THE SYNTAX OF WH-EXPRESSIONS AS VARIABLES IN THAI

by

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Abstract

This dissertation presents an in-depth examination of Thai wh-expression as variables. I claim that wh-expressions are variables with no inherent interrogative force. As variables, they acquire different interpretations in different contexts. A syntactic relation between the operator and the variable is implemented in terms of the probe-goal relation (Chomsky 2000). The probe-goal relation is established by the operation of Match. In Thai, a goal (as a variable) is "underspecified" for featural content. A feature specified on the probe is copied onto the underspecified goal, thereby satisfying feature matching.

In wh-contexts, the probe is identified as a covert interrogative $Q_{[wh]}$. The [wh] feature of the probe Q is copied onto the underspecified goal. I argue that the probe-goal relation is established via Match (without Move). The covert $Q_{[wh]}$ probe is base-generated in C. In the context of negation, a goal matches the [neg] feature on the Neg probe, hence functioning as a Negative Polarity Item (NPI). In a yes-no construction, the goal matches the [polarity] feature on the $Q_{[polarity]}$ probe, functioning as an Existential Polarity Item (EPI). The probe-goal relation is predictably constrained by the c-command relation and locality conditions.

In addition to wh in-situ, it appears there is also partial and long-distance wh-movement in Thai. However, contrary to superficial appearances, I argue that the probe-goal relation in Thai does not involve Move. In particular, I show that apparent cases of movement actually involve two distinct types of cleft constructions. The first I analyze as reduced contrastive wh-clefts with bare wh-expressions. The second I analyze as reduced identificational wh-clefts with D-linked wh-expressions. Semantically and syntactically, contrastive wh-clefts differ from identificational wh-clefts. Contrastive wh-clefts are formed with the overt copula (*pen)*, a definite marker (*tʰîː)* and a nominalized clause. Identificational wh-clefts, on the other hand, are formed with the overt copula (*kʰɯ̂ː)* and a relative clause.

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Abbreviations

Abbreviations of grammatical category labels

asp	aspect marker
cl	classifier
comp	complementizer
dem	demonstrative
def	definite
det	determiner
neg	negation
nom	nominalizer
pass	passive
prog	progressive

Other abbreviations

dist	distributive marker
EPI	existential polarity item
foc	focus
NPI	negative polarity item
top	topic
$Q_{[wh]}$	wh-operator
$Q_{[yes-no]}$	yes-no operator

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Chapter 1

Introduction

1.1 Three construals of the operator-variable relation: wh in-situ, NPI and EPI

This dissertation argues that Thai wh-expressions are variables with no inherent interrogative force. As variables, they acquire an interpretation by "variable assignment". That is, a variable is assigned an interpretation by "a feature copy" operation. This predicts that variable expressions that appear in wh-contexts will appear in other contexts, and their interpretations are constrained by the syntactic context in which they occur, as in (1). In wh-contexts, variables are assigned a wh-construal by copying the [wh] feature of the operator Q, as in (1a). In the context of negation, variables are assigned a Negative Polarity Item (NPI) construal by copying the negative feature of a Neg operator (a kind of Negative Concord), as in (1b). In a yes-no construction, a variable is assigned an Existential Polarity Item (EPI) construal by copying the polarity feature of a yes-no question marker, as in (1c).

(1) a. $Q_{[wh]}$ [variable]   wh-construal

     b.   Neg   [variable]   NPI-construal

     c. $Q_{[yes-no]}$ [variable]   EPI-construal

Examples given in (2) illustrate the claim that variable expressions that are construed as wh-expressions in wh-contexts also have the status of polarity items in other contexts. In the absence of an overt operator, $k^{h}ray$ is interpreted as [+wh, +human], equivalent to 'who', as in (2a). In the presence of negative *mây*, the variable expression is interpreted as [+Neg, +human], equivalent to 'anyone' or 'nobody', as in (2b). And in the presence of the yes-no question marker *mây*, the variable expression $k^{h}ray$ is interpreted as as [−Neg, +human] equivalent to 'someone', as in (2c).

          WH-CONSTRUAL
(2) a.   ⸌Nít   hěn   **[kʰray]**

                   see   *VARIABLE.+HUMAN*

          Who did Nit see?

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NPI-CONSTUAL

b. Nít   **mây**   hěn   **[kʰray]**

       neg   *see*   *VARIABLE.+HUMAN*

≠ (i)   Who did Nit not see?

