

Reflection on the X' category in Thai

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0. Introduction

In Chomsky's X-bar theory, three levels of syntactic categories are argued for: X^0 for word level, X'' or XP for phrasal level, and an intermediate level between the two, a category designated X' . It has been demonstrated that a category larger than lexical or word level yet smaller than the maximal expansion of a phrase exists for noun, verb, preposition, etc. in English. It is no doubt that both X^0 and XP categories, which are more or less traditional, do exist in Thai. It is unclear, however, whether or not there is such an intermediate level of X' category in Thai. Hence, the objective of the investigation of this paper.

1. X'-Equivalences

Four categories, N, V, A, and P are given as major X^0 categories in the X-bar theory. X'-equivalences are summarized as follows (Chomsky 1986, Sells 1985):

X^0	X'	X'' or XP
N	N'	N'' or NP
V	V'	V'' or VP
A	A'	A'' or AP
P	P'	P'' or PP
	I'	S = IP
	C'	S' = CP

Table 1: X'-Equivalences (from Chomsky 1986, Sells 1985).

Where N = noun, V = verb, A = adjective/adverb, P = preposition, S = sentence, and I = INFL = inflection, C = complementizer, and both I and C are non-lexical. Also, IP = NP $[[V\dots]_{VP}]_I$ and CP = ... $[C IP]_C$

A generalized X'-scheme or X'-template is given as follows (Chomsky 1986:3, Sells 1985:28, Radford 1988:261)

$$(1) \quad X^m \rightarrow \dots X^n \quad ; \text{ where } n \leq m \text{ and } 0 \leq m \leq 2$$

- (2)
$$\begin{array}{c} X^m \\ | \\ \text{(specifier) modifier/argument } X^n \end{array} \quad (n \leq m \text{ and } 0 \leq m \leq 2)$$

Where a modifier is a sister adjunct of the head, and an argument or complement is subcategorized by an X^0 -head. A specifier is usually a sister of an X' under the X'' maximal projection, and a modifier/argument is any XP^* , (unlimited numbers of any maximal projection).

Lexical categories, N, V, P, and A as well as phrasal categories, NP, VP, PP, and AP are well noted in traditional Thai grammar. I (in place of the former AUX in earlier versions of Transformational Syntax) deserves a full paper devoted to itself alone and will not be dealt with as far as this paper is concerned. Also, whether or not I and C are lexical in Thai will not be taken up here either. It is noted that S' is a skewing structure and S as an XP-equivalence is an assumption taken in this study. S' as a maximal projection can be demonstrated in Thai (cf. section 2 below). The scope of this study covers only N' , V' , and A' , in particular, it is restricted to N' and V' .

2. X' category in Thai?

First, the skewing S' which is an XP category will be demonstrated in Thai. Consider the schemata below,

- (3) a. $S' = CP = \dots C'$
 b. $C' = C IP = C S$

Complementizers in Thai are e.g. *sîŋ* 'that, which', *t^hîi* 'that, which, who(m)', and *wâa* 'that' and $S' = \dots C S$ as in (3) a & b is observable in Thai, for example,

- (4) $[[[k^h\text{on}]_N [t^h\text{i} \quad [n\acute{o}p \quad h\acute{e}n \quad m\acute{i}a \quad waan]_s]_{s'}]_{N'}]_{NP}$
 man whom Nop saw yesterday

pen phîi phǒm
 is elder sibling my

'The man whom Nop saw yesterday is my elder brother.'

