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A Study of Quantifier Phrases in Thai
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A Study of Quantifier Phrases in Thai

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Abstract: The structures of quantifier phrases in Thai are studied in the X-Syntax framework (Jackendoff 1977). Syntactic and Semantic arguments are provided to prove that this model remedies the deficiency of traditional and early transformational grammar as it provides insightful analyses based on distinctions between intermediate level nodes which display internal hierarchical structures as well as the linear structure of the phrase. In addition, this leads to an account of the different meanings of the structure itself.

A quantifier phrase in Thai always has a noun as its first element.

(1) [phéc sèm mói nick] NP
cloth three class, the first
the first three meters of cloth

The quantifier phrase is somehow embedded in the NP. We cannot yet classify the constituents within this NP because we have to provide arguments for it whether syntactic or semantic. However, if we attempt to diagram the NP in (1) as follows:

```
     NP
   /   \
 /     \    
N   QW
   /     \
 /       \    
phéc sèm máo nick
         \     \    
cloth   three   meter   the first
```

we will encounter a number of immediate problems, i.e., this model provides only the most meager structural framework for the syntactic units. Quite clearly, we cannot suspend all the constituents in (1) from the same node. Such an analysis ignores the fact that the NP has internal hierarchical structure as well as a linear structure which can account for potentially different meanings of the structure itself.
because one might argue that this NP may mean "the three first meters of cloth" or "three meters of the first cloth," etc. rather than "the first three meters of cloth."

To see this clearly, consider the quantifier phrase in (2a) and its associated diagram (2b) provided by the phrase structure rule.

(2) a.  kāw  sām  bai
    glass  three  class.

    three glasses

    NP
    /   \
    |   |
    kāw  sām  bai

    glass  three  class.

    three glasses

Empirical arguments to support the position that the quantifier phrase is embedded and attached at a different level within the NP are provided by using standard constituent structure "tests": deletion, substitution, and conjunction.

(3) a.  dēŋ  miː  kāw  sām  bai
    Dang  have  glass  three  class.

    Dang has three glasses.

b.  dēŋ  miː  kāw  thāraːi
    Dang  have  glass  how many

    How many glasses does Dang have?

c.  dēŋ  miː  e  sām  bai
    Dang  have  three  class.

    Dang has three.

In (3b) sām bai can be substituted for thāraːi in response to questions, and in (3c) which is the answer to (3b) the word kāw (glass) has been left out as the understood constituent (e). sām bai can occur alone without its head noun kāw.
This proves that sách bài constitutes a constituent. It is an 'internal unit' within its own phrase (NP): khiếu sách bài

(4) a. dàn inj mi: khiếu sách bài
   Dàn has three glasses.

   Dàn has three glasses.

b. đam kơ: mi: e sách bài
   Đam also have three class.

   Đam also has three.

c. đam kơ: mi: e sách phcen
   Đam also have three class.

   Đam also has three.

(4c) shows additional evidence that khiếu has been deleted from the NP due to the ungrammaticality of the sentence. phcen is the classifier used with sách (mat). The native speaker intuitively knows that the deleted unit is khiếu (glass) not sách (mat).

If phcen is unacceptable in (4c), it clarifies the point that there is something deleted or else every classifier could be used in this slot without making the sentence unacceptable. This can be accounted for by a co-occurrence restriction, i.e., the head noun in NP selects its classifier; for instance, khiếu selects bài, sách selects phcen etc.

From the arguments proposed, we may tentatively claim that the NP khiếu sách bài has the structure below:

(5)

This diagrammatic representation in (5) has not yet clearly displayed how the constituents are attached at the different levels as to show larger phrasal expansions
of a given head constituent. I adopt the system of X-Syntax to label the different level attachments as follows:

(6) 

\[ \begin{array}{c}
N' \\
\downarrow \\
N \\
\downarrow \\
kāw \\
\text{QP'} \\
\downarrow \\
kām \\
bai
\end{array} \]

Is (6) kāw is under N' node because it is a head noun and its projection to N" denotes the larger phrasal expansion. QP' modifies N, thus it attaches to the N" node and expands the scope of N into N" which corresponds to the traditional category of NP.

