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) Shūhūi kândao 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).¹

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

(3) sūdā: hēn ?āray (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 ECP² 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.

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

²ECP 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]]]

(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. 3

(6) sūda: thā:m [wâ: nît chô:p ʔâray]  
Suda ask Comp Nit like what  
‘Suda asked (me) what Nit liked.’

(7) sūda: chhūa [wâ: nît chô:p ʔâray]  
Suda believe Comp Nit like what  
‘What does Suda believe Nit likes?’

(8) sūda: rû: [wâ: nît chô:p ʔâray]  
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

3 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 /thām/ ‘to ask’ selects a [+Wh] complement, the verb /chtūa/ ‘to believe’ selects a [-Wh] complement, and the verb /rūː/ ‘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.

Suda ask Comp what Nit like

(7') LF[?àray [sūda: chtūa wāː: [ [nīt chɔːːp x] ] ] ]
what Suda believe Comp Nit like

what Suda know Comp Nit like

or

Suda know Comp what Nit like

2.2 Scope Interaction Between Wh-Elements and Quantifiers

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

(9) thūkkhon chɔːːp 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

    NP ─── IP
         └── I'
              └── VP
                  thūkkhon
                  └── chɔːːp
                  kin ?àray
Notice that at S-structure, /thúkkhon/ ‘everyone’ c-commands⁴ /?àray/ ‘what.’ Based on this structure, we should get the distributive interpretation—What does each man like to eat? (/thúkkhon/ has /?àray/ 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 /?àray/ undergoes Wh-movement at LF and thus has /thúkkhon/ in its scope. The LF of (9) is represented by the tree in (11).

\[
\begin{array}{c}
\text{CP} \\
\text{C'} \\
\text{IP} \\
\text{IP} \\
\text{T} \\
\text{VP} \\
\text{?àray} \\
\text{C} \\
\text{thúkkhon} \\
\text{X} \\
\text{I} \\
\text{chô:p kin X}
\end{array}
\]

### 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) apply⁵.

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


teacher scolded child who eat what

‘The teacher scolded the child who ate what?’

Answer: lû:kkwá:t

candy

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⁴The 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, NP₁ /thúkkhon/ c-commands I’, I, VP, V, V, and NP₂ /?àray/. But NP₂ /?àray/ does not c-command NP₁ /thúkkhon/.

⁵The 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.
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    teacher scold child who cry why
    ‘The teacher scolded the child who cried why?’ (/thammay/ ‘why’ goes with
    the verb /rōŋ/ not the verb /dū/?).6

    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.

    what teacher scold child who eat

    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-
    governed7 by /thammay/ because of the intervening NP and CP. Therefore, the
    sentence in (13) is ill-formed.

2.4 Weak Crossover Effects8

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


(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 &

6It should be noted that (13) is acceptable when /thammay/ ‘why’ goes with the verb /dū?/

    A significant question raised by the anonymous reader is: How can we account for /thammay khru:
    dū? dēk thī: rōŋ/? 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
    /dū/? . Assuming that there is a Wh-movement here, we can account for the ungrammaticality of the
    sentence where /thammay/ modifies the verb /rōŋ/ .

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

8The 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\(^9\) 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.

\[(15) \quad \text{khray}_i \quad \text{ch̄ɔːp} \quad \text{phūan} \quad \text{khāw}_i \]
\[\text{who} \quad \text{like} \quad \text{friend} \quad \text{his} \]
\[\text{‘Who likes his friend?’} \]

\[(16) \quad *\text{phūan} \quad \text{khāw}_i \quad \text{ch̄ɔːp} \quad \text{khray}_i \]
\[\text{friend} \quad \text{his} \quad \text{like} \quad \text{who} \]
\[\text{‘Who does his friend like?’} \]

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'.

\[(15') \text{ LF} \]

\[
\text{CP} \quad \text{C'} \quad \text{IP} \quad I' \quad \text{VP} \quad V' \quad \text{NP} \quad \text{NP} \quad \text{NP} \quad \text{I} \quad \text{V} \quad \text{N} \quad \text{NP} \\
\text{khray}_i \quad X_i \quad \text{ch̄ɔːp} \quad \text{phūan} \quad \text{khāw}_i
\]

In (15'), /khāw/ has X as the nearest binder, but X is not an operator (it is not in an A' position). Thus, /khāw/ 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.

\(^9\)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

```
 CP
  
   C'
   |
   |
 IP
   |
   |
 NP
   |
   |
 N
 khray_i
   |
   |
 NP
   |
   |
 I
 phu\u0101an
   |
   |
 NP
   |
   |
 V
 khaw_i
   |
   |
 VP
 ch\u0101\u0143p
   |
   |
 V
   |
   |
 NP
 X_i
```

On the other hand, (16') is ill-formed because the Bijection Principle is violated. In this example, /khaw/ 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 is (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) *khāw chɔː[p [ rǔ:p [ thîː kʰǎːn 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) chān  yâːkrúː [ khray maː kan thammay thîːnâː  bāːn ]  
    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 [IP khāw chɔː[p [NP rǔ:p [CP thîː kʰǎːn x]]]] ] 

(19’) [ thammay [IP chān yâːkrúː [CP khray [IP x maː 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.10

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

10In (19’) the Wh-element /khray/ moves first to obey Strict Cyclicility. 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 [chān yâːkrúː [ khray [ x maː 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.

REFERENCES