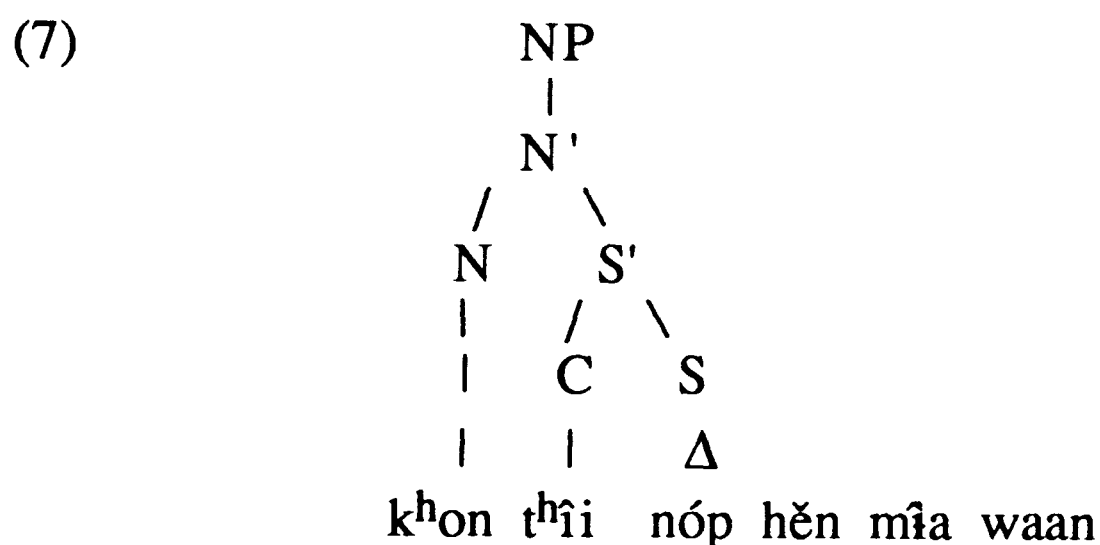
- (5) $k^h\acute{a}w [[[p^h\acute{u}t]_V [w\acute{a}a [k^h\acute{a}w \quad t^h\text{am} \quad s\acute{e}t \quad l\acute{a}e\acute{w}]_s]_{s'}]_V]_{VP}$
 he said that he work finish already
 'He said that he had already finished working.'

- (6) $p\acute{a}a \quad m\acute{a}j \quad pen [[[s\grave{i}\eta]_N [s\grave{i}\eta \quad [raw \quad k^h\text{uan} \quad r\acute{a}ks\acute{a}a \quad w\acute{a}j]_s]_{s'}]_{N'}]_{NP}$
 forest is thing which we should preserve kept
 'A forest is something that we should preserve.'

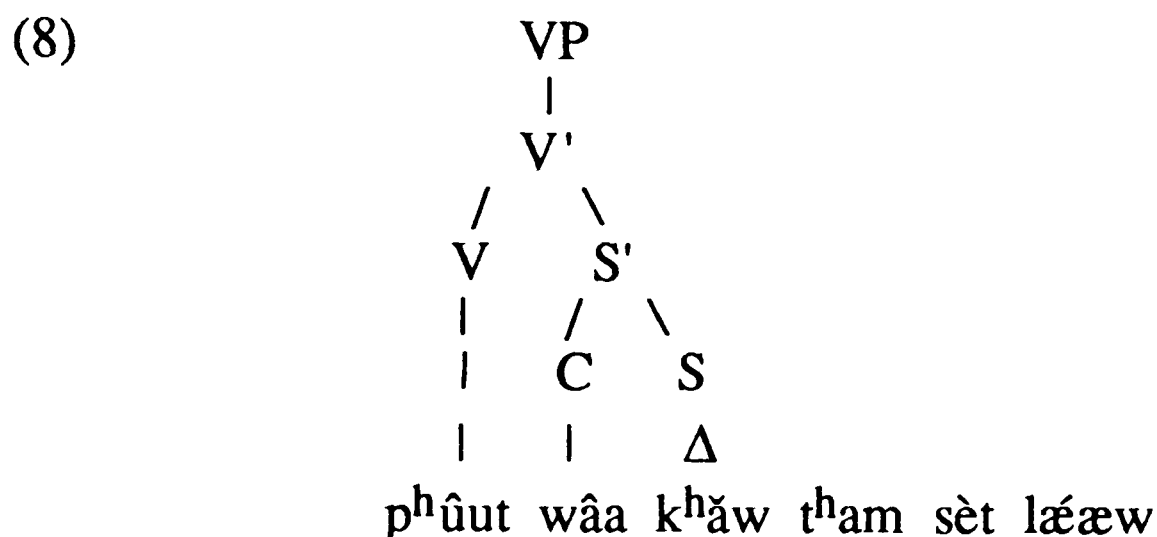
Given (2), the fact that S' is the complement subcategorized by an X^0 category in all of the examples given in (4)-(6) above, satisfying the structure in