Another syntactic argument to support that kāw of N' is definitely separated from QP' can be seen from the evidence in (7).

(7) a. kāw əŋkēit kām bai
    glass English three class.

b. dāŋ mi  kām əŋkēit thūra
    Dang have glass English how many

   How many English glasses does Dang have?

c. dāŋ mi e kām bai
    Dang have three class.

Dang has three.

d. *dāŋ mi e kām bai əŋkēit

(7c) shows that the whole chunk of kāw əŋkēit can be deleted. This means that əŋkēit goes together with N kāw not QP' kām bai. That is why when we move the element əŋkēit and attach it with QP' kām bai in (7d), the sentence becomes unacceptable. Moreover, it is even clearer to see the evidence in the diagrammatic structure in (8) and (6).
(8) is the structure associated with (7a). (9) is ruled out because it violates the 'no crossing of branches' restriction. (8) contains no crossing branches, and thus is well-formed. This argument strongly supports placing kē:w at the N' level and sā:m bai of the QP at the N'' level.

A further argument to support the prediction about the different nodes of N' and N'' can be captured by using the conjunction test.

(10) dang mi: chō:n lā sā:m ajk'īt sā:m khan

Dang have spoon and fork English three class.

Dang has three English spoons and forks.

In (10) the nouns chō:n (spoon) and sā:m (fork) select the same classifier khan so they can be conjoined under the same node as displayed in the tree diagram (11).

(11)

On the other hand, if the nouns do not select the same classifier, they cannot be conjoined under the same node. Let's look at the structure in (12) and its associated diagram (13) to elucidate the point.
(12) đạc mè mét không sáu kín
Dang have knife English three class.

kê sáu không sáu kín
and fork English three class.

Dang has three English knives and forks.

(13)

mét không sáu kín kê sáu không sáu kín khan

From (13), we can see that if the nouns do not select the same classifier, there will be a repetition of the N''. The super N-double-prime has to be proposed in this case.

The data of the quantifier phrases I have provided so far is not exhaustive. As a matter of fact, there can be more elements attached within the quantifier phrase. I categorize all the elements that can occur within the quantifier phrase in the following table.
At this point, I claim that the classifier functions as the head of the quantifier phrase. The argument to support this claim is as follows:

(14) a. đàng mi: kĩw thàñtìn
    Dàng have glass how many

    How many glasses does Dàng have?
b. dang mi: kēw e hai
   Dang have glass class
   Dang has one.

In (14b), which is the answer to (14a), the classifier hai substitutes for thā怀疑. The quantity word (cardinal) can be deleted. We have already shown that N kēw is a separate node from the QP from the previous argument. Now, we are going to concentrate only on the QP' (e hai). Since the quantity word can be deleted, it is obvious that there must be some internal structure within the QP itself. Nonetheless, note that the cardinal deleted here is only the number 'one.' When the QP is expressed only with the classifier, the number of objects perceived intuitively by the native speaker is only 'one.' As far as the evidence is expressed, we may have to re-diagram the structure as follows:

(15)

In (15) hai is the head of the quantity phrase under QP' and its projection to QP' denotes the larger phrasal expansion. QW modifies QP, thus it comes off QP' node and expands the scope of QP' into QP which corresponds to the category QP'.

I will see how the elements of the quantifier phrase get attached to the head of the quantifier phrase.

(16) kēw kē: sām hai
    glass just three class.
    just three glasses
We do not know how khäre: gets attached to săm bai. The way to proceed is to try a constituent structure test.

(17) a. dàng mi: këw khäre: săm bai
   Dang have glass just three class.
   Dang has just three glasses.

b. dàng mi: khäre: déma: mi: (echo question)
   Dang have just how many particle
   Dang has just how many?

c. dàng mi: e săm bai

The native speaker’s perception of the answer to an echo question and a common question is quite different. (17c) is an answer to the echo question (17b) in which the native will perceive the missing element as khäre: (cf. a common question in (3b) and its associated answer (3c). This proves that khäre: must be attached to another level as follows from the previous deletion test so far. The following tree diagram represents the structure for këw khäre: săm bai

![Tree Diagram]

(18) N'
    | N
    | Deg.
    | QW
    | Q'
    | class.