= (ii)   Nit did not see **anyone / nobody.**

EPI-CONSTRUAL

c. Nít   hěn   **[kʰray]**   **máy**

       see   *VARIABLE.+HUMAN* $Q_{[polarity]}$

≠ (i)   Who did Nit see?

= (ii)   Did Nit see **someone** or **did not see nobody?**

The examples in (2) confirm that Thai wh-expressions are in fact variables in that they get interpreted relative to the syntactic context that hosts them. In this dissertation, I propose that the operator-variable relation in Thai is implemented as a syntactic probe-goal relation (Chomsky 2000). The next section discusses how the probe-goal analysis captures the syntactic restrictions that hold between the operator and the variable.

1.2 The operator-variable relation as a probe-goal relation

Wh-questions are often analyzed in terms of an operator-variable structure (e.g. Cheng 1991, Aoun and Li 1993, Tsai 1994, Cole and Hermon 1998). The wh-operator takes scope over the whole sentence and binds a variable, as in (3).

(3)   [OP_i [variable$_i$]]

The grammar provides two ways to derive the operator-variable pair found in wh-questions (Tsai 1994). The in-situ analysis has $OP_{[Q]}$ base-generated and the wh-operator binds a variable, as in (4a). The movement type involves overt wh-movement and the wh-operator binds the variable, as in (4b).

WH IN-SITU

(4)   a.   [$OP_{i[Q]}$ [$variable_i$]]

WH-MOVEMENT

       b.   [wh_i [t_i]]

The question that arises is that "why is the probe-goal relation relevant for modeling the operator-variable relation?" As we saw in (2), Thai wh-expressions have the status of polarity items in some contexts. This indicates that wh-expressions are variables: to be interpreted, they must be syntactically "bound" and "coindexed with a c-commanding antecedent (Grodzinsky and Reinhart 1993). Along the same lines, it has been proposed in the literature that the operator-variable relation involves a licensor-licensee relations such that wh-expressions are treated as polarity items that require a licensor for interpretation (e.g. Huang 1982, Nishigauchi 1990, Cheng 1991, Li 1992a, Lin 1996 and Sigrid & Kim 1997). Licensors for polarity items are usually formed by the same set of licensors—be it negation, an existential quantifier or a universal quantifier. While such licensor-licensee analyses account for languages where wh-expressions are polarity items, they do not account for languages where wh-expressions are not polarity items.

In this study, the operator-variable relation will be implemented as a probe-goal relation. The operator (as the probe) is related to the goal (as the variable) by the operation Match. The proposed analysis provides a unified analysis for both polarity item and non-polarity item languages (See section 2.2.3 for discussion). I argue that a "probe" is identified as $Q_{[wh]}$, Neg or $Q_{[yes-no]}$ and a "goal" is an underspecified variable. In particular, the probe and the goal interact via "feature matching". Notice that the operator-variable relation, as the probe-goal relation, is reversed from the usual kind of probe-goal dependency (i.e. Agreement), where the ϕ features on a verb match features of the goal DP. For "agreement", Chomsky (2000) argues that a ϕ feature on a verb (as a probe) is seeking for the closest matching goal (the DP), namely "matching features that establish agreement" (Chomsky 2000: 122). Under the present anlysis, the goal is seeking for a matching probe. This "reverse" dependency seems to me to be specific to the operator-variable relation that is relevant for wh-questions.

Match is defined by Chomsky (2000: 122) as in (5).

(5)   Matching is feature identity

The first question that arises is how "feature identity" is satisfied with respect to Match. In as much as identity requires the presence of the same feature, Match is always satisfied if the Probe and the Goal have exactly the same feature specification, as in (6a). But there are at least three other logical possibilities to consider, namely those in (6b-d).

POSSIBLE MATCHING RELATIONS

(6)		Probe	Goal
	a.	Q [**wh**]	[**wh**]
	b.	Q [**wh**, F]	[**wh**]
	c.	Q [**wh**]	[**wh**, F]
	d.	Q [**wh**]	[μ, F]

As already mentioned, (6a) satisfies Match because the probe and goal have an identical feature, namely [wh]. The Matching relation in (6b) and (6c), on the other hand, can be established through a superset or a subset relation. That is, either the probe or the goal has an additional feature besides the [wh] feature. If such feature specification satisfies Match, then this implies that the relevant notion of "feature identity" requires that the Probe and Goal share at least one feature. If Match requires that the entire feature specification of the Probe and Goal be identical, then (6b-c) would not satisfy Match. As we shall see in Chapter 2, (6b-c) do in fact satisfy Match. Finally, there is the question of the status of (6d), where the Goal is unspecified for the feature of the Probe. At first glance, (6d) does not satisfy Match, contradicting the definition given in (5) that Match is feature identity.

