mouse disappears.'

This therefore suggests that the underlying structure of the predicative AT in (55) should only contain the dXP that must be interpreted as generic. One way to revise this structure is to say that the structure can only contain the classifier-headed modifier to the exclusion of the head noun in the dXP, so that the dXP is not definite. The underlying structure of the revised predicative AT should look like the following. The dXP is in **bold**.

(63) [$_{CP1}$ chán hěn nákrian$_j$ lɛ́:w] [$_{CP2}$ **[khon sŭ:ŋsŭ:ŋ]**$_i$ [~~kháw$_j$ pen t_i~~]]

I see student already CLF tall.tall she COP

'I met the student already, (she is) a pretty tall one.'

However, when replacing the classifier head *khon* with other classifiers such as the object classifier *ʔan*, the dXP becomes less acceptable.

(64) ???[$_{CP1}$ chán hěn pà:kka:$_j$ lɛ́:w] [$_{CP2}$ **[ʔan jàjjàj]**$_i$ [~~man$_j$ pen t_i~~]]

I see pen already CLF big.big it COP

'I saw the pen already, (it is) a pretty big one.'

Recall the discussion of classifiers as grammaticalized nouns in chapter 2.3.3. The ungrammaticality of example (64) can be attributed to the fact that *ʔan* lacks the ability to function as a noun, while *khon* can serve a dual purpose as both a human classifier and a noun.

(65) a. khon kamlaŋ kin khâ:wchá:w
people ASP eat breakfast
'People are eating breakfast.'

b. *ʔan jù: bon tóʔ
BE on table
'(Something) is on the table' (intended)

Furthermore, the position occupied by *khon* in (63) can be filled with any noun that forms a generic DP with its modifier, as exemplified below.

(66) [$_{CP1}$ chán hěn nákrian$_j$ lɛ́:w] [$_{CP2}$ **[dèk sŭ:ŋsŭ:ŋ]**$_i$ [~~kháw$_j$ pen t_i~~]]
I see student already kid tall.tall she COP
'I met the student already, (she is) a pretty tall kid.'

Therefore, the word *khon* that has been earlier analyzed as the classifier head in the predicative AT construction is not really a classifier proper, but rather a head noun. The revision of the preliminary structures in (55) is shown in (67) below[27].

(67) Underlying structures (revised)

a. Specificational AT

[$_{CP1}$ chán hěn nákrian$_j$ lɛ́:w] [$_{CP2}$ **[~~nákrian$_j$~~ khon sŭ:ŋsŭ:ŋ]**$_i$ [~~chán hěn t_i lɛ́:w~~]]

I see student already student CLF tall.tall I see already

‘ I just met a student, (I met) a pretty tall one.

b. Predicative AT

[$_{CP1}$ chán hěn nákrian$_j$ lɛ́:w] [$_{CP2}$ **[khon sŭ:ŋsŭ:ŋ]**$_i$ [~~kháw$_j$ pen t_i~~]]

I see student already person tall.tall she COP

‘I met the student already, (she is) a pretty tall one.’

Consequently, the classifier-headed modifiers that appear in the AT constructions are actually full DPs with an elided head noun in the specificational AT construction, and generic DPs consisting of a noun and a modifier in the predicative AT construction.

In (67a), the redundant repetition from CP_1 is elided within CP_2, except for the discourse-new dXP. CP_1 and CP_2 are anaphorically linked via the correlate noun *nákrian* in CP_1 and the elided noun *nákrian* in CP_2. In (67b), on the other hand, CP_2 contains the predicational copular clause which is elided to the exclusion of the dXP. Note that, since the noun *nákri-*

[27] This analysis of RD is different from the predicate inversion analysis by Moro (1997), Mikkelsen (2005), den Dikken (2006) and so on. In their analysis, both types of copular clauses are argued to be derived from the same structure and have the same semantics of predication, but they differ in the kind of constituents that raises to Spec IP. In specificational copular clauses, the small clause subject is raised to Spec IP. In predicational copular clauses, on the other hand, it is the small clause predicate that is raised.

an is not allowed a copular clause in CP_2, CP_1 and CP_2 are now anaphorically linked via the correlate noun *nákrian* in CP_1 and the subject pronoun *kháw* which is elided within CP_2. Again, these two syntactic representations reflect different interpretations: the former has the specificational reading represented by the semantically equivalent structures of CP_1 and CP_2, and the latter exhibits the predicative reading represented by the copular clause containing the predicative copula. Moreover, given the fact above about the unavailability of the definite noun phrase within the predicational copular clause, we see that the preliminary version in (55) and the revised version in (67) differ in that the specificational AT involves the occurrence of the head noun *nákrian* inside CP_2 while the predicational copular clause in the predicative AT does not. Again, the reason for such a difference is that the dXP of the specificational AT serves as a referential phrase identifying the intended person — 'the pretty tall student' in this case. On the other hand, the dXP of the predicative AT is interpreted as a property of the student, so the dXP cannot refer to the specific entity in the discourse.

3.4.3 Right-dislocated non-classifier-headed modifiers

We have seen that all categories of nominal modification in Thai can be headed by a classifier and that they can undergo RD with ease, unlike the standalone modifiers (non-classifier-headed modifiers). We also observed that there are three properties of classifiers that enable classifier-headed modifiers to occur in the right-dislocated position, even though it is non-adjacent to the head noun. These properties are summarized again below.

(68) a. The classifier in the classifier-headed modifier construction can license the ellipsis

of the noun. Consequently, the classifier-headed modifiers appearing in the right-dislocated position are not merely standalone modifiers, but rather modifiers with an elided head noun.

b. The Clf^0 contains a [+FOCUS] feature when occurring with a nominal modifier, resulting in the entire noun phrase being emphasized.

c. Most classifiers in Thai are grammaticalized nouns, so they have the ability to function as if they were full DPs on their own.

If the occurrence of the classifier is the reason why the modifiers can be right-dislocated with ease, it accounts straightforwardly for the RD fact of the non-classifier-headed modifiers: because these modifiers are not accompanied by the classifier, they are unable to appear at the right sentence periphery. However, recall that RD can still occur with certain types of non-classifier-headed modifiers. These subtypes of nominal modifiers — reduplicated/intensified adjectives, prepositional phrases, and relative clauses — can occur at the right periphery without the presence of the classifier. Can we say then that they all belong to the same natural class, say right-periphery modifiers? Or could it be that reduplicated/intensified adjectives, prepositional phrases, and relative clauses are all derived from the same underlying structure? Kayne (1994) suggests that AdjPs that can occur as main predicates without intervention of a copula could be analyzed as "reduced relative clauses". The reduced relative clause analysis seems appealing since Thai adjectives (and prepositional phrases) and relative clauses all look very similar on the surface. According to Kayne, for antisymmetry reasons, full relative clauses are not generated as right adjuncts. Instead, they are analyzed as CPs selected by D^0. He posits that the antecedent noun raises from within the clause to the Spec of CP. Such operations also apply to reduced relative clauses where a noun moves out of an IP

domain containing a postnominal participial constituent. This is illustrated in (69) (Kayne 1994, p. 97).

(69) $_{DP}$[the [$_{CP}$ book$_i$ [$_C$ [$_{IP}$ ***t***$_i$ sent to me]]]]

Here, the noun *book* generates inside the (reduced) relative clause and raises to the Spec of CP. Because there is no relative pronoun, C^0 is empty.

The main problem for this idea, though, is that we would have to assume that both adjectives and prepositional phrases always project a clausal structure. In fact, this is not true since they can freely modify a noun within a DP, as illustrated below.

(70) a. Adjective

[dèk [$_{AdjP}$ chalà:t]] cà? khâwcaj rew

kid smart will understand quick

'Smart kids will understand it quickly.'

b. Prepositional phrase

[dèk [$_{PP}$ naj chumchon ní:]] cà? khâwcaj rew

kid in community this will understand quick

'Kids in this community will understand it quickly.'

Because this assumption does not seem to be on the right track, we will not attempt to analyze them as belonging to the same category as relative clauses.

On the other hand, we have seen that reduplicated/intensified adjectives and prepositional phrases are syntactically heavy when they occur at the right edge of the sentence. The

weight of the right-dislocated constituents accounts for why they can appear at that position, along the lines of Rochemont and Culicover (1990), Takami (1998), Wasow (2002), Hawkins (2004), among others, who propose that the heavy constituents at the right periphery are processed more efficiently in comprehension and production. Besides being heavy, we have seen that reduplicated/intensified adjectives and prepositional phrases can also occur as predicates without the presence of the copula in a sentence. The examples of the predicative use of these modifiers are provided below.

(71) a. Nit [$_{AdjP}$ khô:t sŭ:ŋ]
Nit very tall
'Nit is very tall.'
b. chán hĕn Nit [$_{PP}$ bon we:thi:]
I see Nit on stage
'I saw Nit on the stage.'

Because these modifiers can be used predicatively without the copula, they transparently reflect the intuition that the right-dislocated constituents should be considered as predicates, as in (71), favoring the analysis of predicative ATs we have seen in the previous section, exemplified in (72).

(72) Right-dislocated non-classifier-headed modifiers
a. chán hĕn Nit mûawa:n [$_{AdjP}$ khô:t sŭ:ŋ]
I see Nit yesterday very tall
'I saw Nit yesterday, very tall.'

b. chán hěn Nit mûawa:n [PP <u>bon we:thi:</u>]

I see Nit yesterday on stage

'I saw Nit yesterday, on the stage.'

(73) Predicative AT analysis

a. [CP1 chán hěn Nit mûawa:n] [CP2 [**<u>khô:t sŭ:ŋ</u>**]$_i$ [~~khâw t_i~~]]

I see Nit yesterday very tall she

'I saw Nit yesterday, very tall.'

b. [CP1 chán hěn Nit mûawa:n] [CP2 [**<u>bon we:thi:</u>**]$_i$ [~~khâw jù: t_i~~]]

I see Nit yesterday on stage she COP

'I saw Nit yesterday, on the stage.'

Ott and de Vries argue for the predicative AT analysis of right-dislocated adjectives like that in (73a). They provide evidence from German that right-dislocated adjectives must be used predicatively, not prenominally. In German, predicative adjectives bear no inflection, whereas the prenominal ones require the inflectional marker *-e*, as illustrated below (p. 685).

(74) a. Predicative adjective

Sie ist wunderschön.

she is very.pretty

'She is very pretty.'

b. Prenominal adjective

eine wunderschön-**e** junge Frau

a very.pretty-AGR young woman

'a very pretty young woman'

In the case of right-dislocation, the adjective *wunderschön* 'very pretty' bears no inflection, hence corresponding to the predicate use of the adjective.

(75) Hans hat eine junge Frau geheiratet, wunderschön.
Hans has a young woman married very.pretty
'Hans married a young woman, (she is) beautiful'.

In Thai, it is not so clear-cut whether adjectives are used predicatively in the RD construction since both attributive and predicative adjectives must follow the head noun, as exemplified below.

(76) dèk [$_{AdjP}$ khô:t sŭ:ŋ]
child very tall
'The very tall child' *or* 'The child is very tall.'

Such an identical distribution sometimes creates ambiguities and there is no inflectional marker to distinguish between the two types of adjectives. The examples below compare the two potential analyses of right-dislocated adjectival phrases. While the predicative analysis (77a) involves the underlying predicational copular clause that undergoes ellipsis in CP_2 to the exclusion of the dXP (i.e. the adjectival phrase), the specificational analysis (77b) requires the redundant repetition from CP_1 be elided within CP_2 except for the dXP.

(77) a. Predicative AT analysis

[$_{CP1}$ chán hěn dèk$_j$ mûawa:n] [$_{CP2}$ [**khô:t sŭ:ŋ**]$_i$ [~~kháw$_j$ t_i~~]]

I see kid yesterday very tall she

'I saw the kid yesterday, very tall.'

b. Specificational AT analysis

[$_{CP1}$ chán hěn dèk$_j$ mûawa:n] [$_{CP2}$ [**~~dèk~~$_j$ khô:t sŭ:ŋ**]$_i$ [~~chán hěn t_i mûawa:n~~]]

I see kid yesterday kid very tall I see yesterday

'I saw the kid yesterday, very tall.'

However, recall that these structural differences between the two analyses of ATs also yield different interpretations. In (77a), the dXP is a predicative adjectival phrase within the copular clause in CP_2. It is used if the hearer knows the kid, perhaps only by name, but does not know that this kid is very tall. In (77b), the dXP *khô:t sŭ:ŋ* serves as a postnominal attributive adjectival phrase modifying the head noun *dèk* within CP_2. It can be used if the hearer does not know the kid, who is then identified as the very tall person. However, unlike the AT analyses for the classifier-headed modifiers which are compatible with both predicative and specificational ATs, the right-dislocated adjectival (and prepositional) phrases lack the specificational AT interpretation. The referent (the kid) must be contextually given and the dXP is interpreted as a property of the kid, hence a predicate. Therefore, the specificational AT analysis, as in (77b), is disregarded. Only the predicative AT analysis is adopted for the right-dislocated reduplicated/intensified adjectives and prepositional phrases, along the lines of the proposal by Ott and de Vries.

As for relative clauses, their occurrence at the right periphery are usually accounted for by the movement analysis of extraposition, which leaves behind a gap in the host clause,

rendering the discrepancy between extraposition and right-dislocation. In chapter 2, I proposed that extraposed relative clauses are actually unnecessarily related to the correlate noun, hence no movement from the host clause. This idea in fact corresponds to the asyndetic coordination approach proposed by Koster (2000). In this approach, the extraposed constituent is base-generated in a position that is external to the host. Koster proposes the theory of *Parallel Construal* which employs the type of asyndetic coordination adopted by de Vries (2002). He uses a Colon Phrase (:P) to conjoin the extraposed material with some XP in the matrix clause that contains the acting host. The example below shows that the Colon Phrase is used to conjoin the extraposed relative clause with VP.

(78) I [$_{:P}$ [$_{VP}$ met [$_{DP}$ a linguist] this morning] [$_{:P}$: [$_{CP}$ who is from East Africa]]]

The coordinated structure is in fact similar to the biclausal analysis of RD as both conjoin the host clause and the extraposed constituent with the Colon Phrase. If we adopt the same biclausal analysis of AT as above, we have two possible analyses: the specificational and predicative AT analyses. These are exemplified below.

(79) a. Specificational AT

[$_{CP1}$ chán hěn nákrian$_j$ lɛ́:w] [$_{CP2}$ **[~~nákrian~~$_j$ thî: sŭ:ŋsŭ:ŋ]**$_i$ [~~chán hěn t_i lɛ́:w~~]]

I see student already student REL tall.tall I see already

‘ I’ve seen a student already, who is a pretty tall one.

b. Predicative AT

*[$_{CP1}$ chán hěn nákrian$_j$ lɛ́:w] [$_{CP2}$ **[thî: sŭ:ŋsŭ:ŋ]**$_i$ [~~kháw$_j$ pen t_i~~]]

I see student already REL tall.tall she COP

'I've seen the student already, who is pretty tall.'

There are three reasons to explain the ungrammaticality of the predicative AT structure in (79b) and why right-dislocated relative clauses should be analyzed as specificational ATs rather than predicative ATs. Firstly, relative clauses cannot function as predicates, unlike adjectival phrases and prepositional phrases. Therefore, it would be unusual to analyze them as predicative ATs. Secondly, right-dislocated relative clauses cannot have the same interpretation as predicative afterthoughts. Recall that the two underlying structures in (84a) and (79b) yield different interpretations. In (79a), the dXP *thî: sŭ:ŋ sŭ:ŋ* serves as a relative clause modifying the head noun *nákrian* within CP_2. It can be used if the hearer does not know the student, who is then identified as the tall person. In (79b), the dXP is part of a predicative phrase within the copular clause in CP_2. It is used if the hearer knows the student, perhaps only by name, but does not know that this student is tall. However, only the former interpretation is available for right-dislocated relative clauses, forcing us to dismiss the structure of the predicative AT in (79b). Finally, relative clauses are similar to classifiers in that they can license NP-ellipsis. Consider the examples below.