(19) këw ?ëk khäre: săm bai
    glass again just three class.
    just three more glasses

In (19), again, we will find the argument where ?ëk is attached to by using the same test.
(20) a. đàng mi: kẽw ᵀ.k khá: sâm bai
dang have glass again just three class.
Dang has just three more glasses.

b. đàng mi: ᵀ.k khá: thàínăi ná (echo question)
dang have again just how many particle
Dang has just how many more?

c. đàng mi: e khá: sâm bai

In (20c), the deleted element is perceived as ᵀ.k. Consequently, ᵀ.k must be
attached to another level within the phrase. Nonetheless, we might notice that
sâm, khá, ᵀ.k have the same function within the phrase, i.e., they modify the
head classifier. Moreover, they are optional elements and recursive. (21)
represents (19).

(21)
N''
|  
N     PreN'
|  
N'    QP''
|  ᵀ.k

kẽw ᵀ.k Đeŋ
 QP'

khà: QW

sâm class.

b a i

(22) kẽw sâm bai thàínăi
glass three class, only
only three glasses

In (22), thàínăi occur after the head classifier. We still have to adopt the same
test to see how thàínăi interacts within the QP.

(23) a. đàng mi: kẽw sâm bai thàínăi
Dang have glass three class. only
Dang has only three glasses.
b. *dang mi: kí bai thàum on ná* (echo question)  
Dang have how many class. only participle  
Dang has how many only?

c. *dang mi: sâm bai*  
In the same fashion, the deleted element in (23c) is understood as *thàum on*. So it must be attached at another level. The only difference from *kí* and *khé* is that it is postmodifier.

(24) represents the diagrammatic structure of (22).

(25)  
kíw khé: sâm bai thàum on  
glass just three class. only  
just only three glasses

(26)  
kíw *kí khé: sâm bai thàum on*  
glass again just three class. only  
just only three more glasses

From (25) and (26), we will use the same deletion test and put them in the tree diagrams.

(27)  
ba *dang mi: kíw khé: sâm bai thàum on*  
Dang have glass just three class. only  
Dang has just only three glasses.
b. **dàng mì: kēi bái thâuăn ná (echo question)**
   Dang have just how class. only particle many
   Dang has just how many only?

c. **dàng mì: kēi sám bái**

(28) a. **dàng mì: kēi wèn kēi sám bái thâuăn ná**
   Dang have glass again just three class. only
   Dang has just only three more glasses.

b. **dàng mì: ʔék kēi kēi bái thâuăn ná (echo question)**
   Dang have again just how class. only particle
   Dang has just only how many more?

c. **dàng mì: ʔék kēi sám bái**

(29)

(30)
(29) and (30) represent (25) and (26) respectively. It is needless to repeat the same explanation as to how thäänän is attached within the QP. But the obvious evidence that supports why the postadverb comes off the QP and modifies the whole chunk of sâm bai, khâ: sâm bai, and ñék khâ: sâm bai underscored in (23c), (27c), and (28c) respectively, is that we have to repeat every element before the empty element thäänän.

(31) phâ: sip mét kwâ:
cloth ten class, plus
ten meters of cloth plus

In (31), kwâ: is one of the postmodifiers and acts the same way as thäänän.

(32) a. đaŋ mî: phâ: sip mét kwâ:
Dang have cloth ten class, plus
Dang has ten meters of cloth plus.

b. đaŋ mî: kî: mét kwâ: ná (echo question)
Dang have how class plus particle many
Dang has how many plus?

c. đaŋ mî: sip mét e

If we attach khâ: and ñék khâ: to (31) and go through the deletion test we will get:

(33) a. đaŋ mî: khâ: sip mét e

b. đaŋ mî: ñék khâ: sip mét
We know that the postadverb \( kwá \) attaches to the QP” and modifies the whole QP’ \( ?k\) \( khr\): \( sip\) \( mèt \) from the evidence in (32e), (33a), and (33b) such that we have to repeat every element before the empty element \( kwá \).

\[
(37) \quad \text{phá: } ?k\ khr:\ sip\ mèt\ kwá\ thâu:nán
cloth again just ten class. plus only
only just ten more meters of cloth plus
\]

(37) represents the quantifier phrase which contains the most elements. (38) is its associated diagrammatic representation.

