

# Is There *Wh*-Movement in Thai?\*

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## 1. INTRODUCTION

In English, *Wh*-interrogatives overtly move to a clause-peripheral position. In Chinese, on the other hand, *Wh*-interrogatives do not undergo a *Wh*-word fronting rule at S-structure (Huang, 1982a). Consider the following examples.

- (1) What did John see x? (English)  
[ ]
- (2) Shùhùi kàndào shénme (Mandarin Chinese)  
Shuhui see what  
'What did Shuhui see?'

According to Huang (1982b, p. 254), even though *Wh*-elements in Mandarin Chinese do not move overtly at S-structure, they undergo 'covert' *Wh*-movement at LF (Logical Form).<sup>1</sup>

As in Chinese, *Wh*-interrogatives in Thai do not move overtly at S-structure.

- (3) sùda: hěn ?àray (Thai)  
Suda see what  
'What did Suda see?'

A significant question arising here is whether Thai is like Chinese in having *Wh*-movement at LF. Huang (1982b) argues that all languages are supposed to have a *Wh*-movement rule as a substantive universal, but may differ in where the rule applies, at S-structure or at LF. However, his claim is challenged by Cole and Hermon (1994). Based on the absence of ECP<sup>2</sup> effects, Cole and Hermon (1994, pp. 239–262) argue that *Wh*-elements *in situ* in Ancash do not undergo LF *Wh*-movement. This paper is an attempt to examine whether or not *Wh*-elements *in situ* in Thai undergo "covert" *Wh*-movement at LF.

In Section 2, the supportive arguments for LF *Wh*-movement proposed by Huang (1982a, 1982b) and Aoun and Li (1993) are applied to Thai. In Section 3, the

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Definitions of GB terms are provided in footnotes for those who do not have familiarity with the theory

<sup>1</sup>In Government and Binding theory, the term refers to the initial representation of sentence meaning.

<sup>2</sup>ECP is the abbreviation for Empty Category Principle. The principle requires a trace of a moved constituent to be governed by a lexical category or a category with the same index.

difference between *Wh*-movement in Thai and English in the choice of bounding categories for Subjacency is discussed. In Section 4, a conclusion is provided.

## 2. SUPPORTIVE EVIDENCE FOR LF *WH*-MOVEMENT IN THAI

The supportive arguments for LF *Wh*-movement in Chinese proposed by Huang (1982a, 1982b) and Aoun and Li (1993) are selectional requirements, scope interaction between *Wh*-elements and quantifiers, locality effects, and weak crossover effects. Let us consider whether the four arguments are applicable to Thai.

### 2.1 Selectional Requirements

In English, the position of a *Wh*-element at S-structure determines whether a sentence is a direct question or an indirect question. Examples (4) and (5) illustrate this point.

(4) [ What does [he think [ you bought x ] ] ]

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(5) [ He wonders [ what [you bought x ] ] ] (Aoun & Li, 1993, p. 201)

└──────────────────┘

In the direct question in (4), the *Wh*-element takes scope over the entire sentence, whereas in the indirect question in (5), the *Wh*-element takes scope over the embedded clause. Notice that while the matrix verb *think* selects a [-*Wh*] complement, the matrix verb *wonder* takes a [+*Wh*] complement. As in English, different verbs in Thai seem to select different types of complement. Consider the following examples.<sup>3</sup>

(6)            sùda: thǎ:m [wâ: nít      chô:p ?àray]  
               Suda ask    Comp Nit      like      what  
               ‘Suda asked (me) what Nit liked.’

(7)            sùda: chuâ [wâ: nít      chô:p ?àray]  
               Suda believe Comp Nit      like      what  
               ‘What does Suda believe Nit likes?’

(8)            sùda: rú: [wâ: nít      chô:p ?àray]  
               Suda know Comp Nit      like      what  
               ‘What does Suda know Nit likes?’  
               ‘Suda knows what Nit likes.’