(80) a. Relative clause

(nákrian) thî: kamlaŋ kadò:d pen phûan chán

student REL PROG jump BE friend me

'The student who is jumping is my friend.'

b. Adjectival phrase

*(nákrian) chalà:t pen phûan chán

student smart BE friend me

‘The smart student is my friend.’

The examples above show that the NP *nákrian* can be omitted when occurring with a relative clause, but not with an adjective.

All these reasons indicate that the specificational AT structure should be employed for the analysis of right-dislocated relative clauses in Thai.

(81) Non-classifier-headed relative clauses as specificational ATs

[$_{CP1}$ chán hěn nákrian$_j$ lé:w] [$_{CP2}$ **[~~nákrian$_j$~~ thî: sŭ:ŋsŭ:ŋ]**$_i$ [~~chán hěn t_i lé:w~~]]

I see student already student REL tall.tall I see already

‘ I’ve seen a student already, who is a pretty tall one.

The structure above follows the steps of derivation discussed in (56). It starts by constructing a biclausal structure with two clauses adjacent to each other. Then, the dXP *nákrian thî: sŭ:ŋsŭ:ŋ* is fronted to the edge of the clause. Subsequently, the redundant material inside CP2 is deleted. Finally, NP-ellipsis of *nákrian* occurs, which is licensed by the relative clause.

3.5 Summary

In this chapter, we discussed how word order and sentence structure are affected by information structure. Furthermore, we saw that right-dislocated constituents can have different discursive functions. Those that express given/discourse-old information belong to the back-

grounding type. For the right-dislocated modifiers in Thai, we are particularly interested in the afterthought type of right-dislocation. This is because both classifier-headed and non-classifier-headed modifiers in Thai express focus/discourse-new information. The main points of my proposal in this chapter are listed below.

- Right-dislocated classifier-headed modifiers are actually not modifying phrases, but full DPs containing a head noun, which provide specific information that specifies the meaning of that same noun in the host clause.
- Right-dislocated classifier-headed modifiers are ambiguous between specificational ATs and predicative ATs. As specificational ATs, they are full DPs with an elided head noun and a modifier. As predicative ATs, they are full generic DPs with a noun and a modifier.
- Right-dislocated non-classifier-headed modifiers function as predicates of the clause, attributing a certain property or characteristic to the referent of their correlate. The modifiers of this type are structurally complex adjectival phrases (reduplicated and intensified AdjPs) and prepositional phrases.
- Right-dislocated non-classifier-headed relative clauses are analyzed as specificational ATs. This is due to their inability to function as predicates themselves, their distinct interpretation compared to predicative ATs, and their capacity to license NP-ellipsis similar to classifiers.

The schema below summarizes all the relevant facts regarding right-dislocation in Thai:

(82)

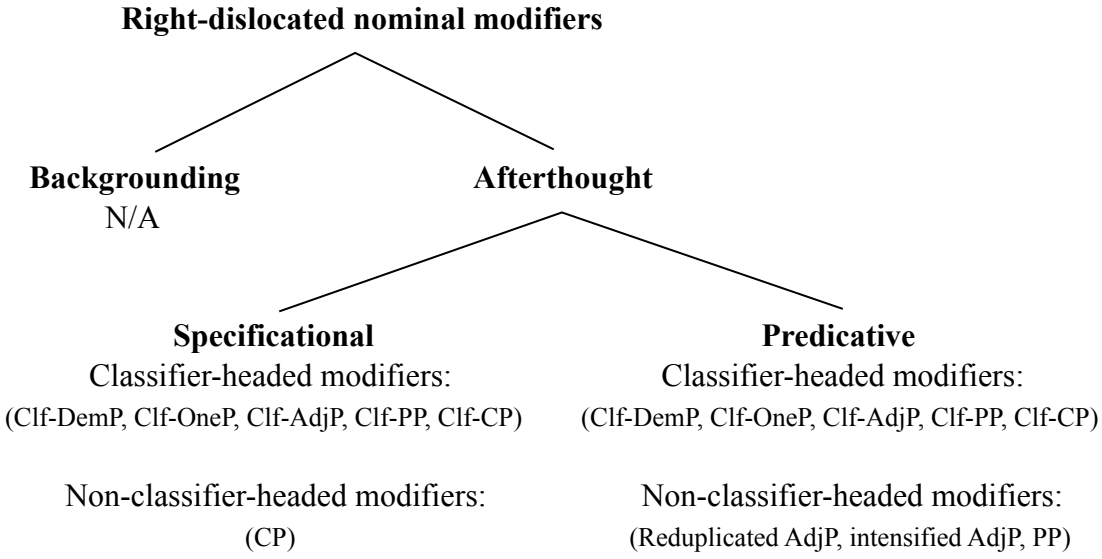


Figure (2): Right-dislocated nominal modifiers in Thai

CHAPTER 4

QUANTIFIER FLOAT

The second type of discontinuous nominal constructions in Thai that we will investigate is the so-called 'quantifier float' (henceforth Q-float) construction. In this construction, the quantifier-classifier sequence appears in the position further away from its associated noun, as exemplified in (1). This floating quantifier in Thai can occur in the position higher than VP, hence either before adverbs (2a) or at the end of the sentence (2b). The base position is shown in (1).

(1) **nákrian thúk-khon** [$_{VP}$ dɯ̀m ná:m paj] lɛ́:w
student every-CLF drink water ASP already
'Every student drank water already.'

(2) a. **nákrian** [$_{VP}$ dɯ̀m ná:m paj] **thúk-khon** lɛ́:w
student drink water ASP every-CLF already
b. **nákrian** [$_{VP}$ dɯ̀m ná:m paj] lɛ́:w **thúk-khon**
student drink water ASP already every-CLF
(both) 'Every student drank water already.'

Chapter 4 is composed of two main parts: the previous studies on Thai Q-float and the proposed analysis. I begin the chapter (section 4.1) by presenting arguments from Jenks (2011) who illustrate that the adjunction (adverbial) analysis cannot explain the Q-float phenomenon in Thai. Likewise, Simpson (2011) argues that the quantifier stranding analysis is also problematic for the analysis of Thai Q-float, and suggests that Q-float should be analyzed as a result of rightward movement, similar to extraposition. Finally, I present a study by Jenks (2011, 2013) who analyzes Thai Q-float as a covert instance of Quantifier Raising (QR), and point out some shortcomings in this analysis. In section 4.2, I propose that Thai Q-float can be straightforwardly accounted for using a rightward subextraction analysis, as suggested by Simpson (2011). Additionally, I argue that the floated position of floating quantifiers is in a dedicated position of Focus Phrase (henceforth FocusP) because Q-float is driven by focus. Section 4.3 concludes.

4.1 The previous analyses of Thai Q-float

4.1.1 The non-movement analysis: Q-float as adverbials

One analysis of Q-float suggests that floating quantifiers can be analyzed as verbal adjuncts since they appear in the adverbial positions[28] (Belletti 1982; Bobaljik 1995; Dowty and Brodie 1984). Jenks (2011) presents an argument based on Nakanishi's (2007) adverbial analysis that floating quantifiers are not actually quantificational determiners as they do not take their associated host as their restrictor. This has to do with the fact that the floating quan-

[28] See section 4.2.5 for the argument against the claim that floating quantifiers occur in the adverbial positions by Singhapreecha and Sybesma (2015).

tifiers have been argued to be associated with both a distributive and a plurality-of-events reading. Consider the examples below (Nakanishi 2007, pp. 133-134, as cited in Jenks 2011):

(3) a. **Gakusei** **san-nin**-ga kinoo Peter-o tatai-ta.
student-NOM three-CLF yesterday Peter-ACC hit-PAST
'Three students hit Peter yesterday.'

b. **Gakusei**-ga kinoo **san-nin** Peter-o tatai-ta.
student-NOM yesterday three-CLF Peter-ACC hit-PAST
'Three students hit Peter yesterday.'
Plurality-of-events reading: Peter was hit multiple times yesterday by three students.

(4) a. **Gakusei** **san-nin**-ga kinoo Peter-o korosi-ta.
student-NOM yesterday three-CLF Peter-ACC kill-PAST
'Three students killed Peter yesterday.'
Distributive reading: Three students killed Peter together yesterday.

b. ??**Gakusei**-ga kinoo **san-nin** Peter-o korosi-ta.
student-NOM yesterday three-CLF Peter-ACC kill-PAST
'Three students killed Peter yesterday.'
??*Plurality-of-events reading*: Peter was killed multiple times yesterday by three students.

When the verb is *tatai-ta* 'hit-PAST', only the sentence with Q-float in (3b) exhibits the plurality-of-events reading. However, this reading is not plausible with the verb *korosi-ta* 'kill-PAST' in (4b), as the interpretation of Peter being killed multiple times by three students

is unacceptable. The unavailability of such an interpretation suggests that the Japanese floating quantifier does not take its host as its quantificational restrictor. The floating quantifier should thus be viewed as an adverbial rather than a quantificational determiner. Now, consider the Q-float structures contrasting the same two verbs in Thai below (Jenks 2011, p. 278):

(5) a. **nákrian** ti: pi:tə̂: mûawa:nní: **sǎ:m-khon**
student hit Peter yesterday three-CLF
'Three students hit Peter yesterday.'

b. **nákrian** khâ: pi:tə̂: mûawa:nní: **sǎ:m-khon**
student kill Peter yesterday three-CLF
'Three students killed Peter yesterday.'

The absence of a contrast between the two Q-float structures in Thai implies that Thai floating quantifiers do not have a quantificational scope over events, and they consistently take their host noun as the quantificational restrictor, unlike in Japanese. Additionally, Jenks argues against the analysis of Q-float as adverbs, as it seems counterintuitive to assume that the quantifier-classifier pairs do not take their nominal hosts as their quantificational restrictors, especially considering the semantic agreement between the hosts and classifiers. Thus, this adverbial hypothesis might not be the best approach to account for the Thai Q-float phenomenon.

4.1.2 The leftward movement analysis: QP stranding

Simpson (2011) suggests that Thai Q-float should be considered as a form of extraposition. Specifically, he considers the extraposed quantifier as a result of rightward movement, contrary to the more recent analyses like the stranding analysis and adverbial analysis. Simpson provides multiple arguments to show that Thai Q-float behaves differently from that in other languages.

The stranding hypothesis is widely adopted by many researchers (Giusti 1990; Simpson 2004, 2011; Sportiche 1988). It involves the leftward movement of the NP host of the floating quantifier to the subject position: the subject originates in a lower VP-internal position and moves to a higher position, leaving this floating quantifier behind. The separation according to this analysis is schematized below:

(6) **NP** …… **Q** ~~**NP**~~ …… (Simpson 2011, p. 133)

(7) **[The students]** have **[** **all** **[**~~**the students**~~**]]** arrived. (Simpson 2011, p. 118)

In (7), the host subject 'the students', originated in a VP-internal position, moves leftward to the higher position, stranding the quantifier 'all'.

The stranding analysis seems to be the most widely adopted since it can account for several phenomena. One of them involves the explanation why the quantifier can appear between two auxiliaries in the passive construction, as in (8). The quantifier can be optionally stranded which gives rise to the floating pattern. This is illustrated in (9) below:

(8) **The criminals** have **all** been arrested.

(9) **[The criminals]** have **[all ~~the criminals~~]** been arrested **[~~all the criminals~~]**

(Simpson 2011, p. 118)

Although the stranding analysis is adopted to explain the Q-float phenomenon in various languages, deriving it via movement seems problematic for Thai. The more recent work of Q-float, such as Simpson's (2011), suggests that the stranding analysis might not be the right analysis for Thai Q-float. He provides more arguments to show that English and Thai floating quantifiers occupy different positions in a sentence, indicating that Q-float in Thai should not have the same syntactic derivation as that in English. First, unlike English, a floating quantifier cannot occur in the position between an auxiliary and a main verb. Such a difference is exemplified in (10)-(11) below:

(10) a. **The children** will **all** have arrived by now.

b. **The children** will have **all** arrived by now.

c. ***phûak-dɛ̀k** ʔà:t-càʔ **thúk-khon** ma: lɛ́:w

children may every-CLF come ASP (Simpson 2011, p. 123)

(11) a. **The cars** were **all** stolen.

b. ***rôt-mə:si:dé:s** thù:k **sì:sìphâ:-khan** khamo:j

car-Mercedes PASS 45-CLF steal (Simpson 2011, p. 123)

The second difference is that English floating quantifiers actually never occur in the post-verbal object position (12a). That position, however, is possible for the floating quantifiers in Thai (12b).

(12) a. ***The cars** were stolen **all**.

b. **rôt-mə:si:dé:s** thù:k khamo:j **sì:sìphâ:-khan**

car-Mercedes PASS steal 45-CLF

'45 Mercedeses were stolen.' (Simpson 2011, p. 123)

A third difference is that the floating quantifier does not occur in the object-of-verb position, following the verb *khəmooy* 'steal', but instead occur in the sentence-final position, following the adjunct PP *naj muəŋ Stuttgart* 'in Stuttgart'. This thus suggests that, unlike English, the quantifier is not located in the position where the associated NP host *rot-Mercedes* might have been moved from, say after the main verb (see the schematized example in (11)). This is illustrated in (13) below:

(13) **rôt-mə:si:dé:s** thù:k khamo:j … naj mɯaŋ satútkà:t **sì:sìphâ:-khan**

car-Mercedes PASS steal … in city Stuttgart 45-CLF

'45 Mercedes were stolen in Stuttgart.' (Simpson 2011, p. 123)

Further data also indicate that floating quantifiers in Thai occur in the positions that their associated NP could not have occupied earlier. The evidence comes from the occurrence of the direct object quantifier in clause final position, following a PP complement that con-

tains an indirect object. This position can never be occupied by a direct object NP. Consider the following example:

(14) a. kháw hâj **ŋən** kàp phŏm **sɔ̌:ŋrɔ́:j-bà:t**
he give money to me 200-Baht
'He gave me 200 Baht.'

b. *kháw hâj … kàp phŏm **ŋən**
he give … to me money (Simpson 2011, p. 124)

Furthermore, this position of Thai floating quantifiers, which is not possible for object NPs, becomes more noticeable when the object is separated from the quantifier by aspect-marking elements like *yuu, maa, paj, sɛt* and *lɛ́:w*, etc. The examples (15a) and (16a) show the positions where the object NPs are originated from. (15b) and (16b), on the other hand, show that the object NP cannot occur in the position that is occupied by the associated floating quantifier.

(15) a. phŏm mi: **ka:ŋke:ŋ** **di:di:** jù: **khê:** **tua-diaw**
I have trouser good-good ASP only CLF-single
'I only have one really good pair of trousers.' (Simpson 2011, p. 124)

b. *phŏm mi: … jù: **ka:ŋke:ŋ** **di:di:**
I have … ASP trouser good-good

(16) a. kháw sú: **nǎŋsŭ:** ma: **sɔ̌:ŋ-lêm**

he buy book ASP two-CLF

'He bought two books.' (Simpson 2011, p. 124)

b. *kháw sú: … ma: **nǎŋsŭ:**

he buy ASP book

In sum, the patterns of Thai Q-float illustrated above suggest that floating quantifiers in Thai typically appear in positions where their associated nouns couldn't have been placed previously or from which they couldn't have been moved, given what have been analyzed in the previous standard analyses of movement of dislocated elements. This thus leads to the conclusion that Q-float in Thai, unlike English, cannot be analyzed as resulting from stranding.