(38)

The argument to support placing \( thâu:nán \) in the outermost layer of the quantifier phrase is from the evidence in (39) below:

\[
(39) \quad \begin{align*}
\text{a. } & \text{dàng mì: phá: } ?k\ khr:\ sip\ mèt\ kwá\ thâu:nán \\
& \text{Dàng have cloth again just ten class. plus only}
& \text{Dàng has only just ten more meters of cloth plus.}
\\
\text{b. } & \text{dàng xu: } ?k\ khr:\ kí: \text{ mèt kwá: thâu:nán (echo question)} \\
& \text{Dàng have again just how class. plus only particle}
& \text{many}
& \text{Dàng has only just how many plus?}
\end{align*}
\]
In (39c), we have to repeat every element before the empty element thâu nán. Hence, thâu nán is the outermost layer of the QP. Moreover, there are no phrase like (40) which is additional evidence to prove the status of thâu nán.

(40) *pház sip mét thâu nán kwá*
cloth ten class. only plus

If we use brackets to show the constituents, it goes as follows:


(41a) is the modified tree diagram from (38). The reason why the postadverb kwá attaches to QP is that kwá modifies the whole chunk of ?k khá: sip mét as already been proven earlier. The postadverb thâu nán, proven as the outermost layer of the QP, attaches to QP”, denoting the larger phrasal expansion. It modifies the whole chunk of ?k khá: sip mét kwá.

A further semantic argument to support that kwá: and thâu nán are postmodifiers of the quantifier phrase is from the restriction of the question word used with these two elements in the echo question test frame. We have to use kí:
(how many) + classifier (accorded with the given noun) with postadverbs kwái: and tháu tour. On the other hand, with premodifiers: Predverb, Degree word, QW, we have to use the question word tháu tour. tháu tour includes a semantic notion of general classifier.

(42) đàng mi: mét lê sôm tháu tour
Dang have knife and fork how many

How many knives and forks does Dang have?

(43) đàng mi: mét lê sôm k'a: khan
Dang have knife and fork how many class.

How many knives and fork does Dang have?

In (42), mét and sôm do not select the same classifier. mét selects lêm while sôm selects khan. However, we can use tháu tour to make a question form. In addition, the ungrammaticality of (43) helps prove that tháu tour has the semantic notion of a general classifier because we cannot use ‘k'a: + classifier’ the same way as tháu tour. Unlike tháu tour, k'a: must be used with a specific classifier according to its selection restrictions.

We can now address the problem proposed at the beginning of how we know the meaning of the quantifier phrase:

(44) phác sôm mét sêk
cloth three class. the first

is ‘the first three meters of cloth’ rather than ‘the three first meters of cloth’ or ‘three meters of the first cloth.’ We have already been provided with the syntactic arguments for the different levels of attachment for the QP. A further argument in support of this is of a semantic nature.
In (45), sám is closely linked to its head classifier and they have already been proven to be in the same constituent. The internal hierarchical structure tells us that the constituent [sám [mét]] is embedded in the constituent [1 sám [mét] ràck].

Thus, we obtain the first reading as the correct one.

(46) phà: mét niŋ
    cloth class. one
    one meter of cloth

(46) is one of the few quantifier phrases that have reversed the order of cardinal and classifier. As a matter of fact, in Thai, the word order is generally fixed. Moreover, the only cardinal number that can occur in this position is niŋ (one). There is no quantifier phrase in Thai like (47).

(47) *phà: mét sám
    cloth class. three
    three meters of cloth

The reversed order of classifier + cardinal can occur in more complicated QP as follows:

(48) a. phà: mét niŋ
    b. phà: mét niŋ thàun
    c. phà: khu: mét niŋ
nih is moved across the classifier but not across the postadverb thâuăn and kwác, and also not across the premodifiers ᵈᵏ and khéc:

(49) a. ᵈphá: mét kwác nih
   b. ᵈphá: mét thâuăn nih
   c. ᵈphá: nih ᵈᵏ mét
   d. ᵈphá: nih khéc: mét

The evidence from (49a, b, c, d) proves that nih can move only within its own internal structure and this also supports the argument that each element has its own level of attachment.