(2), seems to demonstrate that it is an XP, a maximal projection--only maximal projection can be subcategorized by an X^0 . That is, in (4), [$k^h on$]_N as the X^0 -head subcategorizes for the S' complement. Likewise, [$p^h \hat{u}t$]_V subcategorizes for the adjacent S' in (5), and [$s\grave{i}\eta$]_N for the S' complement in (6), (cf. (7)-(9) below).

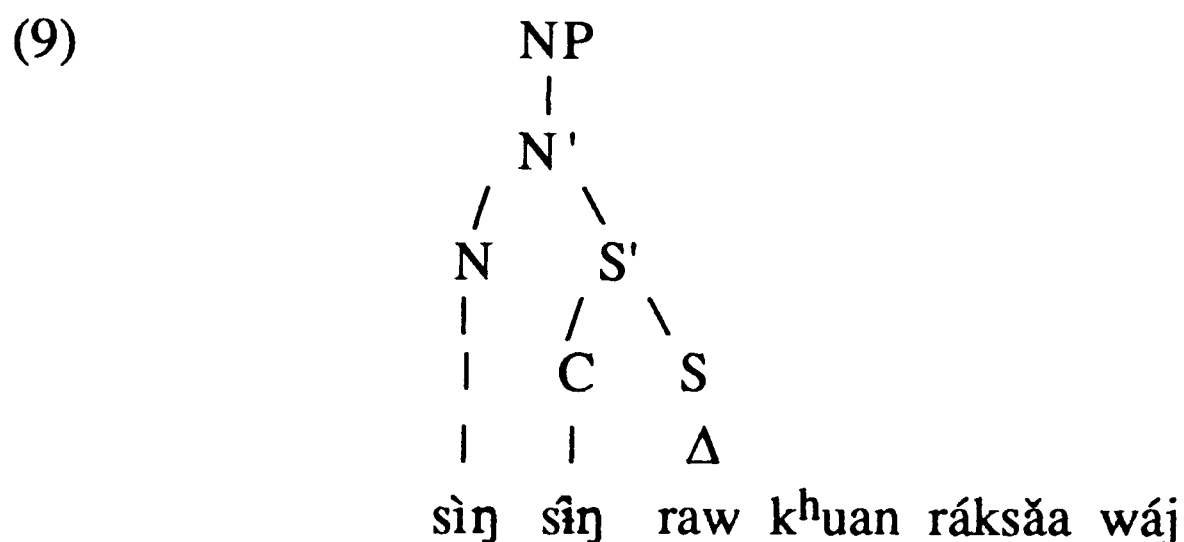
The structures in (4)-(6) can be charted as in (7)-(9) respectively;



Where the lexical entry of $k^h on$ is as follows: [$k^h on$] = N; [___(S')]. More specifically, the optional subcategorization frame is [___ (t^hi S)].



Where the lexical entry of $p^h \hat{u}t$ is [$p^h \hat{u}t$] = V; [___(S')]. With the co-occurrence restriction on the complementizer, the optional subcategorization frame is [___ (wâa S)].



Where $s\grave{i}\eta$ has the following lexical entry, [$s\grave{i}\eta$] = N; [___(S')], or [$s\grave{i}\eta$] = N; [___(s\grave{i}\eta S)]

The question we ask is whether N' in (7) and (9), and V' in (8) are necessary, since neither the NP immediately dominates the N' nor the VP

dominates the V' branches. The intermediate N' and V' seem superfluous and redundant. If it can be shown, however, that such structures as the NP in (7) and (9), and the VP in (8) are not yet maximally expanded, that these XP mother nodes can branch, and that when expanded, they are not quite the same as the N' and V' they dominate, then we may have reasons for the existence of these intermediate N' and V'.