4.1.3 Q-float as QR

Jenks (2011, 2013) claims that Q-float in Thai is not part of a more general phenomenon of rightward movement. In his (2011) dissertation, he proposes that both Q-float and Quantifier Raising (henceforth QR, Chomsky 1976; Chomsky and Lasnik 1977; May 1977, 1985) share many properties in common and that Q-float is an overt instance of QR. He further argues in his (2013) paper that Q-float is driven by focus on the floated quantifiers. In this section, our focus will be on discussing the motivations and syntactic structures of floating quantifiers within the QR approach to Q-float.

There are altogether three properties that are essential implications for movement and strongly support the QR analysis. The list in (17) shows these properties proposed by Jenks (2013):

(17) a. Q-float can apply to any quantifier.

b. Q-float is sensitive to locality restrictions.

c. Q-float affects the scope of quantifiers relative to negation.

First, the fact that every quantifier can float in Thai suggests that Q-float is general and can apply to any quantifier (17a). Secondly, the locality restrictions implies that this phenomenon must involve movement (17b). Thai floating quantifiers are only associated with the NPs that are arguments of the main predicate. For example, no quantifiers can float from genitives (18), NP complements (19), NPs within relative clauses (20), or NPs within an adjunct PP (21). These locality constraints on Q-float imply that it involves movement, which cannot cross multiple phrase boundaries. The examples from Jenks (2013, pp. 3-4) below manifest these locality restrictions on Thai Q-float:

(18) No Q-float from genitives

a. pôŋ càʔ [$_{VP}$ hâj [$_{DP}$ năŋsŭ: khɔ̆:ŋ [$_{DP}$ dèk 2-khon]] kàp nát]

Pong will give book POSS child 2-CLF to Nat

'Pong will give the two children's book to Nat.'

b. *pôŋ càʔ [$_{VP}$ hâj [$_{DP}$ năŋsŭ: khɔ̆:ŋ [$_{DP}$ dèk]] kàp nàt] 2-khon

Pong will give book POSS child to Nat 2-CLF

(19) No Q-float from noun complements

a. co: wâ:t [$_{DP}$ phâ:p ma: săːm-tua] lɛ́:w

Joe draw picture dog 3-CLF already

'Joe drew a picture of three dogs already.'

b. *co: wâ:t [$_{DP}$ phâ:p ma:] lɛ́:w săːm-tua

Joe draw picture dog already 3-CLF

(20) No Q-Float out of relative clause

a. phŏm khəːj cəː [$_{DP}$ phûːchaːj [$_{CP}$ thîː miː rót kwàː-sìp-khan]] maː lɛ́:w

I PRF meet man that have car exceed-10-CLF ASP already

'I have met men who have owned more than 10 cars.'

b. *phŏm khəːj cəː [$_{DP}$ phûːchaːj [$_{CP}$ thîː miː rót]] maː lɛ́:w kwàː-sìp-khan

I PRF meet man that have car ASP already exceed-10-CLF

(21) No Q-float out of prepositional phrases

a. biw rôp [$_{PP}$ naj sanăː mrôp thúk-hèŋ] jàːŋklâːhăːn

Bill fight in battlefield every-CLF bravely

'Bill fought bravely in all the battlefields.'

b. *biw rôp [$_{PP}$ naj sanăː mrôp] jàːŋklâːhăːn thúk-hèŋ

Bill fight in battlefield bravely every-CLF

These clear locality restrictions on Q-float implicate movement, which basically form the basis of the analysis of Q-float as QR.

Lastly, the effects of Q-float on the scope of quantifier relative to negation directly imply the existence of QR (15c). In (22), Jenks (2013, p. 94) shows that Q-float affects scope relative to negation.

(22) a. Q-float lowers the scope of subject quantifiers relative to negation.

b. Q-float raises the scope of object quantifiers relative to negation.

To illustrate, when the subject quantifier is in the canonical position, it must scope above negation (23a). However, Q-float can lower the scope of subject quantifiers. The negated element can now scope over the universal quantifier, resulting in an ambiguous sentence (23b).

(23) a. nákrian thúk-khon (jaŋ) mâj [$_{VP}$ kin khâ:w]

student every-CLF still NEG eat rice

'Every student still hasn't eaten.' ∀ > ¬, *¬ > ∀

b. nákrian (jaŋ) mâj [$_{VP}$ kin khâ:w] thúk-khon

student still NEG eat rice every-CLF

'Every student still hasn't eaten.' ∀ > ¬, ¬ > ∀

On the other hand, the object quantifier must take scope below negation. In the object Q-float construction, the quantifier can now scope over negation, hence raising the scope of object quantifiers relative to negation.

(24) a. co: mâj [$_{VP}$ phóp nákrian thúk-khon] mûawa:nní:

Joe NEG meet student every-CLF yesterday

'Joe didn't meet every student yesterday.' *∀ > ¬, ¬ > ∀

b. co: mâj [VP phóp nákrian] mûawa:nní: thúk-khon

Joe NEG meet student yesterday every-CLF

'Joe didn't meet every student yesterday' ∀ > ¬, ¬ > ∀

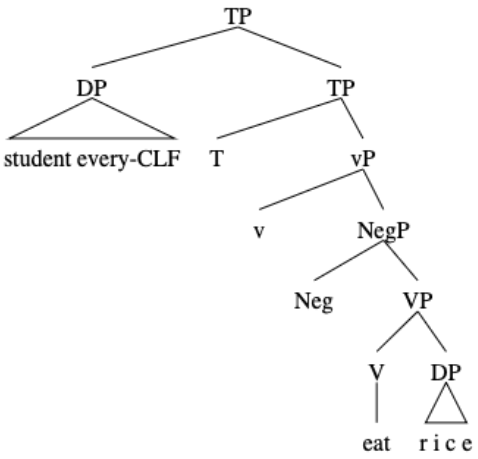
All these facts are summarized in figure 3 below (Jenks 2013, p. 96).

		∀ > ¬	¬ > ∀
Subject-Q	NP-∀ . . . ¬ . . .		*
Subject-FQ	NP . . . ¬ . . . ∀		
Object-Q	¬ . . . NP-∀ . . .	*	
Object-FQ	¬ . . . NP . . . ∀		

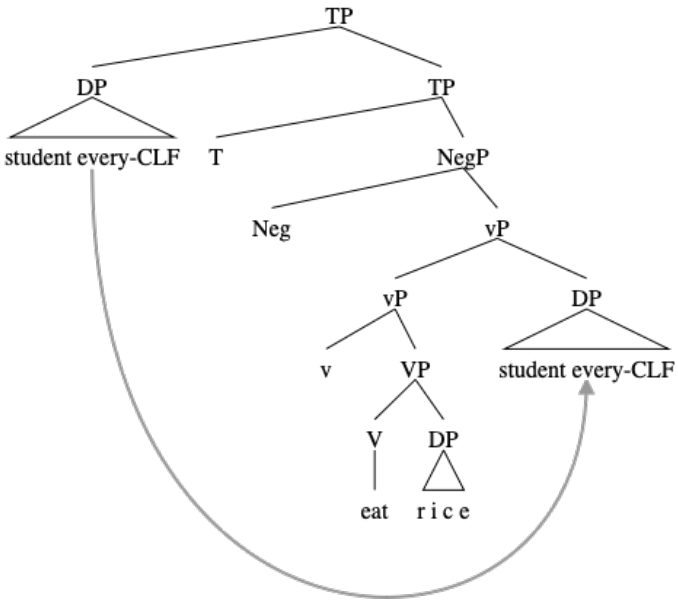
Figure (3): The scopal effects of Q-float relative to negation

Jenks proposes that Q-float is an overt instance of QR. The DP containing a head noun, a quantifier, and an obligatory classifier ([DP N Q-CLF]) undergoes covert movement (QR) to a position in which it can be interpreted, which in this case to the right. The positions of subject and object Q-float would account for the scope facts relative to negation as seen in (25) and (26). Notice that there can be multiple attachment sites available for negation in Thai, which can alternate .

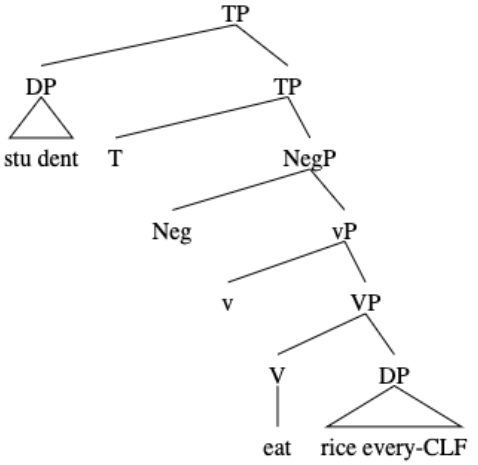
(25) a. Subject-Q (∀ > ¬, *¬ > ∀) =(23a)



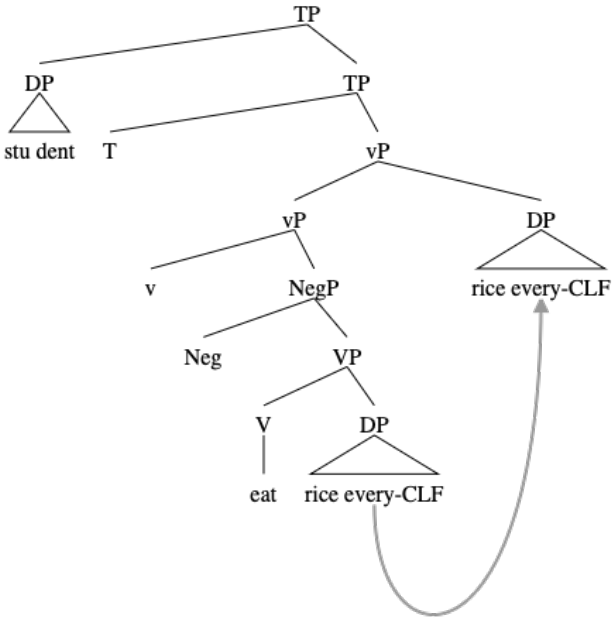
b. Subject-FQ (∀ > ¬, ¬ > ∀) =(23b)



(26) a. Object-Q (*∀ > ¬, ¬ > ∀) =(24a)



b. Object-FQ (∀ > ¬, ¬ > ∀) =(24b)



The evidence for the variable position of negation comes from the fact that negation in Thai can be freely generated in the specifier of verbal auxiliaries, following Visonyanggoon (2000, p. 166).

(27) kháw **mâj** nâ:-càʔ **mâj** tɔ̂ŋ **mâj** tham ŋa:n
he NEG should NEG must NEG do work
'It is unlikely that he does not have to not work.'

Jenks (2013) further accounts for why the specifiers can be on the right, and what permits the discontinuity between the noun restrictor and the quantifier, using a constraint-based analysis of Q-float. The reason why floating quantifiers occur on the right in Thai, while specifiers such as subjects and topics generally occur on the left in Thai, and why the noun restrictor and the quantifier are pronounced in different positions in the structure, is because floating quantifiers always represent new/focused information in the discourse and that Q-float is driven by focus on the floating quantifiers. The constraints proposed in his constraint-based analysis of Q-float consist of Argument Transparency, Scope Transparency, and Focus Prominence. The Argument Transparency constraint requires that syntactic relations must be reflected at PF. The Scope Transparency constraint requires transparent mapping between syntax and semantics. Finally, the Focus Prominence constraint is an attempt to incorporate the relationship between focus and Q-float. When two syntactic objects are identical, a focused one, which appears on the right in Thai, is more prosodically prominent than non-focused one (See Jenks 2013, section 5 for more details).

Despite the success of Jenks' analysis of Thai Q-float, the overt QR account requires an additional constraint-based analysis to explain why the noun is pronounced where it is

generated, while the overt copy of the Q-Clf pair needs to be pronounced in the raised/reconstructed position. One of the reasons for this is the reluctance to adopt the rightward movement account for Thai Q-float. Jenks argues that Q-float should not be considered part of a more general phenomenon of rightward movement, as Thai lacks extraposition. However, this claim is not accurate since extraposition does exist in Thai. The data he provides to reject the extraposition proposal, as suggested by Simpson (2011), do not align with the judgments of many Thai speakers. Consider the extraposed relative clause in (28) below. Note that in Jenks 2011, p. 270, the example in (28b) is ungrammatical.

(28) Relative clause extraposition

a. chán hěn [$_{NP}$ dèk (khon) [$_{CP}$ **thǐ: khru: khə:j ti:** __]] mûawa:nní:
1SG see child CLF that teacher PRF hit yesterday
'I saw [the child whom the teacher hit] yesterday.'

b. chán hěn [$_{NP}$ dèk ___] mûawa:nní: (khon) **[$_{CP}$ thǐ: khru: khə:j ti:]**
1SG see child ___ yesterday CLF REL teacher PRF hit

Following the process of extraposition, the relative clause appears at the rightmost position of the clause, further from its NP in the object position. The acceptability of this sentence suggests the property of being non-specific, parallel between extraposition and Thai rightward floating quantifiers, and in turn supports the analysis of extraposition. The extraposed relative clause can be used when the NP is introduced into the action for the first time, described in a discourse situation (Simpson 2011). I further provide another acceptable sen-

tence with relative clause extraposition below in (27). This shows that the relative clause can also move from its NP in the subject position as well.

(29) **[NP nákrian ___]** klàp bâ:n paj lɛ́:w (khon) **[CP thî: phû:t thaj dâj]**

student ___ return home ASP already CLF REL speak Thai can

'The student who can speak Thai went back home already.'

The judgment issue in the data that Jenks provides to reject this extraposition analysis also extends to adjectives, prepositional phrases, and demonstratives. I show that these extraposed constructions are in fact available in Thai by presenting additional data judged grammatical by Thai speakers in the (c) examples along with the ones that are judged ungrammatical in Jenks 2011, p. 271 (the (b) examples). Note that while these are instances of extraposition in the literature, we analyze them as right-dislocated constituents (See chapter 2 and 3 for more details).

(30) Adjective extraposition

a. chán hěn [NP dèk [khon [AP **son**]]] mûawa:nní:

I see child CLF naughty yesterday

'I saw the naughty child yesterday.'

b. chán hěn [NP dèk ____] mûawa:nní: [khon **[AP son]**]

I see child ____ yesterday CLF naughty

c. **[NP nákrian ____]** ráp thunka:nsùksă: mûachá:w-ní: [khon **[AP chalà:t]**]

student ____ get scholarship morning-this CLF smart

'The smart student received a scholarship this morning.'

(31) PP extraposition

a. nákrian ʔà:n [NP nǎŋsŭ: lêm [PP **bon tóʔ**]] mûawa:nní:

student read book CLF on table yesterday

'The student read the book on the table yesterday,'

b. nákrian ʔà:n **[NP nǎŋsŭ: ____]** mûawa:nní: lêm **[PP bon tóʔ]**

student read book ____ yesterday CLF on table

c. nákrian hâj **[NP ŋən ____]** kàp chán mûawa:nní: **[PP cà:k krapăw]**

student give money ____ to me yesterday from bag

'The student gave the money from that bag to me yesterday.'

(32) Demonstrative extraposition

a. [NP **nákrian** [**khon ní:**]] kin khâ:w lɛ́:w

student CLF this eat rice already

'This student already read a book.'

b. **[NP nákrian ____]** kin khâ:w lɛ́:w [**khon ní:**]

student ____ eat rice already CLF this

c. chán càʔ sú: **[NP sûa ____]** phrûŋní: ʔì:-krɔ̂:p **[tua ní:]**

I will buy shirt ____ tomorrow more-time CLF this

'I will buy this shirt again tomorrow.'