The analysis of Thai wh-expressions that I propose claims that Match can be satisfied in (6d) via feature "copying". In particular, I argue that, in Thai, the operator-variable relation, as a probe-goal relation, satisfies Match through feature copying. Thai wh-expressions are variables; as such they are "underspecified" goals whose featural [μ] content needs to be filled in. The underspecified goal in (7a) is filled in by the [wh] feature on the Q probe which is copied onto the underspecified goal. When, the "underspecified" goal is left unfilled, as illustrated in (7b), the sentence is ill-formed. (7b) cannot be interpreted as a command because there is no

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available probe in an imperative sentence. The goal remains thus uninterpretable due to the lack of an appropriate probe.

WH-CONSTRUAL

(7) a. kʰun   kin   **[ʔaray]**

     you   eat   VARIABLE. – HUMAN

     What did you eat?

IMPERATIVE

b. * kin   **[ʔaray]**

     eat   VARIABLE. –HUMAN

     [Eat what!]

The underspecified goal is constrained by the domain in which it occurs. The syntactic domain determines which features are copied onto the underspecified goal. The feature copy operation is restricted to the following features: [wh], [neg] and [polarity]. Copying wh-feature, therefore, yields a wh-construal, while copying a negative feature yields a negative construal. Along the same line, copying a polarity feature yields a positive construal. The feature copy analysis captures the fact that Thai variable expressions are invariant forms, regardless of their different interpretations.

MATCHING RELATIONS IN THAI

(8)	Probe	Goal	Domain
	[wh]	$[\mu, F]$	a wh-question
	[neg]	$[\mu, F]$	a negative clause
	[polarity]	$[\mu, F]$	a yes-no question

This analysis predicts that the goal that is "underspecified" for a feature will have a fixed interpretation—be it wh-construal or polarity construal—depending on the feature of the probe copied onto the goal. This is illustrated in (9). We see that in addition to the wh-construal, the goal may have an NPI construal. This is due to a [Neg] feature of the probe that is copied onto the goal, creating feature identity for Match. The goal may also have an EPI construal. The polarity feature on the $Q_{[yes-no]}$ probe is the one that is copied and filled in for the underspecified goal. Hence, Match is satisfied.

		PROBE			GOAL
		[WH]	[NEG]	[POLARITY]	
(9)	*kʰray*	'who'	'anyone'	'someone'	[μ, +human]
	ʔaray	'what'	'anything'	'someone'	[μ, –human]
	tʰî:năy	'where'	'anywhere'	'somewhere'	[μ, +place]
	mî:aray	'when'	'anytime'	'sometime'	[μ, +time]
	yà:ŋray	'how'	'anyhow'	'somehow'	[μ, +way]
	tʰam-may	'why'	'any reason'	'some reason'	[μ, +reason]

I argue that in Thai, the probe-goal relation is only established via Match (without Move). There are, however, some languages where the probe-goal relation is established via Move, as illustrated in the table in (10).

(10)

Feature Specifications	Match Probe [±wh]	Move Probe [±wh]	Move Probe [+wh]
Goal [+wh]	Old Chinese	*	*
Goal [+wh, F]	*	*	Yorùbá
Goal [μ, F]	Thai	English, French	*

Given that Move is a by-product of Agree, the question that arises is 'why do some languages need Agree?' Agree is taken to be an operation that deletes uninterpretable features that render the probe and goal active in order for Agree to apply (Chomsky 2000: 123). If Agree is feature deletion, we need Agree to delete an uninterpretable feature prior to LF to avoid a crash of the derivation (by definition). Take English as an example. The uninterpretable [wh] feature is on the C head and is copied onto the underspecified goal. (See a detailed discussion of "the underspecified goal" in English in 2.2.3). After feature copying, the probe and goal match in [wh] features. Agree then triggers overt wh-movement to satisfy the EPP feature of C in case of A' movement. The goal will have to move to the probe, forming a specifier of the probe. The uninterpretable feature on the probe and the goal needs to be deleted before LF via Agree.

This is where the system is different between Thai and English, in that Thai only needs Match, while in English Match and Move are both required. I delay the detailed discussion of how the probe-goal analysis accounts for typological differences in other languages until chapter 2.