3. Subcategorizations in Thai

Given (2), evidence for any X' category lies heavily on the argument or complement structure of the X⁰ category itself—i.e., in its subcategorization frame at the lexical entry. Any structure with an X⁰-head that subcategorizes for any XP complement satisfying the template in (10) is by definition an X' (Chomsky 1986:3, Radford 1988:267). As such, a complement is distinguished from a modifier which is an adjunct XP—a periphery element in relation to the head.



3.1 V'

With respect to subcategorization, at least two verb structures in Thai will be considered here.

3.1.1 V-X constituents

There are two-word verbs of the form [V X], where X = V, N, A, or P. For example,

- (11)
- | | | | |
|----|-------------|-------------------------------------|-------|
| a. | [sám sǒn] | 'be redundant' | [V V] |
| b. | [wîŋ raaw] | 'snatch and run as an act of crime' | [V N] |
| c. | [wîŋ prîaw] | 'run in a relay' | [V A] |
| d. | [dǎn khâw] | 'walk in' | [V P] |

It seems that these V-X sequences function together as a constituent. For example, verb-preposition sequences such as *nam khâw* 'import', *sǒŋ sǒk* 'export' require an NP object. However, the preposition has to form a constituent with the verb rather than the NP following it, otherwise illformedness will result, or a different meaning (not intended) will be communicated. For example,

- (12)
- | | | | | |
|---------|----------|----------------------|----------|------|
| bǒrísàt | nam khâw | sǐnk ^h áa | tɕamnuan | mâak |
| company | import | merchandise | amount | many |
| naj | pii | thîi lææw | | |
| in | year | last | | |

The company imported a large amount of merchandise last year.'

A question may be formed for the statement in (12). However, only a question with *nam khâw* functioning together as a constituent as in (13)a is wellformed. A question such as the one in (13)b which separates the verb and the preposition is illformed, or has a different meaning totally unrelated to (12).

(13) a. *khraj* *pen* *phuû* [*nam khâw*]
 who is one who import
 ‘Who is the one that imported (the merchandise)?’

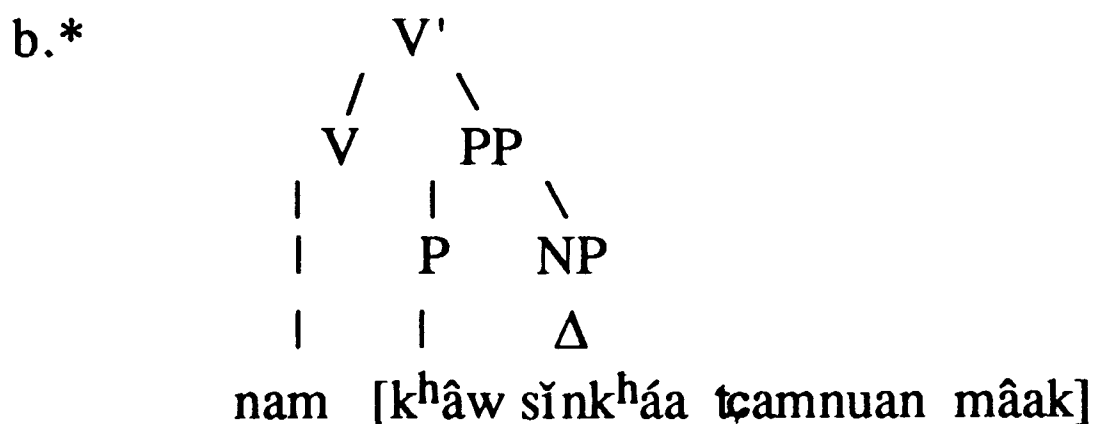
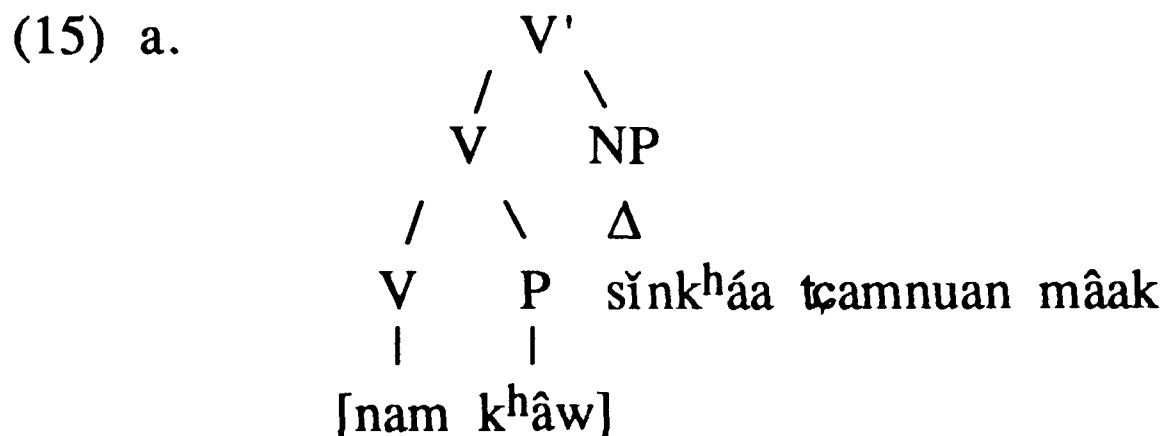
b.* *khraj* *pen* *phuû* [*nam*] ?
 who is one who bring
 *‘Who is the one that brought ---?’
 (unfinished sentence)
 *‘Who is the leader?’
 (different meaning, out of context)