Furthermore, Iwasaki and Ingkaphirom (2005, pp. 70-71) provide a couple of examples of "appended modifiers", nominal modifiers that occur in the position after a complete sentence. One of these examples is an extraposed relative clause.

(33) Appended relative clause

chûaj ʔaw krapro:ŋ tua màj ma: nɔ́j [thî: khwɛ̌:n naj tû:]

help take skirt CLF new ASP ADV that hang in closet

'Can you bring me the skirt – the one hanging in the closet?'

All these examples, therefore, amount to the existence of extraposition in Thai. Since these instances of extraposition exist, it does not seem odd to consider Q-float as part of a general phenomenon of rightward movement, as argued by Jenks. Building on the analysis of Ross (1967), I propose that Thai quantifier float can be straightforwardly accounted for using the subextraction approach similar to the one proposed for extraposed relative clauses. Additionally, I propose that the floated position for the quantifier is in FocusP since the movement of quantifier float in Thai is driven by focus. The following section is devoted to this analysis.

4.2 The proposal: Rightward Subextraction to FocusP

In this section, building on the idea of Ross (1967), I propose that Thai Q-float can be straightforwardly accounted for using the rightward subextraction analysis suggested for extraposed relative clauses by Simpson (2011). Additionally, I propose that the floated position of extracted quantifiers is at the dedicated position of FocusP since the movement of quantifier float in Thai is driven by focus. This position is located right above vP but lower than the position of high adverbs (e.g. temporal adverbs) and sentence-final particles. Since quantifier float involves clause-internal movement, it should be positioned lower than CP. Finally, I ar-

gue that quantifiers that appear at the edge of the clause are ambiguous between floating quantifiers and right-dislocated quantifiers, with the latter occurring clause-externally.

4.2.1 Implications from extraposition

Simpson suggests that there could be other instances of 'rightward movement' which might support the analysis of Q-float in Thai. He assumes that the structure of Q-float in Thai can actually be a form that is closely related to 'extraposition' similar to the schematized examples below:

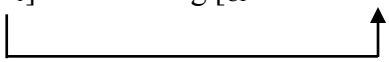
(34) [A review __] appeared in the Times [of a new book about Roosevelt].

(35) I met [a man __] yesterday [who had known your father in the 1960s].

All in all, Simpson shows that Thai Q-float could be thought of as a form of extraposition. Although he stops short of fleshing out this rightward movement analysis, his suggestion could be taken as a potential analysis for Q-float in Thai (apart from the problematic adverbial and stranding analyses).

The rightward movement approach suggested by Simpson is in fact similar to the 'subextraction analysis' originally proposed by Ross (1967). In this analysis, the extraposed material is extracted out of its host and right adjoins to what Ross called the first cyclic node, i.e., CP.

(36) I met [$_{DP}$ a linguist e_1] this morning [$_{CP}$ who is from East Africa]$_1$



However, Baltin (1978, 1981) and Guéron (1980), and later Rochemont and Culicover (1990) observed that the extraposed relative clause does not always behave as if it were adjoined to CP. Overfelt (2015, pp. 148-149) presents the contrasting grammaticality patterns, adapted from Baltin (1981, p. 269), which suggest that the height of the extraposed material correlates with the height of the host. (37a) and (38a) show the extraposed construction without VP-fronting. The contrast between (37b) and (37c) can be taken to show that a relative clause that has been extraposed from a DP in a direct object position cannot be stranded by VP-fronting, thus it must form a constituent with the VP. The contrast between (38b) and (38c), on the other hand, suggests that the opposite is true of a relative clause extraposed from a DP in subject position. The extraposed relative clause cannot be considered as part the VP constituent with regards to VP-fronting.

(37) a. Though we may [$_{VP}$ invite [$_{DP}$ someone]$_1$ tomorrow

[$_{CP}$ who is from East Africa]$_1$], …

b. [$_{VP}$ Invite [$_{DP}$ someone]$_1$ tomorrow [$_{CP}$ who is from East Africa]$_1$]$_2$

though… we may e_2 , …

c. * [$_{VP}$ Invite [$_{DP}$ someone]$_1$]$_2$

though we may e_2 [$_{CP}$ who is from East Africa]$_1$, …

(38) a. Though [$_{DP}$ someone]$_1$ may have been [$_{VP}$ invited

[$_{CP}$ who is from East Africa]$_1$], …

b. * [$_{VP}$ Invited [$_{CP}$ who is from East Africa]$_1$]$_2$

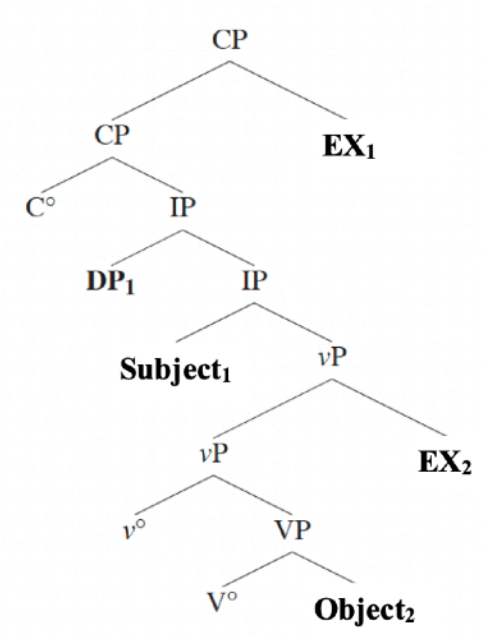
though [$_{DP}$ someone]$_1$ may have been e_2, . . .

c. [$_{VP}$ Invited]$_2$ though [$_{DP}$ someone]$_1$ may have been e_2

[$_{CP}$ who is from East Africa]$_1$, . . .

Therefore, while the extraposed constituent from the object DP seems to attach to the position within VP (or *v*P), the one from the subject DP is likely to attach to some position higher. The structure below illustrates these two positions for extraposition.

(39)



Overfelt then adopts the QR + Late-Merger analysis by Fox and Nissenbaum (1999) to account for relative clause extraposition. According to Fox and Nissenbaum, the host of the extraposed material undergoes QR and the extraposed material is subsequently late-merged into the higher copy. This is shown in a two-step derivation below:

(40) QR + Late-Merger

1st step (QR):

[DP every camper] left this morning [DP every camper]]

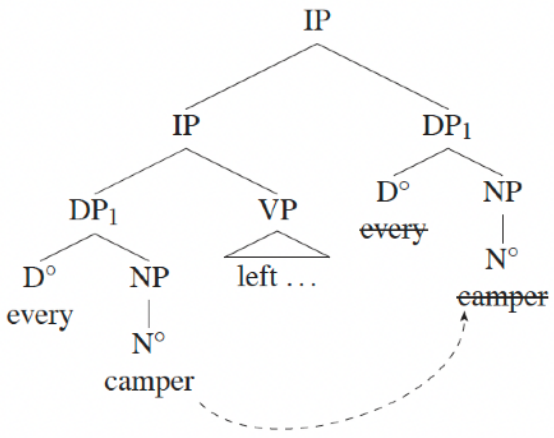
2nd step (Late merge):

[DP every camper] left this morning]

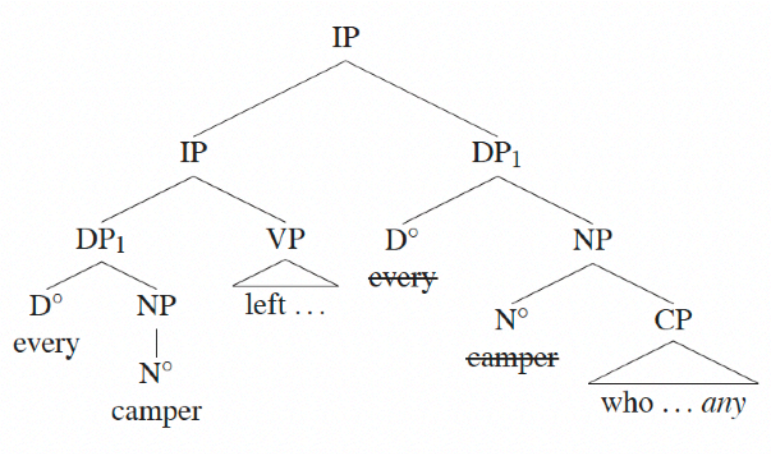
[DP ~~every camper~~ [CP who was at any of the sites with flooding]]

As expected, the covert movement and late merger take place in the higher projection above *v*P/VP. The example below is taken from Overfelt (2015, p. 179).

(41) a. Covert movement



b. Late-Merger



4.2.2 The landing site of floated quantifiers

The tree in (39) in turn provides a clear picture for Thai Q-float since quantifiers in Thai only float inside IP. That is, floating quantifiers should not appear outside of a clause since the IP-external area could be associated with constituents such as right-dislocation, as seen in the previous chapter. One piece of evidence comes from the fact that floating quantifiers never appear after sentence-final particles such as an interrogative marker *máj* (42), an affirmative marker *ná?* (43), and a politeness marker *khráp/khà?* (44) (Jenks 2011, pp. 273-274):

(42) a. **nákrian** [ʔà:n nǎŋsŭ: lêm-ní:] **thúk-khon** máj
student read book CLF-that every-CLF YNQ
'Has every student read this book?'

b. ***nákrian** [ʔà:n nǎŋsŭ: lêm-ní:] máj **thúk-khon**
student read book CLF-that YNQ every-CLF

‘Every student read this book, right?’

(43) a. **nákrian** [ʔà:n nǎŋsŭ: lêm-ní:] **thúk-khon** náʔ
student read book CLF-that every-CLF AFF
‘Every student read this book, right?’

b. ***nákrian** [ʔà:n nǎŋsŭ: lêm-ní:] náʔ **thúk-khon**
student read book CLF-that AFF every-CLF

(44) a. **nákrian** [ʔà:n nǎŋsŭ: lêm-ní:] **thúk-khon** krâp/khàʔ
student read book CLF-that every-CLF POLITE
‘Every student read this book.’ [*polite*]

b. ***nákrian** [ʔà:n nǎŋsŭ: lêm-ní:] krâp/khàʔ **thúk-khon**
student read book CLF-that POLITE every-CLF

Moreover, Jenks (2011, pp. 272-273, adapted) illustrates that floating quantifiers must occur outside of VP because they cannot appear before low adverbs, including aspect markers (45) and manner adverbials (46).

(45) a. **nákrian** [ʔà:n nǎŋsŭ:] paj-lɛ́:w **sɔ̌:ŋ-khon**
student read book ASP-already 2-CLF
‘Two students already read the book.’

b. ***nákrian** [ʔà:n nǎŋsŭ:] **sɔ̌:ŋ-khon** paj-lɛ́:w
student read book 2-CLF ASP-already

(46) a. **nákrian** [kin thúrian] kàp mɯ: **sɔ̌:ŋ-khon**

student eat durian with hand 2-CLF

'Two students eat durian with their hands.'

b. ***nákrian** [kin thúrian] **sɔ̌:ŋ-khon** kàp mɯ:

student eat durian 2-CLF with hand

On the other hand, floating quantifiers can follow higher adverbs, such as temporal adverbs, with a requirement for a prosodic break before a floating quantifier. Double horizontal lines (||) indicate the prosodic break.

(47) a. **nákrian** [ʔà:n nǎŋsŭ:] **sɔ̌:ŋ-khon** mûawa:nní:

student read book 2-CLF yesterday

'Two students read the book yesterday.'

b. **nákrian** [ʔà:n nǎŋsŭ:] mûawa:nní: || **sɔ̌:ŋ-khon**

student read book yesterday 2-CLF

(48) a. **nákrian** [kin thúrian] **sɔ̌:ŋ-khon** do:jthanthi:

student eat durian 2-CLF immediately

'Two students immediately ate durian.'

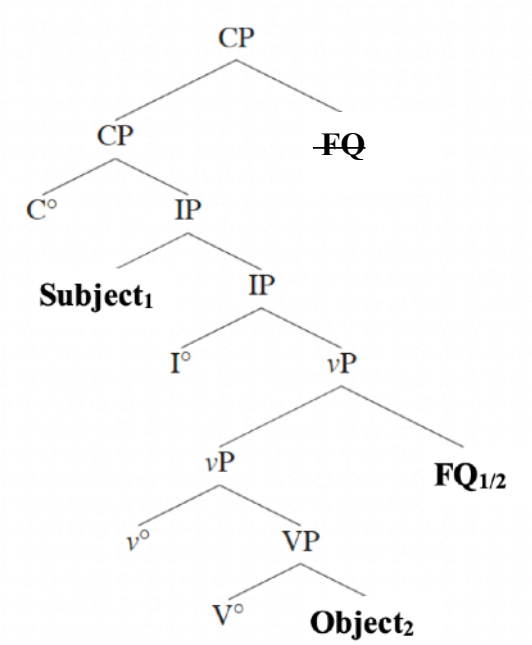
b. **nákrian** [kin thúrian] do:jthanthi: || **sɔ̌:ŋ-khon**

student eat durian immediately 2-CLF

Because floating quantifiers can reorder with higher adverbs, it is likely that they are able to occur above the projection of high adverbs, which is usually associated with IP or As-

pectP. However, Jenks suggests that basic position of floating quantifiers should be roughly at *v*P since floating quantifiers preferentially precede higher adverbs in general. Therefore, if we adopt the rightward movement analysis, the landing site for the movement of Thai floating quantifiers should be around *v*P rather than some higher projection above IP, as illustrated below.

(49)



In the subsequent section, I demonstrate that the quantifiers occurring after high adverbs (and a prosodic break) and sentence-final particles can freeze the quantifier scope. In other words, they do not affect the scope in the same way that they typically do in a standard case of Thai Q-float. This observation, in turn, supports the structure outlined in (49), where floating quantifiers cannot occupy the position that c-commands the subject. On the other hand, I adopt the biclausal analysis, as presented in the previous chapter, to account for this type of quantifier behavior.

4.2.3 Floated quantifiers vs. right-dislocated quantifiers

In the examples in (47) and (48), we see that floating quantifiers can reorder with higher adverbs. However, the requirement of a prosodic break can be taken to indicate that the following constituents are associated with high attachment (i.e. the CP-field), and thus occur outside of the IP domain. Because these quantifiers must be set off by a prosodic break, they behave just like right-dislocated constituents, where their position is located in another clause (assuming the biclausal analysis). Furthermore, novel evidence suggests that these "right-dislocated quantifiers" manifest different scopal effects relative to negation from the regular floating quantifiers. Recall that when quantifiers float, they affect the semantic scope relative to negation. The example in (23) is repeated below in (50). Note that in this example, the prosodic break is not present.

(50) a. nákrian thúk-khon (jaŋ) mâj [$_{VP}$ kin khâ:w]
student every-CLF still NEG eat rice
'Every student still hasn't eaten.' ∀ > ¬, *¬ > ∀

b. nákrian (jaŋ) mâj [$_{VP}$ kin khâ:w] thúk-khon
student still NEG eat rice every-CLF
'Every student still hasn't eaten.' ∀ > ¬, ¬ > ∀

Nevertheless, the example in (51a) shows that when the sentence is pronounced with such a prosodic pattern, the scope of the subject quantifier remains higher than that of the negated element. The prosodic break functions as a cue, creating boundaries between some of

the sentence constituents (Wagner and Watson 2010). The example in (52b) also shows the same scope taking behavior: the quantifier that appears after a sentence-final particle (e.g. a politeness marker) does not lower the scope of the subject quantifier, unlike the floating quantifier exemplified above.