(50) a. [Diagram]

   N' ———— N
   QP' ———— QW

   phá: class. Postadv. kwác nih

   mét

b. [Diagram]

   N' ———— N
   QP' ———— QW

   phá: class. Postadv. thâuăn nih

   mét
(50 a, b, c, d) show that the movement of *nțḥ violates the 'no crossing of branches' restriction. Thus they all are ruled out.

The transformational rule that can account for the structure of classifier + cardinal is 'nțḥ Movement.'

'*nțḥ Movement' (optional)

| S.D. | x  | 2  | y  |
| 1    | 3  | 4  |

This is a local transformation, for the movement only occurs between adjacent constituents (local node).

The movement of *nțḥ across the classifier node gives rise to some phrasal structures that need to pass a semantic filter.

(51) *phâ: mêt nțḥ kwač  
cloth class. one plus  
a meter of cloth plus
(52)  phó: mét kwâi
      cloth class, plus
      a meter of cloth plus

(53)  *phô: mét ngî rîck
      cloth class, one, the first
      the first meter of cloth

(54)  phó: mét rîck
      cloth class, the first
      the first meter of cloth

When ngî is moved across the classifier node and followed by the postmodifier kwâi and rîck, ngî must be deleted. But the empty element is still perceived as ngî by the native speakers. This is because kwâi and rîck always semantically contain the notion of 'singularity.' ngî is a part of their meaning so their combination with ngî will be redundant. These two words act as a semantic filter to rule out quantifier phrases like (51) and (53).

The ngî that appears after the classifier can also be viewed as a postmodifier. (51) and (53) are ungrammatical because all three postmodifiers ngî, kwâi, rîck can only appear in a single postmodifier position. This is a case where one lexical item can have two functions but still carries the same meaning. So both cardinal ngî and postmodifier ngî are derived from the phrase structure rule. Thus, there is no need for a transformational rule if the phrase is analyzed in this way.

There are still some quantifier phrases in which the different word orders create differences in meaning.

(55)  phó: sîp mét kwâi
      cloth ten, class, plus
      ten meters of cloth plus
      (a little bit more than ten but not eleven)
(55)  a.  
\[
\begin{array}{c}
N' \\
N \\
\text{phá:} \\
\text{NUM} \\
\text{QP} \\
\text{Postadv.} \\
\text{síp} \\
\text{mét} \\
\text{kwá:}
\end{array}
\]

(56)  a.  
\[
\begin{array}{c}
N' \\
N \\
\text{phá:} \\
\text{NUM} \\
\text{QP} \\
\text{Class.} \\
\text{Postadv.} \\
\text{síp} \\
\text{mét} \\
\text{kwá:}
\end{array}
\]

(55) and (56) have different meanings as mentioned above. (55) has its meaning as such because kwá expresses the meaning of 'plus 1 unit.' This is why the meaning perceived by the native speaker is a bit more than the number given but not up to the following number; for instance, if the given number is '10' then '10 plus' in this situation is equal to 10 + .01 to .99 but not 11. In this case, the focus is on the classifier mét. Every cardinal can occur before the classifier in this phrasal structure. On the other hand, (56) has its meaning as ten meters of cloth plus (up to nineteen but not twenty). The important fact in this structure is that the only cardinals that can occur before the classifier are digital words as in (57).
There are no phrase like (58)

Since not every cardinal can occur in the phrasal structure like (57), there must be a difference in meaning between (55) and (56). As a matter of fact, we can provide an explanation by using a semantic argument. (56) means ten meters of cloth plus (up to nineteen but not twenty): 10 + 1-9.99 but not 20 and if the number is 100, the plus number is 1-99.99 but 200 etc. In this case, the focus is on the cardinal (all the decimal words). These two examples demonstrate the subtle range of meanings created by the different word orders. As far as the evidence goes, they are more or less accounted for by the constituent structures.

There are still some more interesting facts about numbers in QP. Thai uses the decimal system for numbers.

\[ (59) \quad \text{sip} \quad = \quad 10 \]

\[ (60) \quad \text{sīm sip} \quad = \quad 30; (3 \times 10) \]
(61) \[ \text{sip sâm} = 13 : (10 + 3) \]

(62) \[ \text{sâm sip sâm} = 33 : (3 \times 10) + 3 \]

(60) and (61) have structural differences between the prenumber and postnumber modifiers. The prenumber expresses 'multiplication,' but the postnumber modifier expresses 'addition.'