Example (6) must be interpreted as a statement taking an indirect question, Example (7) must be interpreted as a direct question, and Example (8) can be interpreted as

<sup>3</sup>The examples in this paper have been checked with five native speakers of Bangkok Thai.

either. Notice that the only difference found in (6), (7), and (8) is the choice of the matrix verb. These examples indicate that the verb /thă:m/ 'to ask' selects a [+Wh] complement, the verb /chûa/ 'to believe' selects a [-Wh] complement, and the verb /rú:/ 'to know' optionally selects a [+Wh] complement. The idea of LF *Wh*-movement appears to provide a straightforward account for these examples. With the assumption that the *Wh*-elements in (6), (7), and (8) undergo LF *Wh*-movement, the selectional requirements are met at LF.

(6') LF[ [sùda: thă:m wâ: [ ?àray [nít chô:p x] ] ] ]  
           Suda ask Comp what Nit like

(7') LF[?àray [sùda: chûa wâ: [ [nít chô:p x] ] ] ]  
           what Suda believe Comp Nit like

(8') LFa ) [[?àray [sùda: rú: wâ: [ [nít chô:p x] ] ] ] ]  
           what Suda know Comp Nit like

or

b) [ [sùda: rú: wâ: [?àray [nít chô:p x] ] ] ]  
           Suda know Comp what Nit like

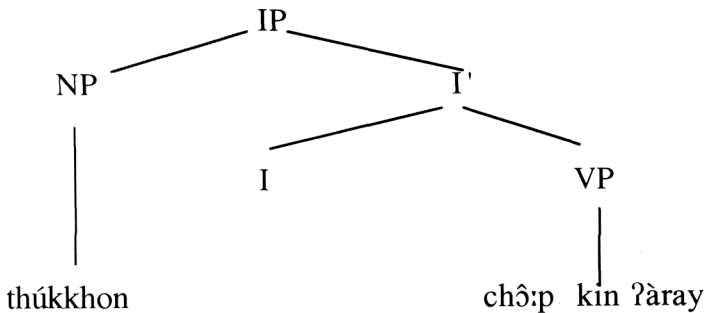
## 2.2 Scope Interaction Between Wh-Elements and Quantifiers

Example (9) contains *Wh*-element-Quantifier interaction.

(9)           thúkkhon      chô:p            kin      ?àray  
           everyone      like            eat      what  
           'What (single item) does everyone like to eat?'  
           Answer: ice cream.

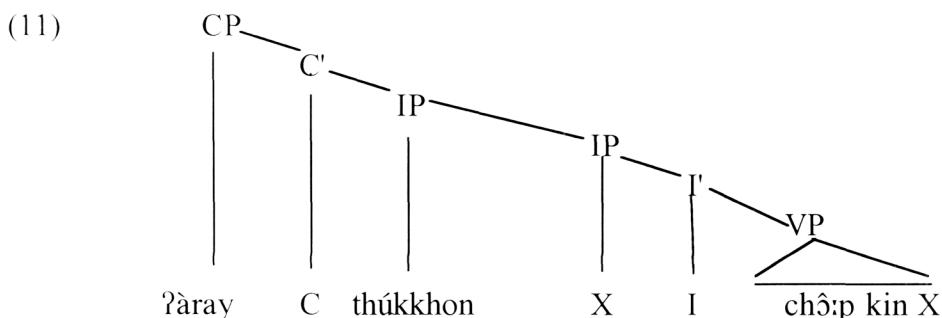
The S-structure of (9) is represented by the tree in (10).

(10) S-S



Notice that at S-structure, /thúkkhon/ ‘everyone’ c-commands<sup>4</sup> /ʔàray/ ‘what.’ Based on this structure, we should get the distributive interpretation--What does each man like to eat? (/thúkkhon/ has /ʔàray/ in its scope). But in fact, (9) has the collective interpretation--What single item does everyone like to eat? This indicates that in Thai *Wh*-elements that remain *in situ* at S-structure have quantifiers within their scope.

This phenomenon can be accounted for if we assume that /ʔàray/ undergoes *Wh*-movement at LF and thus has /thúkkhon/ in its scope. The LF of (9) is represented by the tree in (11).