Likewise, an answer to the question in (13)a must have *nam khâw* as a constituent, for example,

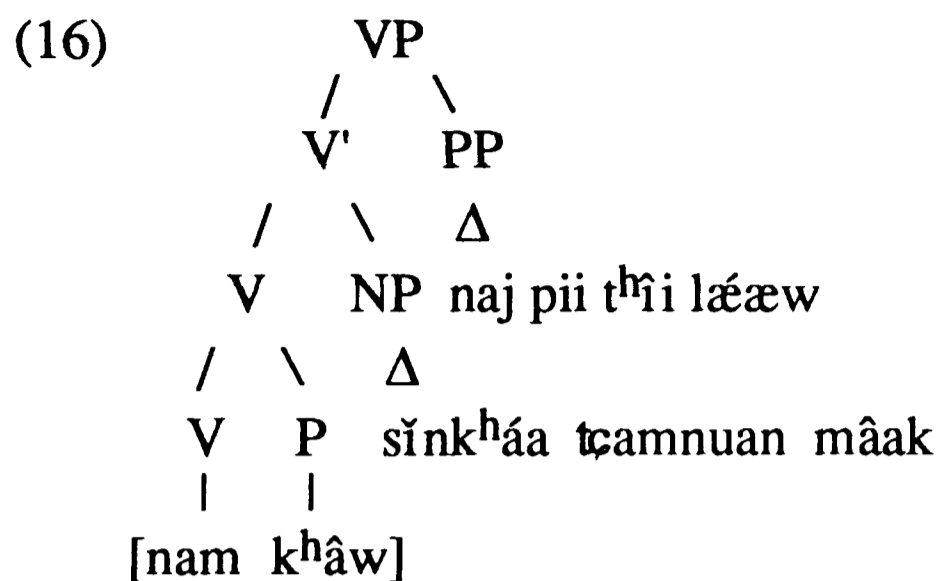
(14) a. *borísàt* *siisii* *pen* *phuû* [*nam khâw*]
 company C.C. is one who import
 ‘The C.C. company is the importer.’

b.* *borísàt* *siisii* *pen* *phuû* [*nam*]
 company C.C. is one who bring
 *‘The C.C. company is the one who brought ---’
 (unfinished sentence)
 *‘The C.C. company is the leader.’
 (different meaning, incoherent utterance)

As such, the V-P constituent in (12), (13)a, and (14)a has the structure as shown in (15)a, whereas the V and P in (13)b and (14)b has the structure of (15)b;



Thus, the subcategorization frame of *nam khâw* is as follows: [nam khâw] = V; [___NP], and the VP in (12) has the structure of (16) below;



It is noted that *nam khâw* and *nam* 'bring' as in *nam sĭnk^háa khâw* 'bring merchandise in' have different and separate lexical entries. The lexical entry of *nam* is [nam] = V; [___NP (*khâw*)]. Also, a generalization can be made for two-word verbs of the form [V X]_v that require an NP complement.