(51) a. nákrian (jaŋ) mâj [VP kin khâ:w] || thúk-khon
student still NEG eat rice every-CLF
'The students still haven't eaten, all of them.' ∀ > ¬, *¬ > ∀

b. nákrian (jaŋ) mâj [VP kin khâ:w] khráp thúk-khon
student still NEG eat rice POLITE every-CLF
'The students still haven't eaten, all of them.' ∀ > ¬, *¬ > ∀

Likewise, Q-float raises the scope of object quantifiers only when the sentence is pronounced without a break. The example is illustrated in (24), repeated in (52). However, when the prosodic break (53a) or the sentence-final particle (53b) is inserted before the quantifier, the object quantifier cannot take scope over negation. As a result, the sentence remains unambiguous.

(52) a. Joe mâj [$_{VP}$ phóp nákrian thúk-khon] mûawa:nní:
Joe NEG meet student every-CLF yesterday
'Joe didn't meet every student yesterday.' *∀ > ¬, ¬ > ∀

b. Joe mâj [VP phóp nákrian] mûawa:nní: thúk-khon

Joe NEG meet student yesterday every-CLF

'Joe didn't meet every student yesterday' ∀ > ¬, ¬ > ∀

(53) a. Joe mâj [VP phóp nákrian] mûawa:nní: || thúk-khon

Joe NEG meet student yesterday every-CLF

'Joe didn't meet every student yesterday' *∀ > ¬, ¬ > ∀

b. Joe mâj [VP phóp nákrian] mûawa:nní: khráp thúk-khon

Joe NEG meet student yesterday POLITE every-CLF

'Joe didn't meet every student yesterday' *∀ > ¬, ¬ > ∀

In Thai orthography, the prosodic break can be indicated by white spaces. Spacing is used similarly to commas in Roman scripts. Wagner and Watson (2010) suggest that spacing serves as "explicit prosody" for readers. However, the insertion of a space before floating quantifiers does not seem consistent among Thai speakers. Sometimes the Q-float sentence is not written with a space, but the pause is inserted when speaking, and vice versa. In other languages like German and Dutch, the afterthought construction always written following a colon or a comma, or as a separate clause. A couple of them are illustrated below (Ott and de Vries 2016, p. 643). The example of Thai orthography (with a prosodic break) is also added below.

(54) a. German

Ich habe heute einen Star getroffen: **den John Travolta**!

I have today a star met the John Travolta

'I met a star today: John Travolta.'

b. Dutch

Hij kwam binnen, **doodsbleek**

He came inside pale white

'He came in, pale white.'

c. Thai

โจไม่ได้พบนักเรียนเมื่อวานนี้ ทุกคน

co: mâjdâj phóp nákrian mûawa:nní: || thúk-khon

Joe NEG meet student yesterday every-CLF

'Joe didn't meet every student yesterday'

Again, these afterthought constructions express discourse-new or focused information. This is the reason why they always appear at the end of the clause (or even in a separate clause). Thus, their discourse function is relatively similar to that of floating quantifiers in Thai because Thai Q-float also expresses new information. In fact, floating quantifiers in Burmese and Japanese are also analyzed as afterthoughts, contrary to those in Thai (Simpson 2011). This is because post-verbal elements in these languages are often interpreted separately from the preceding clause and hence are assumed not being syntactically integrated into that clause. Simpson (2011, p. 27) shows that it is possible for floating quantifiers in Burmese

and Japanese to occur following the verb in a clause, as illustrated in (55) and (56), respectively:

(55)	manɐ̯ekaɁ	thuu	zēe-hmaa	**sa-ōuq**	wɛ-tɛ,	**thōun-ōuq**
	yesterday	he	market-in	book	buy-REAL	3-CL

'Yesterday he bought books in the market, ..three to be precise'

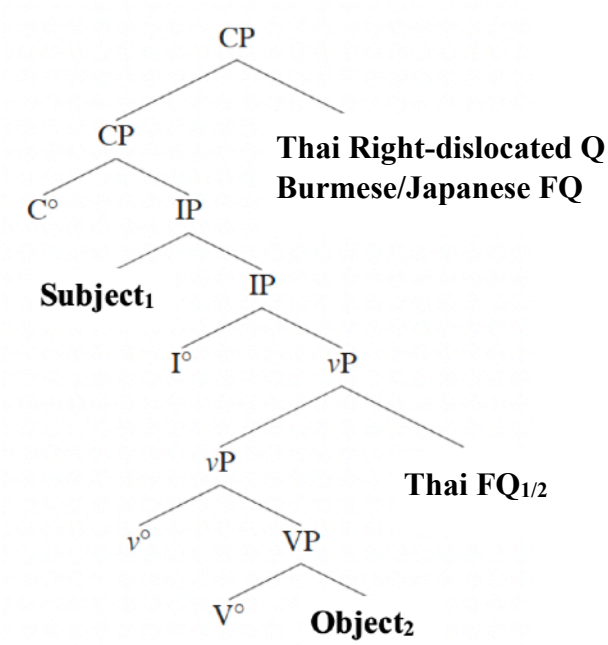
(56)	Taroo-wa	Kinokuniya-de	**hon-o**	katta,	**san-satsu**	
	Taroo-TOP	Kinokuniya-in	book-ACC	bought	3-CL	

'Taroo bought books in Kinokuniya, ..three it was.'

Note that while I make a clear distinction between floating quantifiers (floating quantifiers) and right-dislocated quantifiers in Thai, I will continue to use the term "afterthought floating quantifiers" when discussing floating quantifiers in languages like Burmese and Japanese, as suggested by Simpson. What can be inferred from this is that there must be different syntactic analyses between floating quantifiers and right-dislocated quantifiers in Thai, as well as those post-verbal afterthought floating quantifiers in Burmese and Japanese. The right-dislocated quantifiers in Thai, and afterthought floating quantifiers in Burmese and Japanese could be grouped together as they have the same discourse function and possibly the same syntactic structure. Moreover, as suggested by Simpson, the prosodic break that is present with post-verbal floating quantifiers in Burmese and Japanese sets the quantifier off from the rest of the preceding clause, so their structure should not be integrated into that clause, unlike that of the floating quantifiers in Thai. The structure below illustrates

different positions between Thai floating quantifiers versus right-dislocated quantifiers and Bermese/Japanese afterthought floating quantifiers.

(57)



The structure, as shown above, suggests that the quantifiers may not attach to such a high position in the structure, but instead originate in a different clause. In fact, analyzing right-dislocated quantifiers as a separate clause turns out to be what a number of linguists have discussed in their studies (e.g., de Vries 2011; Ott 2012; Ott and de Vries 2016, among others). In the previous chapter, we discussed the biclausal analysis of afterthoughts in more details. We can adopt this analysis to account for Thai right-dislocated quantifiers and Burmese/Japanese afterthought floating quantifiers. Their example sentences ((58a) and (59a)) and derivations ((58b) and (59b)) could look like the following:

(58) Thai right-dislocated quantifiers

a. co: mâj [$_{VP}$ phóp nákrian] mûawa:nní: || thúk-khon

Joe NEG meet student yesterday every-CLF

'Joe didn't meet the students yesterday, all of them.'

b. [$_{CP1}$ co: mâj phóp nákrian mûawa:nní:]

Joe NEG see student yesterday

[$_{CP2}$ [~~**nákrian**~~ **thúk khon**]$_i$ [~~co: mâj phóp t_i mûawa:nní:~~]]

studentevery CLF student Joe NEG see yesterday

(59) Burmese afterthought floating quantifiers

a. manẹ̯ekạ̯ thuu zēe-hmaa sa-ōuq wɛ-tɛ, **thōun-ōuq**

yesterday he market-in book buy-REAL 3-CLF

'Yesterday he bought books in the market, three to be precise'

b. [$_{CP1}$ manẹ̯ekạ̯ thuu zēe-hmaa sa-ōuq wɛ-tɛ]

yesterday he market-in book buy-REAL

[$_{CP2}$ [~~**sa-ōuq**~~ **thōun-ōuq**]$_i$ [~~manẹ̯ekạ̯ thuu zēe-hmaa t_i wɛ-tɛ~~]]

book 3-CLF yesterday he market-in buy-REAL

4.2.4 Q-float is driven by focus

In this section, I present arguments from Simpson (2011) and Jenks (2013) who demonstrate that the reason why Q-float must appear on the right in Thai is due to focus. That is, floating quantifiers represent important, new information in the discourse.

Simpson (2011) suggests that Thai floating quantifiers are associated with focus on the quantifier, expressing new information. He illustrates that there are three contexts in

which floating quantifiers are used. First, floating quantifiers are commonly found in presentational sentences, where new referents are being introduced into the discourse. An example of this can be seen with the use of the existential verb *mi:* (Simpson 2011, p. 135):

(60) mi: dèk ma: ŋa:npa:tî: ra:w sì:sip-kwà: khon
have child come work.party around forty-plus CLF
'There were more than forty students that came to the party.'

Second, floating quantifiers are observed in cases of *re-presentation* and partitivity. In instances where the NP is already known to the hearer and speaker, representing old information, the NP and quantifier can be split. The splitting results in partitive interpretations, which emphasizes the characteristics of a specific number of items within the set represented by the NP. Therefore, while the floated quantifier represents new information, its associated noun phrase represents previously introduced information (Simpson 2011, p. 135):

(61) baŋkalo: kɔ̂: wâ:ŋ jù: sɔ̌:ŋ/sǎ:m-lǎŋ
bangalow PRT vacant ASP 2/3-CLF
'Two or three of the bungalows are free.'

Finally, the use of floating quantifiers is often perceived as more natural when the quantifier is accompanied by additional focus or qualifying particles such as *khɛ̂:* 'just', *tâŋ* 'as many as', *kùap* 'almost', *ra:w* 'approximately', or when it has a remarkable or high value (Simpson 2011, p. 136):

(62) mi: khon ma: tâŋ-hâ:sip-khon
have people come as.many.as-50-CLF
'As many as 50 people came.'

Furthermore, according to Jenks (2013, p. 100), quantity questions offer additional support to the association between Q-float and new information on the quantifier. Floating quantifiers are observed to be preferred in quantity questions and their corresponding answers, as in (63). The quantifier itself can function as the answer to the following question, allowing for the ellipsis of the remaining part of the sentence.

(63) Q: nákrian chô:p kin ʔa:hă:n-fàràŋ kì:-khon?
student like eat food-western how.many-CLF
'How many students like to eat western food?'
A: (nákrian chô:p kin ʔa:hă:n-fàràŋ) să:m-khon
student like eat food-western three-CLF
'Three students like to eat western food.'

Floating quantifiers can also serve as the positive answer to a polar question, suggesting that it expresses new information. In the example below, the quantifier *thúk-khon* 'everyone' can be used as the answer instead of *châj* 'yes', and the position where it occurs is the floated position (Jenks 2013, pp. 100-101, adapted):

(64) Q: nákrian chô:p ʔa:hă:n-fàràŋ thúk-khon máj?
student like food-western every-CLF YNQ

‘Did every student like western food?’

A: (chɔ̂:p) thúk-khon

(like) every-CLF

‘Yes.’

A’: ??thúk-khon chɔ̂:p

He further demonstrates that quantifiers can occur in the floated position as a positive response to a polar question, even though they are not floated in the question itself:

(65) Q: nákrian thúk-khon chɔ̂:p ʔa:hă:n-fàràŋ máj?

student thúk-khon like food-western YNQ

‘Did every student like western food?’

A: (chɔ̂:p) thúk-khon

(like) every-CLF

‘Yes.’

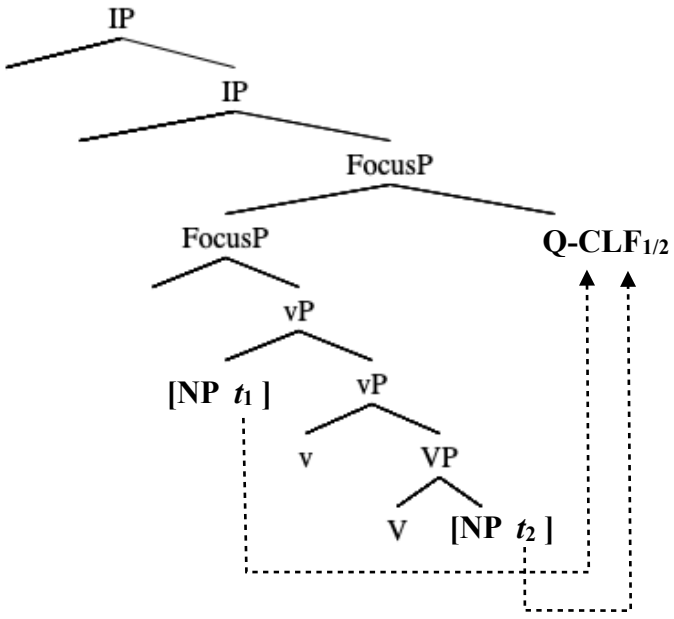
A’: ??thúk-khon chɔ̂:p

Therefore, the presence of floated quantifiers as the affirmative response to a polar question strongly supports the notion that the floated position of the quantifier is associated with new information.

Given the aforementioned observation that floating quantifiers express new information, the syntactic representation of Thai Q-float should promptly provide the focal structure for positions that are always in focus. I propose that there is a position available for Focus

Phrase (FocusP) above the *v*P to indicate that an element occurring in this position expresses new information and is considered in focus in Thai, aligning with the analysis proposed by Belletti (2001, 2004). The structure below is the modified version of that in (49). In this structure, the quantifier undergoes extraction from the subject/object DP to the dedicated position of FocusP. This FocusP projection is located directly above vP, positioned within the IP domain.

(66)



It should be noted that the movement to FocusP in Thai is unique to quantifiers since it is a clause-internal movement that does not occur at the right (or left) periphery of IP. While the dedicated position of FocusP could potentially accommodate other types of focus movement, including topicalization and VP-fronting, it should be located in the above the IP level rather than around the vP. In other words, Q-float is not an IP-peripheral phenomenon like other types of focus movement in Thai. The structures below exemplify the focus move-

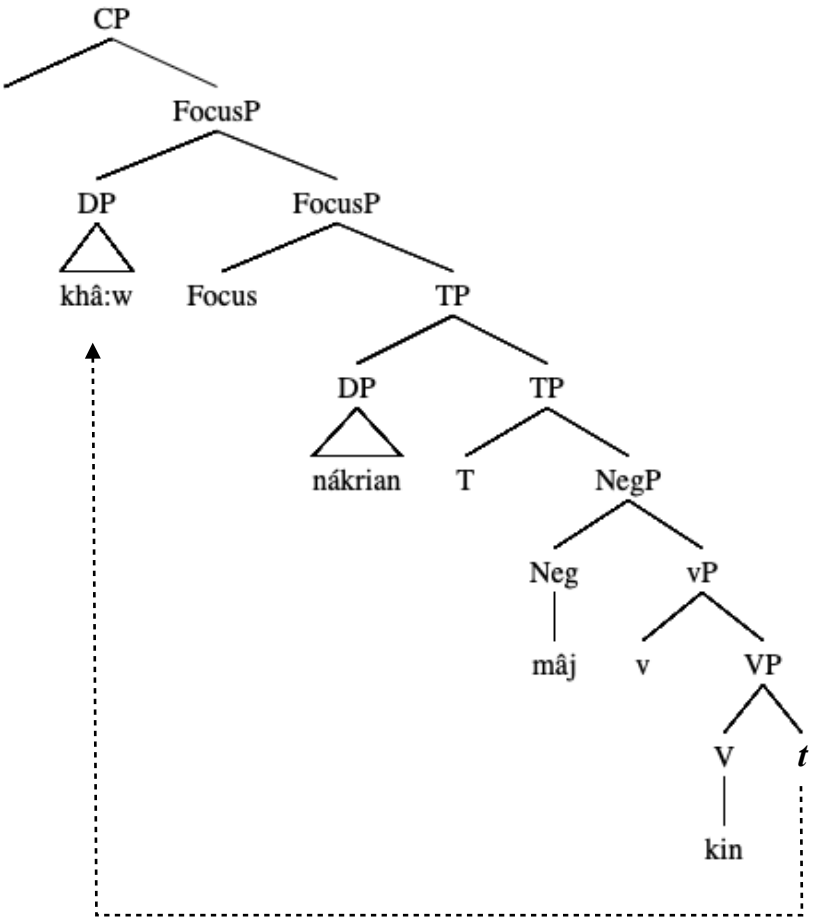
ment of topicalization (67a) and VP-fronting (67b) in Thai. The position of FocusP must be located high in the structure since it is the movement to the left-peripheral position.