(63)

In (63), the number phrase has been proposed. The evidence that \( \text{sâm} \) (postnumber modifier) attaches to the upper level node (NUM') is that logically the operation of multiplication precedes the operation of addition. If the operations were performed in the opposite order, the result would be 39 rather than 33. The number phrase is the most internal structure within the QP. It modifies the head classifier. Clearly, enough, this answers why we have a difference in meaning between \( \text{sâm sip kwâ: méi t} \) and \( \text{sâm sip méi t kwâ:} \)

(64) \[ \text{sâm sip kwâ: méi t} \]
three ten plus class.

thirty plus (up to thirty nine but not forty)

(65) \[ \text{sâm sip méi t kwâ:} \]
three ten class. plus

thirty plus (a little bit more than thirty but not up to thirty one)
(66) and (67) are the associated phrase markers of (64) and (65) respectively. In (66), the number phrase modifies the head classifier *mćt. *kwā becomes postnumber modifier modifying *sǎm *slp in the very internal structure of QP, but in (67) *kwā is postadverb (QP') modifying *sǎm *slp *mćt in QP'.

(68) *sǎm *slp *sǎm *kwā *mćt

(68) is unacceptable because there is a restriction on the postnumber modifier. There is only one place in the phrase marker for the element. We have to choose between lexical items *kwā and the cardinal numbers.

prenumber modifier + number + postnumber modifier

\[
\begin{array}{c}
\text{sǎm} \\
\text{kwā}
\end{array}
\]
(69)   sām  sip  sām  mēt  kwā:
three  ten  three  class.  plus
thirty three meters plus

(69) is well-formed because sām is chosen to fill the postnumber modifier instead of occurring together with kwā: which leads to the unacceptability of (70)

(70)  *sām  sip  sām  kwā:  mēt
three  ten  three  class.

The phrase marker of (69) is displayed in (71).

(71)

```
   QP
     Postadv.

     class

     kwā:

     mēt

     NUM

     Postnumber mod.

     NUM

     sām  sip
```

Now we can include the number phrase which is the very internal structure within QP and makes the most complicated QPs as follows:

(72)  phā:  طبق  كبيرة  sām  sip  sām  mēt  kwā:  thāmān
cloth again just three ten three class. plus only
just only thirty three meters of cloth plus more
(a little bit more than thirty three meters of cloth but not to thirty four meters)

(73)  phā:  طبق  كبيرة  sām  sip  kwā:  mēt  thāmān
cloth again just three ten plus class. only
just only thirty meters of cloth plus more
(up to thirty nine but not forty meters of cloth)

(74) and (75) are the associated phrase markers of (72) and (73) respectively.
The other two things to observe within the quantifier phrase is how it interacts with demonstrative adjectives and prepositional phrases.
(76) phè; sâm mét níc: thàunìn
   cloth three class. these only
   only these three meters of cloth

(77) a. đàq níc: phè; sâm mét níc: thàunìn
   Đang have cloth three class. these only
   Đang has only these three meter of cloth.
   b. đàq níc: phè; kî mét níc: thàunìn níc (echo)
      Đang have cloth how class. which only particle
      many one
      Đang has how many only?
   c. đàq níc: sâm mét níc: e
      Đang have three class. these
      Đang has these three meters...

(77c) is the answer to an echo question in (77b). The deleted element perceived by
the native speaker is thàunìn. This proves that thàunìn is the external node and
there is no quantifier phrase like (78).

(78) *đàq níc: phè; sâm mét thàunìn níc
    Đang have cloth three class. only these
    The ungrammaticality in (78) proves that demonstrative adjective is attached in the
    internal structure of QP. (79) is the phrase marker of (76).