### 2.3 Locality Effects

Huang (1982b) points out that in Chinese, movement of an argument is free—can violate island constraints, whereas movement of an adjunct is not. This argument-adjunct asymmetry can be predicted if we assume that *Wh*-movement at LF and the Empty Category Principle (ECP) apply<sup>5</sup>.

The following examples illustrate that the *Wh*-elements *in situ* in Thai also display an argument-adjunct asymmetry.

- (12) khru: dù? [dèk [ thî: kin ʔàray ] ]  
 teacher scold child who eat what  
 ‘The teacher scolded the child who ate what?’  
 Answer: lû:kkwà:t  
 candy

<sup>4</sup>The term “c-command” in the present study refers to the so-called maximal projection c-command or maximal-command.

C-command: A node X c-commands a node Y if every maximal projection dominating X also dominates Y, and X does not itself dominate Y. In (10) s-s, NP<sub>1</sub> /thúkkhon/ c- commands I', I, VP, V', V, and NP<sub>2</sub> /ʔàray/. But NP<sub>2</sub> /ʔàray/ does not c- command NP<sub>1</sub> /thúkkhon/.

<sup>5</sup>The Empty Category Principle (ECP) in this paper refers to the version adopted by Huang (1982b, p. 550). The principle states that a trace must be either lexically governed or locally controlled—governed by its antecedent.

- (13) \*khru: dù? [dèk [ thî: róng thammay ] ]  
 teacher scold child who cry why  
 'The teacher scolded the child who cried why?' ( /thammay/ 'why' goes with the verb /róŋ/ not the verb /dù?/).<sup>6</sup>

The grammaticality contrast found in (12) and (13) suggests that a direct question can be asked to obtain an answer only if the *Wh*-element in a complex noun phrase is an argument. By assuming that /ʔaray/ and /thammay/ undergo LF *Wh*-movement and the Empty Category Principle (ECP) applies, we can account for the argument-adjunct asymmetry found in these examples.

- (12') LF[ ʔaray [khru: dù? [ dèk [ thî: kin x ] ] ] ]  
 what teacher scold child who eat

- (13') LF[ thammay [khru: dù? [ dèk [ thî: róng x ] ] ] ]  
 why teacher scold child who cry

In (12'), the trace left by the movement of /ʔaray/ 'what' is lexically governed by the verb /kin/ 'to eat.' On the other hand, the trace left by the movement of /thammay/ 'why' in (13') is not governed; it cannot be lexically governed by V or antecedent-governed<sup>7</sup> by /thammay/ because of the intervening NP and CP. Therefore, the sentence in (13) is ill-formed.

## 2.4 Weak Crossover Effects<sup>8</sup>

The last piece of evidence for LF *Wh*-movement concerns weak crossover effects.

- (14) \*Who<sub>i</sub> does his<sub>i</sub> mother like x<sub>i</sub>? (Aoun & Li, 1993, p. 201).

(14) is an example of weak crossover from English. The *Wh*-element *who* moves over the coindexed pronoun *his*. According to the Bijection Principle (Koopman &

<sup>6</sup>It should be noted that (13) is acceptable when /thammay/ 'why' goes with the verb /dù?/.

khru: dù? [dèk [thî: róng] ] thammay

A significant question raised by the anonymous reader is: How can we account for /thammay khru: dù? dèk thî: róng/? Is this a *Wh*-movement at S-structure or has /thammay/ been subcategorized in this position since D-structure?

Notice that the sentence is grammatical only when /thammay/ is an adjunct modifying the verb /dù?/. Assuming that there is a *Wh*-movement here, we can account for the ungrammaticality of the sentence where /thammay/ modifies the verb /róŋ/.

<sup>7</sup>A trace is said to be antecedent-governed when it is governed by a co-indexed category.

<sup>8</sup>The crossover principle states that movement cannot apply if it would result in an NP crossing another with which it is co-indexed. Weak crossover refers to the case where the pronoun does not c-command the co-indexed trace.