I have set out some core assumptions of this work regarding how probe-goal relations are established in (11). The probe-goal relation is constrained by the following conditions in that the probe and the goal must satisfy feature identity (Match), c-command and locality.

(11)   (i)   Feature identity: The probe-goal satisfies Match, which requires probe and goal to have identical features.

       (ii)   C-command condition: The probe must c-commands the goal.

       (iii)   Locality: Match is satisfied by the most local probe.

In this study, I implement the operator-variable relation as a probe-goal relation. Wh-expressions are treated as a goal underspecified for a feature. This follows from the claim that the goal is a variable that needs to be licensed. Within the probe-goal dependency, the "underspecified" goal needs to be filled by featural content. This is done through "feature copying". Then, the probe and the goal enter into a Matching relation. In order to Match, the goal must be in the domain of the probe and must satisfy locality conditions. Discussion of the probe-goal relation is spread through the following four chapters. Each chapter considers the probe-goal relation as it occurs in different domains.

1.3 Outline of the thesis

This thesis is organized into a first and second chapter that set out the general position that will be adopted and expanded into the three other chapters. I propose that the syntactic relation between the operator and the variable is implemented in terms of the probe-goal relation. The probe-goal relation requires the underspecified goal enter a matching relation (Chomsky, 2000:122). I claim that the feature-matching requirement in Thai is met by the "feature copying" operation. The feature of the probe is copied onto the goal that is underspecified for a feature. After feature copying, the probe and the goal are identical in feature identity, as required by Match.

Chapter 2 discusses the probe-goal relation in wh-contexts such as (12).

WH-CONSTRUAL

(12)   Nít   hěn   [kʰray]

        see   *VARIABLE.+HUMAN*

lit = Nit saw who

  = **Who** did Nit see?

I argue that the probe is a covert $Q_{[wh]}$, and the goal, on the other hand, is a variable expression. The [wh] feature of the probe is copied onto the underspecified goal. The goal matches with the probe in [wh] features, and hence is interpreted as an interrogative. I claim that the Matching relation between the probe and the goal in Thai is established without Move. Much of chapter 2 is spent discussing the two major consequences of the claim that the covert $Q_{[wh]}$ probe is base-generated in C from where it takes scope and matches with the goal. First, the proposed analysis correctly predicts the structural properties of Thai wh in-situ. More specifically, it derives the absence of an asymmetry between wh-subjects and wh-objects, as well as the absence of an asymmetry between wh in-situ arguments and wh-adjuncts with respect to island effects. Second, the proposed analysis also correctly predicts the interpretive properties of Thai wh in-situ. In particular, it derives the absence of pair-list readings in multiple wh-questions, as well as the absence of list-readings in wh-constructions that contain a quantifier.

Chapter 3 discusses variable expressions in polarity contexts such as (13).

NPI-CONSTRUAL

(13) a.   Nít   **mâly**   hěn   [kʰray]

            neg   *see*   *VARIABLE.+HUMAN*

     Nit did not see **anyone.**

EPI-CONSTRUAL

  b.   Nít   hěn   [kʰray]   **máy**

          see   *VARIABLE.+HUMAN* $Q_{[polarity]}$

     Did Nit see **someone?**

The probe-goal analysis extends to NPI and EPI contexts. In the context of negation, the [neg] feature on the Neg probe is copied onto the underspecified goal. The goal matches with the probe in [neg] features, and is interpreted as a Negative Polarity Item (NPI). In a yes-no

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construction, the goal matches the [polarity] feature on the $Q_{[yes-no]}$ probe, interpreted as an Existential Polarity Item (EPI). In chapter 3, I argue that the interpretation assigned to a variable expression is predictably constrained by the c-command relation that holds between the probe and the goal. The proposed analysis correctly predicts the presence of subject/object asymmetries, and captures the fact that complement/adjunct asymmetries with respect to NPI- and EPI-construals only hold in matrix clauses. Thus, while NPI- and EPI-construals are unavailable with adjuncts in matrix clauses, they are available in embedded clauses. This is because a matrix negative probe or a matrix yes-no question probe is available for the embedded goal. The availability of NPI- and EPI-construals in embedded clauses are a side-effect of the locality condition that requires that the closest c-commanding probe is the one that enters into the probe-goal relation.