The lexical entry will be of the form [V X] = V; [___NP].

It seems clear that the V' structure is satisfied under (2) and (10) in a two-word verb with NP complement. Also, it is quite clear that such V' may have a sister adjunct as a modifier such that the modifier expands the V' into yet another V; (not shown here), which in turn, with its null specifier expands into its maximal projection, VP, as in (16) above. In the following, it will be shown that such V' can be substituted by a proform, *t^ham* 'do' and a WH-word, which distinguishes it from a full VP. Consider the following question for the statement in (12),

- (17) *b*orísàt [t^ham ?à? raj] naj pii t^hi l^ae^aw
 company do what in year last
 'What did the company do last year?'

And a short answer will be,

- (18) [nam khâw sĭnk^háa t^camnuan mâak]_v
 import merchandise amount many
 'imported a large amount of merchandise'

Here we have [t^ham ?à? raj] in (17) substituting for the V' [nam khâw sĭnk^háa t^camnuan mâak] which is the short answer to the question.

Besides, *t^ham* 'do', can serve as a proform of a V' but not the entire VP. For example,

- (19) a. *b*orísàt [nam khâw sĭnk^háa t^camnuan mâak]_v
 company import merchandise amount many
 naj pii t^hi l^ae^aw t^ae^a mâj dâj [t^ham] naj pii ní
 in year last but NEG do in year this

'The company imported a large amount of merchandise last year but (it) does not do...'(so) this year.

b.* bōrísàt [nam k^hâw sǐnk^háa tcamnuan mâak
 company import merchandise amount many

naj pii t^hîi lǎæw] _{VP} tææ mâj dâj [t^ham]
 in year last but NEG do

*'The company imported a large amount of merchandise last year but (it) does not do ...'

In (19) a *t^ham* serves as a pro-V' but in (19)b serving as a pro-VP does not work. The sentence is incomplete in (19)b.

Moreover, in passivization, only the V' and not the entire VP is involved. For example,

(20) a. [sǐnk^háa tcamnuan mâak]_i thùuk [nam k^hâw e_i]_V
 merchandise amount many PASS. import

naj pii t^hîi lǎæw
 in year last

'A large amount of merchandise was imported last year.'

b. *[sǐnk^háa tcamnuan mâak naj pii t^hîi lǎæw]_i thùuk
 merchandise amount many in year last PASS.

[nam k^hâw e_i]_{VP}
 import

*'A large amount of merchandise last year was imported.'

All the examples in (17)-(20) above seem to give evidence for the existence of a V' category.

3.1.2 Transitive verbs

Since the subcategorization frame of a verb determines whether or not the XP sister node is an argument or an adjunct according to (2) and (10), any transitive verb has the structure of [V NP]_V and a bi-transitive verb has a structure of [V NP PP]_V or [V NP NP]_V. For example,

(21) k^hǎw [[[háj]_V [khǒŋ khwǎn]_{NP} [[kææ]_P [dèk]_{NP}]_{PP}]_V naj
 he give gift to children in

ŋaan líŋ sàməə
 party always

'He always gives gifts to children at a party.'