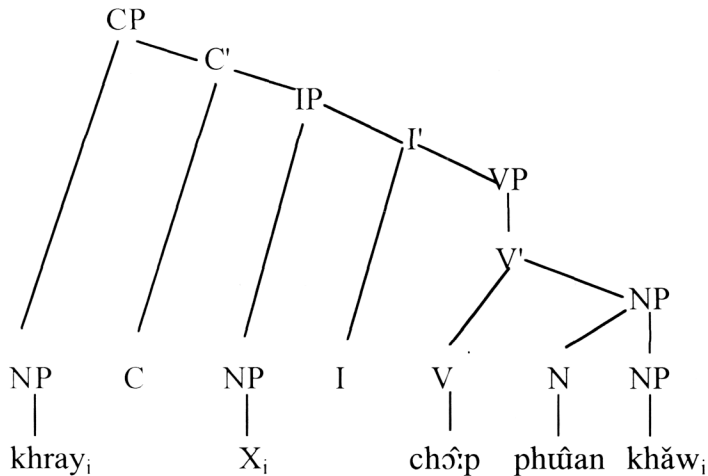
Sportiche, 1982), every operator should locally bind exactly one variable<sup>9</sup> and every variable should be locally bound by exactly one operator. This principle is violated in (14) because the operator, the *Wh*-element *who*, binds two variables, *his* and *x*. For this reason, the sentence is ungrammatical. Let us turn to Thai examples.

- (15) khray<sub>i</sub>            chôn:p            phûan            khăw<sub>i</sub>  
       who            like            friend            his  
       ‘Who likes his friend?’

- (16) \*phûan            khăw<sub>i</sub>            chôn:p            khray<sub>i</sub>  
       friend            his            like            who  
       ‘Who does his friend like?’

The grammaticality contrast found in (15) and (16) can be explained if we assume that LF *Wh*-movement and the Bijection Principle apply. The LFs of (15) and (16) are represented by the trees in 15' and 16'.

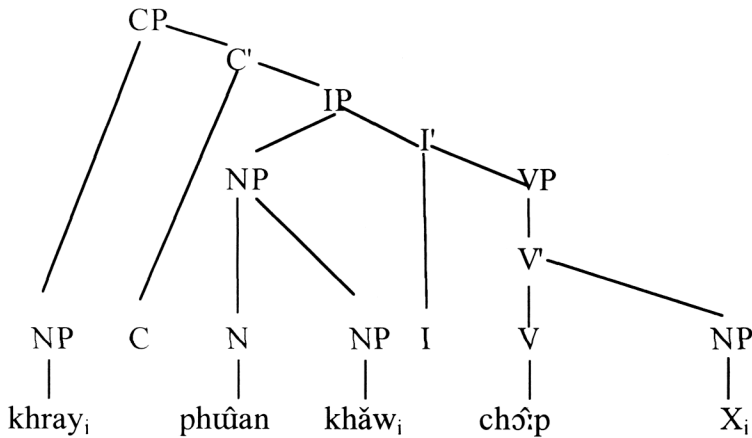
(15') LF



In (15'), /khăw/ has *X* as the nearest binder, but *X* is not an operator (it is not in an *A'* position). Thus, /khăw/ is not a variable. The only one variable in this example is *X*, which is bound by the operator /khray/. Here the operator /khray/ binds only one variable. Since the Bijective Principle is obeyed, the sentence is well-formed.

<sup>9</sup>An element in an *A* position whose nearest binder is in an *A'* position. According to Chomsky (1981), there are two types of NP positions, argument positions (*A* positions) and non-argument positions (*A'* positions). An *A* position is a position to which a theta role may be assigned, whereas an *A'* position is a position to which theta roles are never assigned (Cowper, 1992, p. 132).

(16') LF



On the other hand, (16') is ill-formed because the Bijection Principle is violated. In this example, /khăw/ and *X* are variables bound by the same operator /khray/.

The four phenomena discussed above seem to be sufficient evidence for the claim that *Wh*-elements *in situ* in Thai undergo a fronting rule. The idea of “covert” *Wh*-movement at LF leads us to a unified cross-linguistic account of *Wh*-elements; both English and Thai have *Wh*-movement, but the difference lies in the fact that English has “overt” movement at S-structure, while Thai has “covert” movement at LF.