(67) a. Topicalization

[$_{DP}$ khâ:w]$_i$ nákrian mâj kin t_i

rice student NEG eat

'Rice, the student won't eat.'

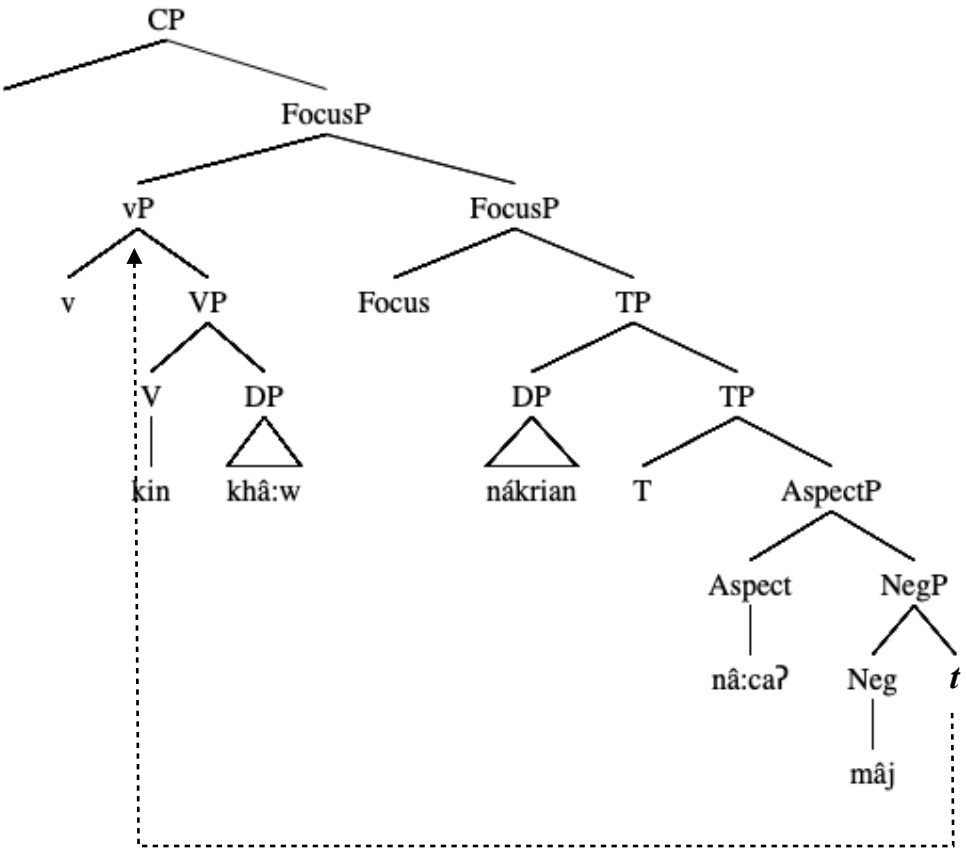


b. VP-fronting

[$_{vP}$ kin khâ:w]$_i$ nákrian nâ:caʔ mâj t_i

eat rice student might NEG

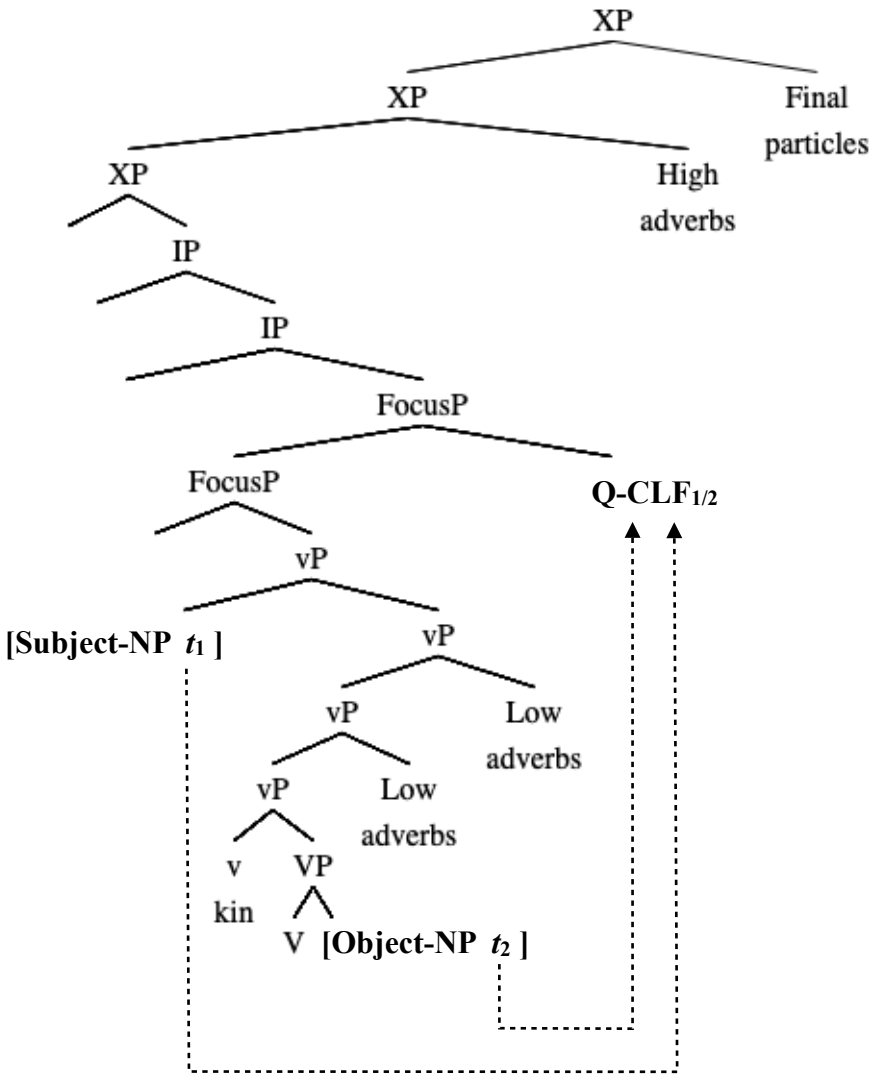
‘Eat rice, the student might not.’



4.2.5 The complete structure

In this section, building on the idea of Ross (1967), I propose that Thai quantifier float can be straightforwardly accounted for using the subextraction analysis similar to the one proposed for extraposed relative clauses. Additionally, I propose that the landing site for subtracted quantifiers is at the dedicated position of FocusP, right above *v*P, since the movement of quantifier float in Thai is driven by focus.

(68)



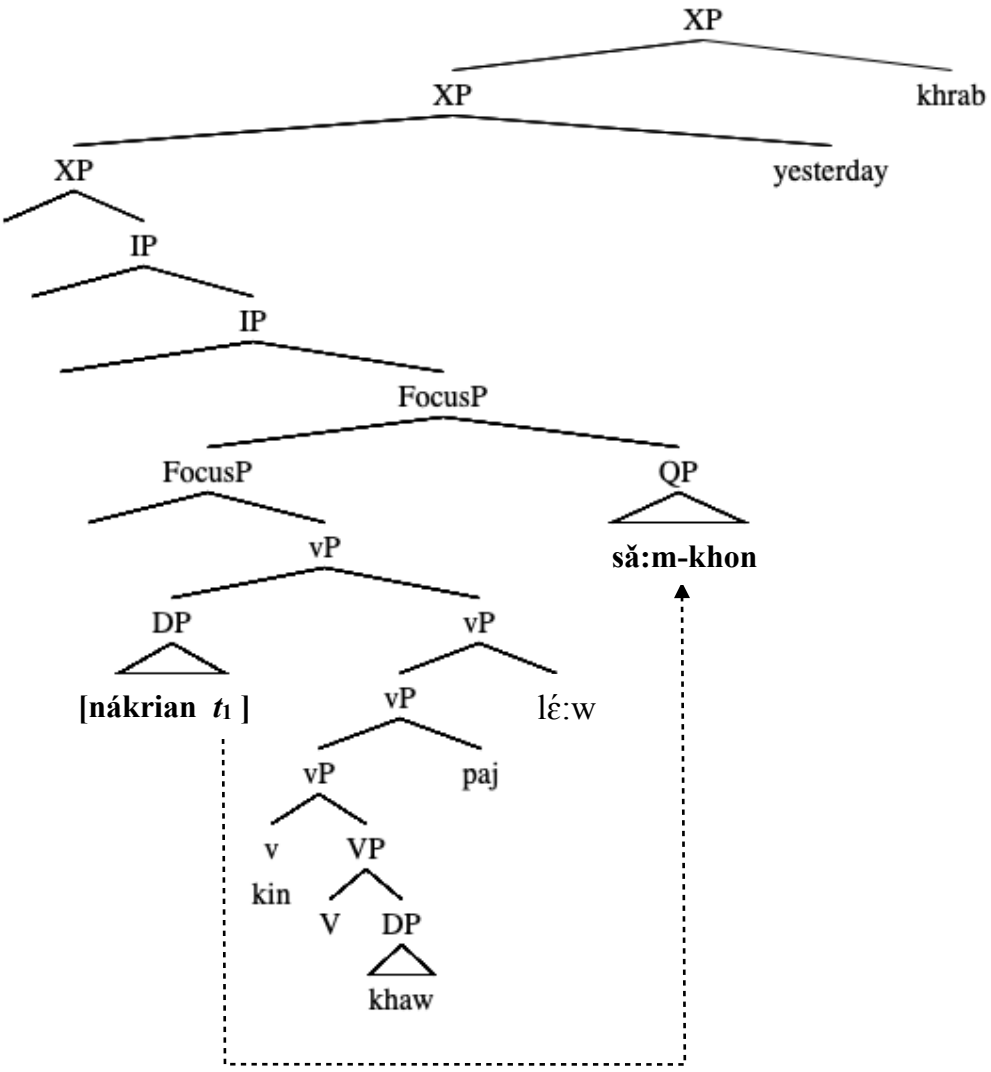
The above structure incorporates high adverbs (e.g. temporal adverbs), low adverbs (e.g. aspect markers and manner adverbs), as well as sentence-final particles. As we have seen above, floating quantifiers cannot appear after high adverbs and sentence-final particles. I propose that while the floating quantifier is in FocusP, these elements must be in some higher projection above it.

By applying this structure to the sentence with Q-float in Thai, we have the following complete structure.

(69) [nákrian t_i] kin khâ:w paj lɛ́:w [să:m-khon]$_i$ mûawa:nní: khráp

student eat rice ASP already three-CLF yesterday POLITE

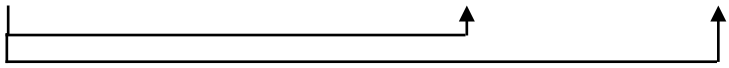
'Three students already ate rice yesterday.'



However, Singhapreecha and Sybesma (2015) illustrate that the there are in fact two available positions where Q-float can occur, which in turn distinguish Q-float from other kinds of adverbials in Thai. These two available positions for Q-float are schematized below. The examples are also shown along the side.

(70) a. Subject FQ

[N [Q+Clf]] V (N) … (Aspect) **Q+Clf** (‘already’) **Q+Clf**



(i) [dèk săːm-khon] wîŋ rɔ̂ːp sanăːm paj/maː/sèt lɛ́ːw **săːm-khon**

kid 3-CLF run around field ASP already 3-CLF

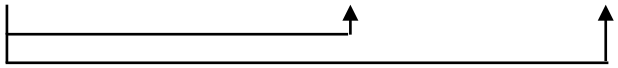
‘Three kids have already run around the field.’

(ii) [dèk săːm-khon] wîŋ rɔ̂ːp sanăːm paj/maː/sèt **săːm-khon** lɛ́ːw

kid 3-CLF run around field ASP 3-CLF already

b. Object FQ

N V [N [Q+Clf]] … (Aspect) **Q+Clf** (‘already’) **Q+Clf**



(i) dèk kin [khâːw săːm-caːn] paj/maː/sèt lɛ́ːw **săːm-caːn**

kid eat rice 3-CLF ASP already 3-CLF

‘The kids have already eaten three bowls of rice.’

(ii) dèk kin [khâːw săːm-caːn] paj/maː/sèt **săːm-caːn** lɛ́ːw

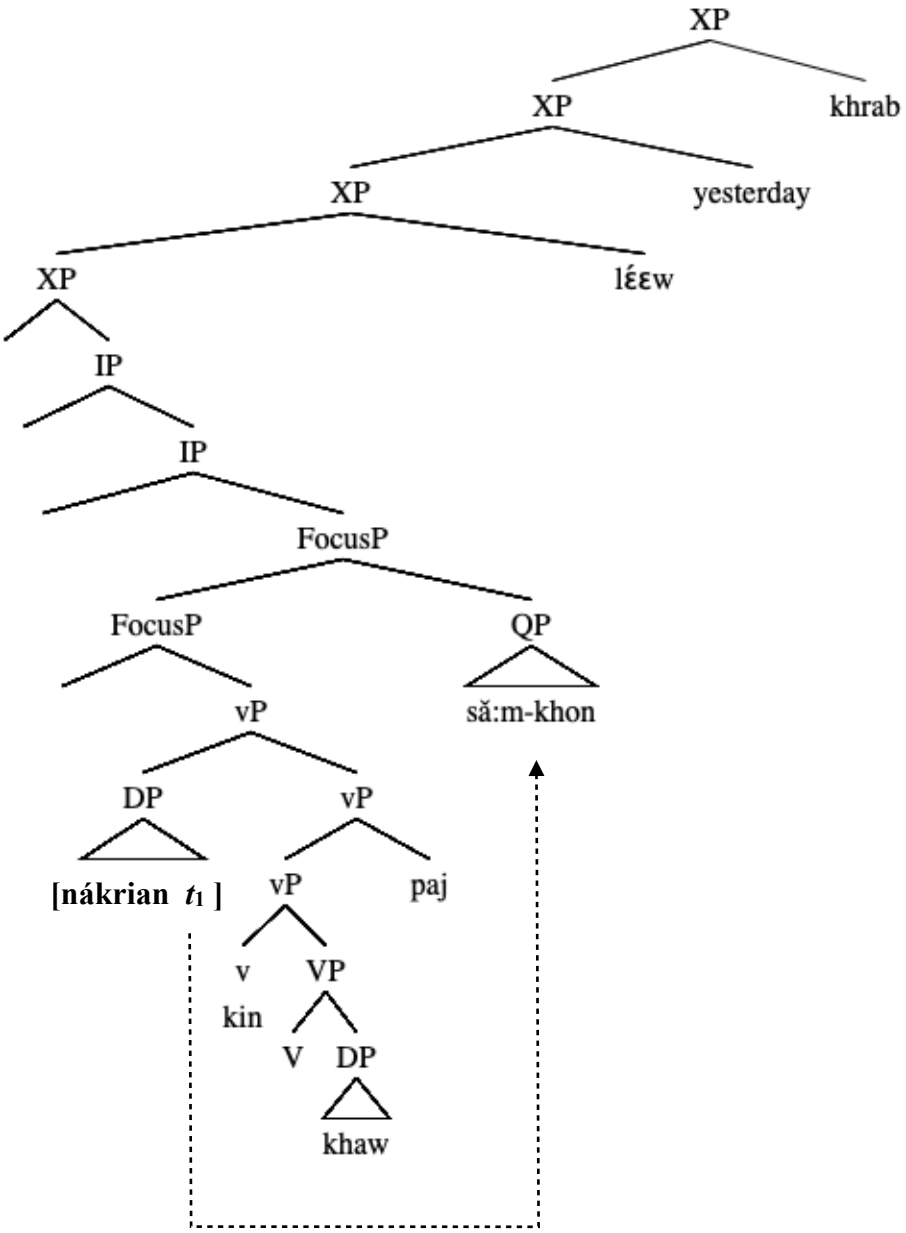
kid eat rice 3-CLF ASP 3-CLF already

According to Singhapreecha and Sybesma, the adverb *lɛ́:w* 'already' is treated as a event/sentence-level modifier, which is positioned higher in the structure, above IP. I propose that there are two positions within the structure where *lɛ́:w* can occupy, either as a low adverb or high adverb. As a low adverb, which we have seen in (69), *lɛ́:w* is located as an adjunct to *v*P, immediately above the aspect *paj/ma:/sèt*. In the case where *lɛ́:w* occurs higher than the floated quantifier, I propose that *lɛ́:w* occupies the position above IP, which is interchangeable with other high adverbs. Together with the high adverb and sentence-final particle, the sentence in (71), where the floating quantifier occurs between the aspect *paj* and the adverb *lɛ́:w*, can have the structure below.