Where [háj] = V; [___NP (kææ) NP]

In the same manner as (17)-(20) above, transitive verbs can be tested for a V' constituent which is distinguished from a VP. For example,

- (22) a. $k^h\check{a}w$ $[h\acute{a}j$ $kh\check{o}ŋ$ $khw\check{a}n$ $k\grave{a}\grave{e}$ $d\grave{e}k]_V$ naj
 he give gift to children in
- ηaan $l\acute{i}aŋ$ $s\grave{a}m\check{a}\check{o}$ $t\grave{a}\grave{e}$ $m\acute{a}j$ $d\acute{a}j$ $[t^ham]$ naj ηaan $n\acute{i}$
 party always but NEG do in party this
 ‘He always gives gifts to children at a party but (he) does not
 do (so) at this party.’
- b. $*k^h\check{a}w$ $[h\acute{a}j$ $kh\check{o}ŋ$ $khw\check{a}n$ $k\grave{a}\grave{e}$ $d\grave{e}k$ naj
 he give gift to children in
- ηaan $l\acute{i}aŋ$ $s\grave{a}m\check{a}\check{o}]_{VP}$ $t\grave{a}\grave{e}$ $m\acute{a}j$ $d\acute{a}j$ $[t^ham]$
 party always but NEG do
 *‘He always gives gifts to children at a party but (he) does not
 do (so).’

Here in (22)a t^ham is a pro-V' whereas in (22)b, it is a pro-VP. Again, it does not work in the latter, indicating that a V' is different from a VP.

In all, we see that a category V' does exist in Thai and that the templates in (2) and (10) do work for Thai V' and VP, and that the subcategorization at lexical entry of a verb helps determine the V' category.

3.2 N'

It will be shown in this section that the same principles hold true for N' and NP as in the case of verbs above.

A major distinction between the Thai and English NP that needs mentioning is that there are no articles, definite or indefinite in Thai, whereas in English, the articles *a*, *an*, and *the*, are more or less obligatory for countable singular nouns. While determiners *this*, *that*, are less obligated in English, they are optional in Thai. Given (2) and (10), we have the following NP and N' schemas:

- (23) NP → N' (DETP)
 N' → N ({S', PP}) (AP)
 DETP → (CLP) DET

Where CL = classifier and DET = determiner, and the S' or PP may be complements of N whereas AP is an adjunct of N. The rules for adjectives are;

- (24) A' → {(CLP) A

The examples below will show the difference between an N' and an NP in that proforms e.g. *man*, *tʰəə* can only serve as a pro-NP but not a pro-N'.

- (25) a. [mææw khǒŋ tʰǎn tua níi]_{NP} tʰǎn rák [man] mâak
 cat of I CL this I love it much
 'This cat of mine, I love it (very) much.'
- b. *[mææw khǒŋ tʰǎn]_{N'} tʰǎn rák [[man] tua níi] mâak
 cat of I I love it CL this much
 *'My cat, I love it this one (very) much.'

In (25) a [man] serves as a pro-NP, but in (25)b it serves as a pro-N', which does not work.

- (26) a. [phûu jǐŋ sǔəj khon níi]_{NP} tʰǎn rúu tʰək [tʰəə] dii
 woman beautiful CL this I know her well
 'This beautiful woman, I know her well.'
- b. *[phûu jǐŋ sǔəj]_{N'} tʰǎn rúu tʰək [[tʰəə] khon níi] dii
 woman beautiful I know her CL this well
 *'Beautiful woman, I know her this one well.'

Again, [tʰəə] in (26)a serves as a pro-NP which is wellformed. But when it serves as a pro-N' in (26)b the sentence is illformed. As such, an N' is distinguished from an NP.

4. Summary

Returning to the question we asked earlier at the end of section 2, whether or not the N' and V' nodes of (7)-(9) are redundant when the mother nodes, NP and VP, do not branch. The answer seems clear now that these N' and V' nodes are actually there and they can be expanded into an NP or VP with a specifier. However, we may assume the general practice of skipping the X' node in writing when the XP mother node does not branch (Sells 1985:29).

In sum, there seems to be evidence for the existence of an X' category in Thai, in particular, N' and V', and most probably A' and P' as well, if a similar kind of argumentation is applied. The implications are many. For example, V' can handle recursion in the serial verb construction in Thai nicely, and N' distinguishes a semi-phrase without a determiner from a maximally expanded NP. Moreover, under the X'-template of (2) and (10), the significant role of lexical entries whereby subcategorizations are specified is put forward. In light of the X' category, as specific and necessary information is required for each and every lexical entry (Radford 1988:365), a revision of the lexicon is being called for.

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