(79)
(80)  phó: sârn mêt kwâ: nê:  thánân
cloth three class plus these only
only these three meters of cloth plus

(81)  phó: sârn mêt râck nê: thánân
cloth three class, the first these only
only these first three meters of cloth

(82)  *phô: sârn mêt nê: nê: thánân
cloth three class, one this only
only this one meter of cloth

(83), (81), (82) show how nê interacts with the postmodifiers kwâ: and râck.
These two postmodifiers can occur before demonstrative nê: but not the
postmodifier nê: which is not surprising because ‘this one’ is quite redundant in
Thai; even though, there are some languages that permit this structural
configuration, kwâ: and râck always occur before nê: because we cannot have
the sentences like (83) and (84).

(83)  *phô: sârn mêt nê: kwâ: thánân

(84)  *phô: sârn mêt nê: râck thánân

The demonstrative nê: gets attached to another level within the QP. The evidence
that can support this is from (85).

(85)  a.  dêng nê: phó: sârn mêt kwâ: nê: thánân nê:
Dang have cloth three class plus which only particle
one (echo question)
Which three meters of cloth plus does Dang have?
b.  e nê: nê: mē
this one particle

(86)  a.  dêng nê: phó: sârn mêt râck nê: thánân nê:
Dang have cloth three class, the which only particle
first one
Which first three meters of cloth does Dang have?
In (85a) and (86a), nê is substituted by the question word nú. In (85b) and (86b) which are the answers to (85a) and (86a) respectively, nú can occur alone and the empty elements are perceived as sâm mét kwê and sâm mét rôck respectively.

(87) and (88) represent the phrase markers of (83) and (86) respectively.

In (87) and (88), nê comes off at upper level (another QP) from the arguments developed in (85) and (86) aforementioned.

(89) phà: sâm mét thâu nân không phân nê. cloth three class. only of class. this

only three meters of this cloth
(90) a. Dăng mi phạ: sâm mét khêng phên ní: Dăng have cloth three class. of cloth. this
    Dăng has only three meters of this cloth.

b. Dăng ní: phạ: khêng phên ní: mét thán nán ní: Dăng have cloth how many class. only particle
    khêng phên ní: (echo question) of class. this
    Dăng has only how many?

c. Dăng mi: sâm mét thán nán e Dăng have three class. only
    Dăng has only three meters...

(90c) is the answer to the echo question of (90b). The empty element is perceived as the prepositional phrase (PP). This reveals the evidence that PP should be detached from QP and is a different phrase-level category all by itself as displayed in (91).

(91)

(92) phạ: khêng phên ní: sâm mét thán nán cloth of class. this three class. only
    only three meters of this cloth

In (92), PP and QP are reversed in order. This shows that the PP and QP have free relative ordering and therefore are attached at the same level of phrase structure.

(93) is the diagrammatic representation of (92).
Last but not least, the postadverb “thâunân” can modify only nouns without the numeral classifier as in (94).

\[
\begin{align*}
(94) & \quad kê:u \quad thâunân \\
& \quad glass \quad that\ many
\end{align*}
\]

However, the meaning of “thâunân” is not ‘only’ anymore. It means ‘that much’ or ‘that many.’

\[
\begin{align*}
(95) & \quad đêng \ mi: \ kê:u \ thâunân \ mi: \ phâ: \ rok \\
& \quad Dang\ have\ glass\ that\ many\ not\ enough\ particle
\end{align*}
\]

In this case, “thâunân” does not occur in the QP but it modifies the head noun all by itself and comes off N’. (96) is the associated tree diagram of (94).

\[
\begin{align*}
(96) & \quad N' \quad P\text{ostadvv} \\
& \quad N \quad thâunân \\
& \quad kê:u
\end{align*}
\]

From the overall structures of the quantifier phrases and the arguments provided thus far, we have seen how X Syntax deals with the data in Thai. This model remedies the deficiency of traditional and early transformational grammar as it
provides insightful analyses based on distinctions between intermediate level nodes which display internal hierarchical structure as well as a linear structure of the phrase. In addition, this leads to an account of the different meanings of the structure itself.

NOTES

1 A kind of question one utters when a previous sentence one has heard was either somewhat inaudible or unbelievable.

2 Or any cardinal numbers except all the digital words: 10, 100, 1,000, 10,000, 100,000, 100,000, 300.

3 The question word used in an echo question when QP has demonstrative adjective as a member; kl: classifier + nāi, nāi means 'which one' which characterize the semantic nature of demonstrativeness.

REFERENCES