(71) [nákrian t_i] kin khâ:w paj [săm-khon]$_i$ lέ:w mûawa:nní: khráp

student eat rice ASP three-CLF already yesterday POLITE

'The students have eaten rice yesterday, namely already three (of them).'



The evidence that supports the claim that *lέ:w* can function as either a low adverb or a high adverb comes from its dual availability in two distinct positions. Within a single sentence, *lέ:w* can be occupied at the same time, as exemplified below.

(72) phŏm ʔo:n ŋən paj (lɛ́:w) mûawa:n (lɛ́:w) khráp

I transfer money ASP already yesterday already POLITE

'I already transferred the money yesterday.'

In conclusion, I propose that both subject and object quantifiers move to the dedicated position of FocusP in the Thai Q-float construction. This FocusP is located immediately above *v*P since the floated position must be lower than high adverbs. I finally propose that there are two available positions for the adverb *lɛ́:w* in the structure.

4.2.6 Quantifier scope and negation

Recall that Q-float affects the scope of quantifiers relative to negation. In Jenks' (2011, 2013) analysis, the different scope effects are represented by overt movement of QR. For subject quantifiers, non-floating quantifiers always take scope above negation and NegP is attached immediately above VP. On the other hand, floating quantifiers take scope below negation (i.e. subject Q-float "lowers" the quantifier scope), where NegP is attached under TP[29]. To account for the different scope interpretations between the subject quantifier cases, we assume the similar structures in Jenks' QR approach, which locates the subject high (i.e. in the Spec of TP)[30]. When the subject quantifier floats to FocusP, and the negation is attached high (i.e.

[29] We can assume the Scope Principle (Aoun and Li 1989) which states that when QP A c-commands QP B, QP A takes scope over QP B. While the scope patterns of Thai Q-float align with the Scope Principle, our current proposal addresses the scope and c-command interactions between quantifiers and another scope-bearing element, specifically negation.

[30] Assuming that subjects start high is useful for explaining the different scope interpretations of Q-float, although vP is not fully exploited. I will leave this as a puzzle for future research.

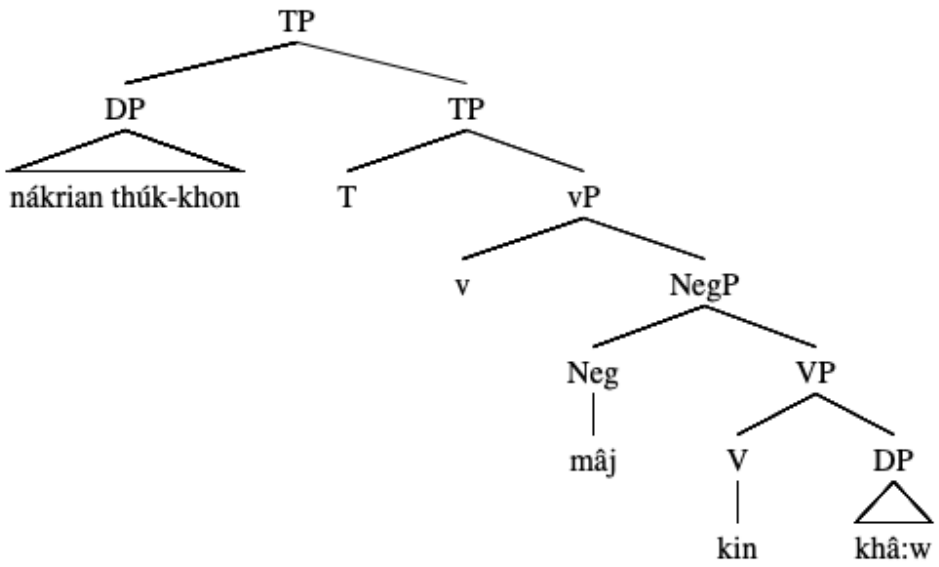
above FocusP), the interpretation where negation takes scope over floating quantifier is obtained. The sentence and structure below illustrate the quantifier scope effects relative to negation for subject quantifiers.

(73) a. No subject Q-float

[$_{DP}$ nákrian thúk-khon] mâj kin khâ:w]

student every-CLF NEG eat rice

'Every student hasn't eaten.' ∀ > ¬, *¬ > ∀

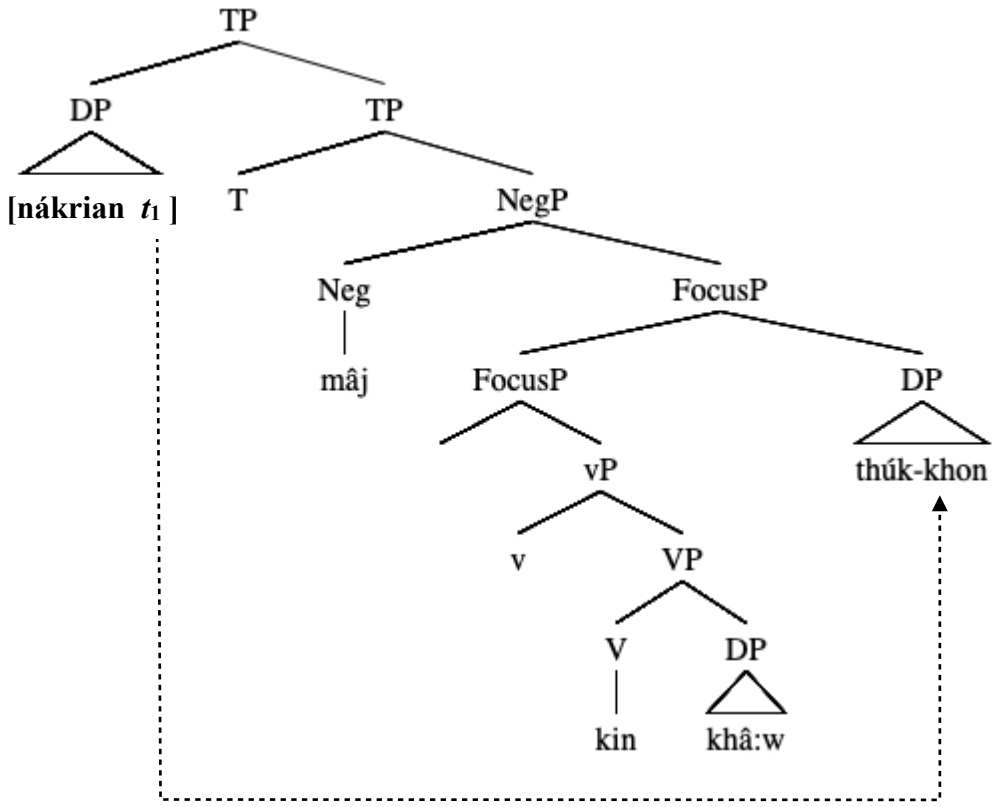


b. Subject Q-float

[$_{DP}$ nákrian] mâj kin khâ:w [$_{FocusP}$ thúk-khon]

student NEG eat rice every-CLF

'Every student hasn't eaten.' ∀ > ¬, ¬ > ∀

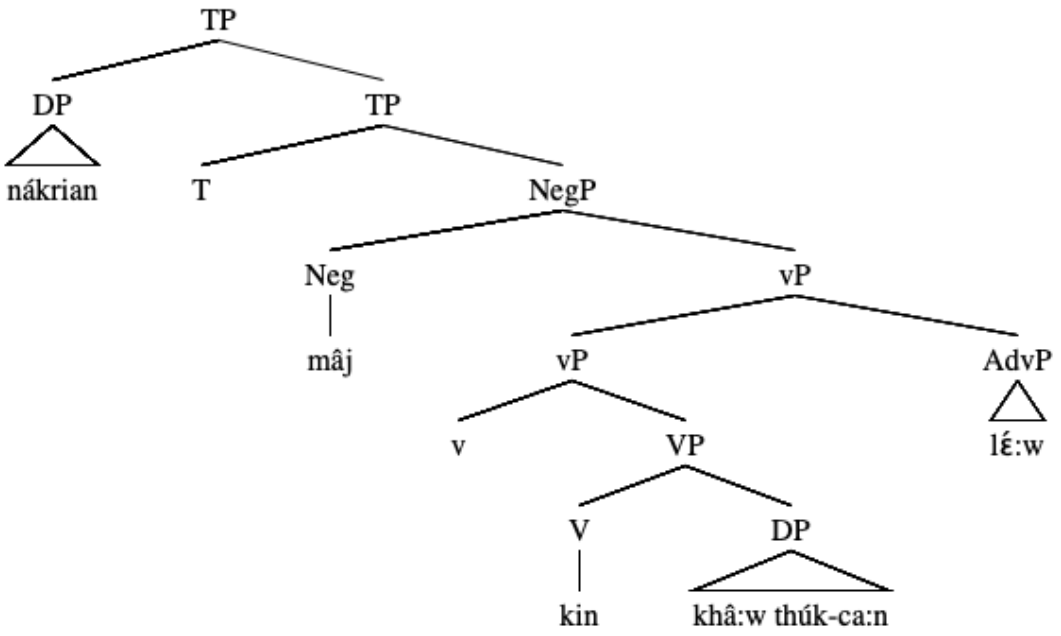


In the case of object quantifiers, we also account for the different scope interpretations between non-floated and floated object quantifiers by postulating the movement to FocusP and providing the two attachment sites for negation. Non-floated quantifiers must take scope below negation, hence a non-ambiguous interpretation. NegP is attached under TP. When object quantifiers float, they can take scope below negation (i.e. object Q-float "raises" the quantifier scope), and the position of NegP alternates to the position immediately VP. The sentence and structure below illustrate the quantifier scope effects relative to negation for object quantifiers.

(74) a. nákrian mâj kin [DP khâ:w thúk-ca:n] lɛ́:w

student NEG eat rice every-CLF already

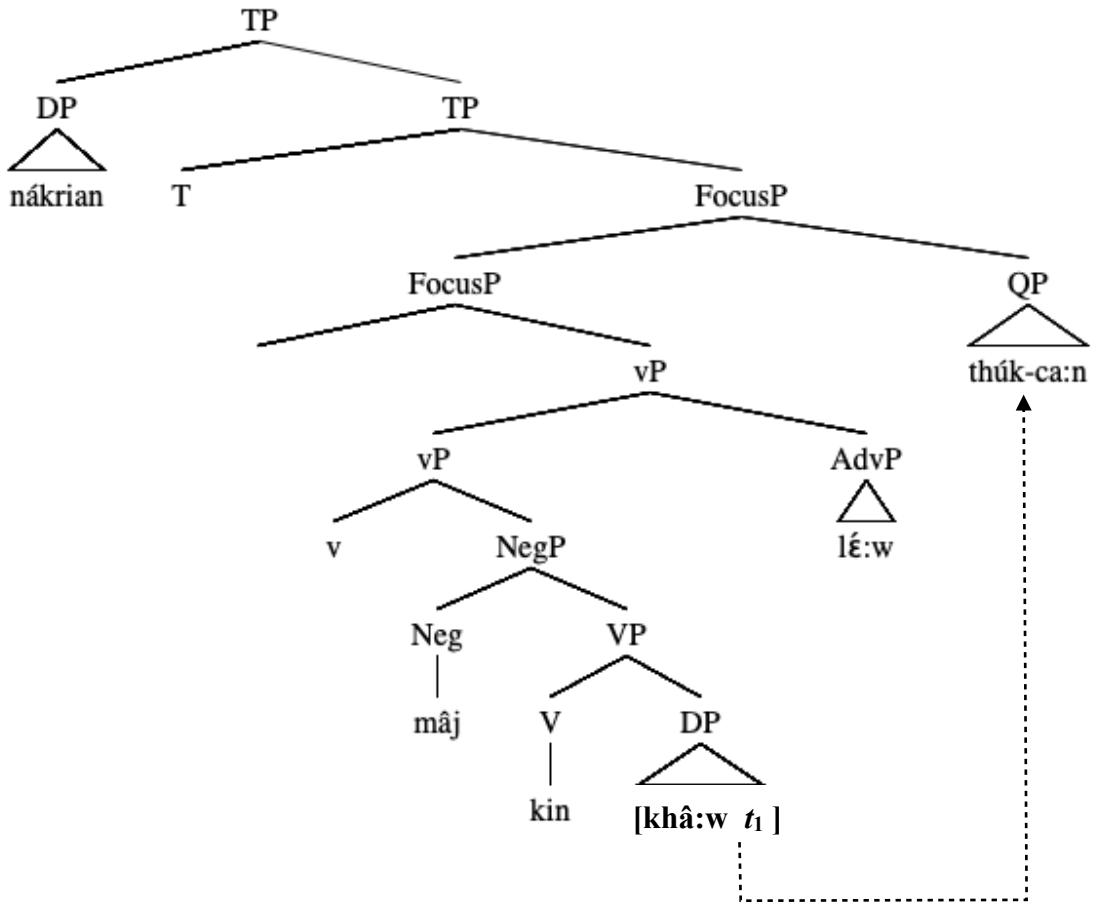
'Joe hasn't eaten every bowl of rice.' *∀ > ¬, ¬ > ∀



b. nákrian mâj kin [$_{DP}$ khâ:w] lɛ́:w [$_{FocusP}$ thúk-ca:n]

student NEG eat rice already every-CLF

'Joe hasn't eaten every student.' ∀ > ¬, ¬ > ∀



To summarize, Q-float manifests the scopal effects of quantifiers relative to negation. To represent this fact in the structures of Thai Q-float, we utilize the potential sites of Thai negation. These sites can alternate between non-floated and floated quantifiers, as well as between subject and object quantifiers. Negation can be attached either high (under TP) or low (above VP) to illustrate the scope behaviors of floating quantifiers.

Moreover, these scope effects are only observed in the 'true' Q-float construction. We saw in section 4.2.3 that this is not the case for right-dislocated quantifiers. The examples

below compare the scope interpretations between floated and right-dislocated quantifiers, repeated from (52) and (53).