In Section 3, another major difference between *Wh*-movement in Thai and in English will be discussed. The difference is the choice of the bounding categories for Subjacency.

### 3. BOUNDING CATEGORIES FOR SUBJACENCY IN THAI

According to the government and binding approach (GB), *Wh*-elements in English cannot move freely; they have to obey so-called Subjacency. The ungrammaticality of (17) elucidates the point.

- (17) \*Which books that [Judy believe [the report that Judith damaged ]  
(Cowper, 1992, p. 120)

Based on GB, the sentence in (17) is ill-formed because it violates Subjacency. The condition states that a trace must be 1-subjacent to its closest antecedent in a chain (Cowper, 1992, p. 121). That is, a *Wh*-element cannot be moved out of more than one bounding node. In English, NP and IP are bounding categories. The sentence in (17) is unacceptable because the *Wh*-phrase *Which books* moves across two bounding nodes, IP and NP.

It is claimed in the previous section that Thai has LF *Wh*-movement. And according to Huang (1982b), LF *Wh*-movement of an adjunct has to obey Subjacency. The question here is “What are the bounding categories for Subjacency in Thai?” Rizzi

(1982) points out that not every language has IP as a bounding node. Let us investigate whether IP is a bounding category in Thai.

The ungrammaticality found in examples (13) and (18) indicates that the *Wh*-element /thammay/ ‘why’ in Thai is an adjunct and cannot move freely.

- (18) \*khăw chô:p [ rû:p [ thî: khǎn thammay] ]  
 he like picture Rel paint why  
 ‘He likes the picture that was painted why?’

Interestingly, the direct question in (19) is well-formed even though it also has the adjunct /thammay/ ‘why.’

- (19) chǎn yà:krú: [khray ma: kan thammay thî:nâ: bâ:n ]  
 I wonder who come plu. why in front of the house  
 ‘I wonder who came why in front of the house.’

Here in (19) /thammay/ crosses IP. The fact that the sentence is grammatical suggests that IP might not be a bounding node for Subjacency in Thai. Based on the grammaticality contrast in (18) and (19), it is proposed here that in Thai, the bounding nodes relevant for Subjacency are NP and CP.

- (18') [ thammay [<sub>IP</sub> khăw chô:p [<sub>NP</sub> rû:p [<sub>CP</sub> thî: khǎn x] ] ] ]
- 

- (19') [ thammay [<sub>IP</sub> chǎn yà:krú: [<sub>CP</sub> khray [<sub>IP</sub> x ma: kan x] ] ] ]
- 

In (18'), the *Wh*-element /thammay/ ‘why’ moves across two bounding nodes, CP and NP. Therefore, the sentence is ungrammatical. On the other hand, (19') is grammatical because the *Wh*-movement crosses only one bounding node, the embedded CP.<sup>10</sup>

#### 4. CONCLUSION

Selectional requirements, scope interaction between *Wh*-elements and quantifiers, locality effects, and weak crossover effects are four pieces of evidence for the claim that Thai has *Wh*-movement as in English. A crucial difference between *Wh*-movement in

<sup>10</sup>In (19') the *Wh*-element /khray/ moves first to obey *Strict Cyclicity*. The rule says “All operations on a lower constituent must precede any operation on a matrix constituent.” Since the Spec of the embedded CP is occupied by the *Wh*-element /khray/, the *Wh*-element /thammay/ cannot move in two successive steps.

thammay [ chǎn yà:krú: [ khray [ x ma: kan x] ] ]  
 ↑ \_\_\_\_\_ × \_\_\_\_\_    ↑ \_\_\_\_\_ × \_\_\_\_\_



Thai and in English lies in the fact that the rule in English is overt at S-structure, whereas the rule in Thai applies covertly at LF. Another important difference seems to be the choice of the bounding categories for Subjacency. While English has NP and IP as bounding nodes, Thai selects NP and CP.

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