(75) a. Canonical position

[$_{DP}$ nákrian thúk-khon] mâj kin khâ:w

student every-CLF NEG eat rice

'Every student hasn't eaten.' ∀ > ¬, *¬ > ∀

b. Floated position

[$_{DP}$ nákrian] mâj kin khâ:w [$_{QP}$ thúk-khon]

student NEG eat rice every-CLF

'Every student hasn't eaten.' ∀ > ¬, ¬ > ∀

c. Right-dislocated position

nákrian mâj kin khâ:w || [$_{QP}$ thúk-khon]

student NEG eat rice every-CLF

'The students haven't eaten, all of them.' ∀ > ¬, *¬ > ∀

I propose that the *frozen* scope of the right-dislocated quantifier *thúk-khon* in (75c) follows from the biclausal analysis adopted to account for the structure of Thai RD. Assuming our biclausal analysis, *thúk-khon* originates in CP2, so it is not a result from the movement out of CP1. In fact, right-dislocated modifiers stay in their original position, and their occurrence at the right edge of the sentence is just a remnant of the ellipsis of the redundant materials in CP2, copied from CP1. Notice that the quantifier *thúk-khon* cannot be used as a predicate, so it is analyzed as a specificational afterthought. The structures below illustrate

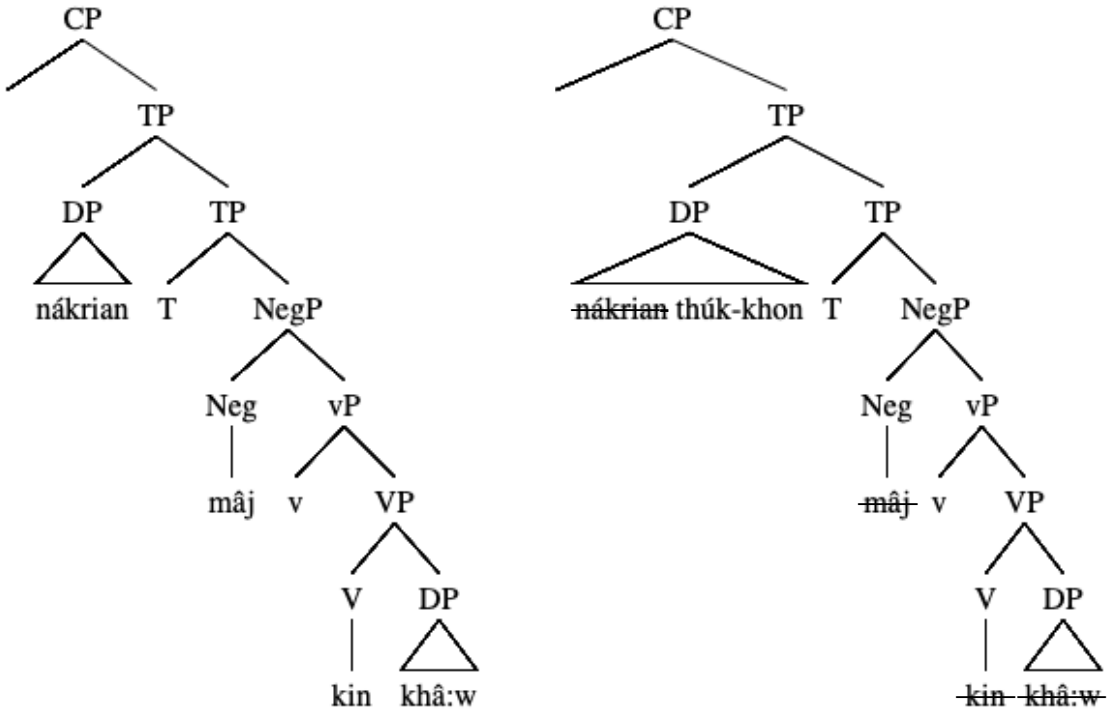
the biclausal analysis of the right-dislocated quantifier in (75c). The bracket representation is shown in (76a) and the tree is in (76b).

(76) a. [$_{CP1}$ nákrian$_j$ mâj kin khâ:w] [$_{CP2}$ **[~~nákrian$_j$~~ thúk-khon]**$_i$ [~~t_i mâj kin khâ:w~~]]

student NEG eat rice student every-CLF NEG eat rice

'The students haven't eaten, all of them.'

b. CP1 CP2



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Because the quantifier *thúk-khon* never undergoes movement to the position lower than negation in the RD construction, the interpretation where the negation takes scope over the quantifier, as in the case of Q-float, is not obtained.

4.2.7 An argument for subextraction: P-drop

One of the main arguments for the QR analysis of Q-float by Jenks (2011, 2013) is that Q-float is sensitive to locality restrictions, suggesting that there is movement involved. My proposal is in line with Jenks in this respect since the analysis involves movement out of DP. Nevertheless, Singhapreecha and Sybesma (2015) argue that the Q-float phenomenon in Thai does not involve movement in general, as quantifiers cannot have been generated with a demonstrative NP to start with. This directly poses a problem for the subextraction analysis, which assumes that a quantifier and a demonstrative NP form a single constituent at the base position. The example in (76) shows that the quantifier *săam khon* 'three-CLF' can float out of the demonstrative NP (Singhapreecha and Sybesma 2015, p. 16):

(77) kháw hâj [dèkphû:cha:j klùm nán] wîŋ rɔ̂:p sanǎ:m [sǎ:m khon]
he make boy CLF^{group} that run around field three CLF
'He ordered three of those boys to run round the field'

The problem arises if we posit that the floating quantifier *săam khon* has been originated within the NP containing a demonstrative. This is because, according to Singhapreecha and Sybesma, *săam khon* can never be combined into one phrase with the demonstrative NP *dèkphû:cha:j klùm nán* 'those boys'. The sentence in (78) illustrates this fact.

(78) *kháw hâj [dèkphû:cha:j sǎ:m khon klùm nán] wîŋ rɔ̂:p sanǎ:m
3S make boy three CLF CLF^{group} that run around field
'He ordered three of those boys to run round the field'

Note that the floating quantifier cannot occur at the end of the NP either since the quantified expression must form a constituent with the noun before combining with the demonstrative phrase, as argued above by Culbertson & Adger (2014). The only case in which the demonstrative phrase *klùm nán* can follow the quantifier is when it is set off by a prosodic break. However, the presence of the prosodic break would suggest that the demonstrative phrase behaves like a non-restrictive (appositive) phrase rather than the regular restrictive one, hence subject to a different type of analysis.

Moreover, Singhapreecha and Sybesma claim that the interpretation of the sentence in (77) is even more unambiguously partitive than that of the NP containing only the bare noun *dèkphû:cha:j*, giving rise to the interpretation 'three of those boys' rather than 'these three boys'. This partitive reading suggests that there could exist a null preposition *of* as a head of the complement demonstrative phrase *klùm nán*. This is exemplified in (79) below.

(79) dèkphû:cha:j [săːm khon] **(càːk)** klùm nán
boy three CLF **(of)** CLF^{group} that
'three of those boys'

This null preposition fact is actually not new. Bobaljik (2003) shows that the English floating quantifier *all* cannot form a constituent with a DP containing a demonstrative in the base position, as in (80b). However, adding the preposition of, as in (80c), will solve the problem. Consider the examples (adapted from Bobaljik 2003, p. 124) below[31].

[31] Jenks (P.C.)

(80) a. The thief, the smuggler, and the pirate were **all** about to attack the ship.

b. ***All** the thief, the smuggler, and the pirate were about to attack the ship.

c. All **of** the thief, the smuggler, and the pirate were about to attack the ship.

The quantifier *each* also exhibits the same problem, moreover. The preposition *of* must be absent when *each* is floated, but not when it is in the base position (Bobaljik 2003, p. 123):

(81) a. These children have **each** read a different book.

b. ***Each** these children has read a different book.

c. Each **of** these children has read a different book.

According to Bobaljik, this mismatch between the Q-float construction and the underlying NP can be simply explained by the morphological process like preposition insertion (or deletion). In English, this *of* can be dropped when occurring with the quantifier *all*, as in the sentence *all (of) these children are from NY*. In Thai, the preposition drop (P-drop) phenomenon is more general. For example, Hoonchamlong (1991) shows that the prepositions that can be dropped in Thai include those that specify location (82a), direction (82b), and possession (82c):

(82) a. kháw nâŋ (bon) kâwʔîː

he sit on chair

'He sat on the chair.'

b. kháw tòk (loŋ naj) lŭm

he fall down in hole

'He fell into the hole.'

c. pâ: (khɔ̌:ŋ) raw cajdi:

aunt of us kind

'Our aunt is kind.'

Thus, if we posit that the demonstrative NP containing a quantifier in (79) in fact contains the preposition *cá:k* 'of' which is dropped in the base position, the claim that quantifiers cannot have been generated with a demonstrative NP to start with can be proven wrong. Since they can form a grammatical constituent, the movement issue as pointed out by Singhapreecha and Sybesma should no longer exist.

4.3 Summary

In this chapter, I argue that Thai Q-float can be straightforwardly accounted for using the rightward subextraction to FocusP analysis because it clearly demonstrates in the structure what moves and why it moves.

This analysis follows the suggestion from Simpson (2011) who argues that the leftward quantifier stranding analysis is problematic for Thai. This is because floating quantifiers in Thai typically occur in positions where their associated noun could not have previously occupied or been moved from, as indicated in the previous standard stranding analysis. Likewise, the adverbial analysis fails to explain why floating quantifiers in Thai are always interpreted with their restrictor, which sets them apart from typical adverbs and poses a challenge

to the adverbial analysis. Finally, the QR analysis of Q-float rejects any rightward movement analysis since it is claimed that Thai in general lacks rightward movement phenomena such as extraposition. The QR analysis effectively explains the scope-taking behavior of Thai Q-float. However, it requires a separate analysis to account for why the noun restrictor and the quantifier are pronounced in different positions in the structure, as well as what motivates the rightward position of floating quantifiers. The proposed analysis, on the other hand, demonstrates that the quantifier and its noun restrictor constitute a single constituent in the base position. The subsequent movement of the quantifier to the dedicated position of FocusP is motivated by and driven by focus.

CHAPTER 5

CONCLUSION

This dissertation begins by providing an introduction to the topic of discontinuous noun phrases in Thai. The first chapter discusses the classification of Thai modifiers based on their occurrences with classifiers. It also explores the rigid word order in Thai, where dependents always occur on the right of their head, and provides various examples to illustrate the word order patterns in Thai sentences. Furthermore, the chapter discusses the rigidity and discontinuity of noun phrases in Thai. It presents the typical order of modifiers within noun phrases, with adjectives closest to the head noun and demonstratives at the end. The chapter concludes by briefly discussing the exception to the rigid word order, namely floating quantifiers, and introduces the concept of appended modifiers, which appear after complete sentences. Finally, the chapter establishes questions regarding the possibility of displaced nominal modifiers in a postnominal language like Thai, comparing them to relative clause and prepositional phrase extraposition in English.

In chapter 2, I examined the first type of discontinuous noun phrase constructions, namely, right-dislocation. In section 2.1, I introduced two types of modifiers that can undergo right-dislocation, which are distinguished based on the presence of a classifier head: classifier-headed modifiers and non-classifier-headed modifiers. The main question addressed in this chapter is which modifiers can or cannot undergo right-dislocation in Thai and why. I started discussing demonstratives and a specific indefinite numeral ‘one’ in section 2.2. I illustrated

that they form a natural class called deictic modifiers, following Jenks (2011). The reason why both of these modifier types cannot appear in the right-dislocated position has to do with the fact that deictic modifiers must always be accompanied by a classifier. I further highlighted a strong connection between the specific indefinite numeral 'one' and the cardinal numeral 'one', providing both syntactic and historical evidence to show that the latter is derived by the former. I ended the chapter by offering a unified syntactic analysis for both the demonstratives and the specific indefinite and cardinal numerals. In section 2.3, I explored the roles that classifiers play in facilitating the ease of right-dislocation for all classifier-headed modifiers. I proposed that there are three properties of classifiers that enable classifier-headed modifiers to occur in the right-dislocated position, even though it is non-adjacent to the head noun. I illustrated that Thai classifiers can license ellipsis of the noun, that they can share some properties with focal elements, and that they are grammaticalized nouns. As a result, the classifier-headed modifiers that appear at the right-dislocated position are not merely standalone modifiers but rather modifiers with an elided head noun. I then proposed in section 2.4 that right-dislocated non-classifier-headed modifiers (certain types of adjectival phrases, prepositional phrases, and relative clauses) are only grammatical when they are structurally complex. That is, the modifiers must contain at lease one other phrase or be contained within a larger phrase. This thus explains why standalone adjectives cannot appear in the right-dislocated position, but reduplicated and intensified (adverbial-modified) adjectives, as well as prepositional phrases and relative clauses, can. Finally, in section 2.5, I suggested that there is no clear structural difference between extraposed relative clauses and right-dislocated modifiers in Thai. I argued that both of these constructions do not behave as if they were moved out of their host clause, thus supporting a non-movement analysis.

The syntactic analysis of all the Thai right-dislocated modifiers is discussed in chapter 3. In this chapter, I adopted a version of the "biclausal" analysis proposed by de Vries (2009a, 2013), Ott (2012, 2015), and Ott and de Vries (2012, 2016) and demonstrated that the properties of right-dislocation observed in Germanic languages can be applied to a non-related language like Thai. I illustrated that there are two main types of right-dislocation — backgrounding and afterthought — and right-dislocated modifiers in Thai are of the afterthought type since they express discourse-new information. In section 3.1, I discussed information structure and introduced various discursive terms. Next, in section 3.2, I investigated backgrounding and afterthought, as well as the two subtypes of afterthought, namely specificational afterthought and predicative afterthought, in more detail. It also highlights the asymmetries between these concepts of right-dislocation. Section 3.3 presents the previous analyses of right-dislocation, with a focus on the biclausal analysis. The biclausal analysis explains that right-dislocated constituents or dXPs are remnants from the subsequent deletion of redundant material, that they exhibit clause-external properties, and that they are underlyingly clausal. I then examined the Thai right-dislocated constituents in section 3.3, suggesting that right-dislocated classifier-headed modifiers in Thai can be categorized as specificational ATs because they provide specific information that clarifies or specifies the meaning of the correlate. On the other hand, right-dislocated non-classifier-headed modifiers can be considered predicative ATs since they function as predicates, attributing a certain property or characteristic to the referent of their correlate. Finally, I demonstrated that relative clauses, irrespective of their classifier head, should be regarded as specificational ATs in the RD construction. This is due to their inability to function as predicates themselves, their distinct interpretation compared to predicative ATs, and their capacity to license NP-ellipsis similar to classifiers.

The last chapter of the dissertation explores clause-internal displacement of quantifiers, known as quantifier float. I started the chapter by presenting three previous analyses of quantifier float in Thai: adverbial, stranding, and QR analyses, as well as their shortcomings in section 4.1. In section 4.2, building on the idea of Ross (1967), I proposed that Thai quantifier float can be straightforwardly accounted for using the rightward subextraction analysis suggested for extraposed relative clauses by Simpson (2011). Additionally, I proposed that the floated position of extracted quantifiers is at the dedicated position of FocusP since the movement of quantifier float in Thai is driven by focus. This position is located right above vP but lower than the position of high adverbs (e.g. temporal adverbs) and sentence-final particles. Since quantifier float involves clause-internal movement, it should be positioned lower than CP. Furthermore, I argued that quantifiers that appear at the edge of the clause are ambiguous between floating quantifiers and right-dislocated quantifiers, with the latter occurring clause-externally. Finally, I illustrated the effects of Q-float on the quantifier scope when the negation is present in the structure, following Jenks. I ended the section by addressing the problem of the impossibility for the floating quantifier and its demonstrative associate to have formed a single constituent, as a preposition is required in between them. I offered a solution suggesting that prepositions in Thai can be dropped in general. In this case, the floating quantifier and the demonstrative NP can successfully form a constituent since the preposition has been dropped at the base position.

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