Chapter 4 is concerned with an apparent case of wh-movement, as examplified in (14a), where a wh-expression is found in sentence-initial position. I argue that the Matching relation between the probe and the goal does not induce Move, despite surface appearances. (14a) is analyzed as a reduced contrastive wh-cleft with the same structure as the contrastive wh-cleft in (14b). The latter are called *pen* clefts because they have the overt copula *pen*.

(14)   REDUCED CONTRASTIVE WH-CLEFT

   a.   [kʰray   tʰíː]   tʰam   caːn   tǽːk

      VARIABLE.+HUMAN   *def*   *cause* *plate* *brake*

      Who broke a plate?

   CONTRASTIVE WH-CLEFT

   b.   [kʰray   tʰíː]   pen   kʰon   tʰam   caːn   tǽːk

      VARIABLE.+HUMAN   *def*   *be*   *nom*   *cause* *plate* *break*

      Who was the one that broke a plate?

I show that the semantics and syntax of reduced contrastive wh-clefts have the same properties as contrastive wh-clefts with the overt copula *pen*. I close the chapter by considering the three major consequences of analyzing such apparent cases of wh-movement as reduced wh-clefts. First, only wh-subjects can occur as a cleftee (due to the inability of the nominalizer *kʰon* to nominalize the object). Second, wh-objects can occur as a cleftee only when passive markers are present (the object can only nominalize if it is promoted to subject by passivization). Last,

only 'who' can occur as a cleftee (due to [+human] specification of the nominalizer *kʰon*). These restrictions fall out naturally from the contrastive wh-cleft analysis.

Chapter 5 looks at another case of apparent wh-movement, which involves discourse-linked wh-expressions such as 'which man', as in (15a). Such constructions are analyzed as reduced identificational wh-clefts with the same structure as identificational wh-clefts such as (15b). The latter are called *kʰɨː* clefts because they have the overt copula *kʰɨː*.

(15)   REDUCED IDENTIFICATIONAL WH-CLEFT

    a.   **[pʰûːcʰaːy kʰon năy tʰîː]**   Nít   ʔæ̀ːp   cʰɔ́ːp

          man   cl   VARIABLE comp   *hide   like*

        Which man does Nit secretly have a crush on?

IDENTIFICATIONAL WH-CLEFT

    b.   **[pʰûːcʰaːy kʰon năy]**   **kʰɨː**   **kʰon**   tʰîː Nít ʔæ̀ːp cʰɔ́ːp

          man   cl   VARIABLE   be   cl   comp   hide like

        Which man is the one that Nit secretly has a crush on?

I show that the semantics and syntax of reduced identificational clefts have the same properties as identificational wh-clefts with the overt copula *kʰɨː*. This leads to the conclusion that the *tʰîː* clauses with D-linked wh-expressions such as (15a) are derived from identificational wh-clefts such as (15b). The chapter ends by considering two predictions that fall out from the identificational wh-cleft analysis. Thai wh-intervention effects are explained by the reduced identificational wh-cleft analysis. To satisfy the probe-goal relation that the goal must be at the left edge of the clause in order to match with the [wh] of the Q probe, rather than with a [Neg] feature of an intervening probe. Another consequence of analyzing *tʰîː* clauses with D-linked wh-expressions as reduced wh-clefts is that it reveals the internal structure of wh-argument locatives. It suggests that they may be inherently D-linked wh-expressions such as 'which place', in contrast to the bare wh-expressions such as 'where'.

The last chapter concludes, tying together the results of the whole thesis. The chapter has a final note on wh-adjuncts and how they interact with Move.

Chapter 2
Wh-expressions as variables

2.1 Deriving the properties of wh-questions in Thai

In Thai, when wh-questions are formed the wh-expression—be it subject (henceforth wh-subject), object (wh-object), indirect object (wh-indirect object) or possessor (wh-possessor) — occurs in the same position as the corresponding non-wh-expression in declarative sentences. This is illustrated in (1) for wh-subjects, in (2) for wh-objects, in (3) for wh-indirect objects, and in (4) for wh-possessors.

WH-SUBJECT

(1) Q: [kʰray]   sɨ́ː   nǎŋsɨ̌ː   mɨ̂ːawaːnníː

          VARIABLE.+HUMAN *buy*   *book*   *yesterday*

          Who bought a book yesterday?

SUBJECT

      A: [Nít]   sɨ́ː   nǎŋsɨ̌ː   mɨ̂ːawaːnníː

                 buy   *book*   *yesterday*

          Nit bought a book yesterday.

WH-OBJECT

(2) Q: Nít   sɨ́ː   [ʔaray]   mɨ̂ːawaːnníː

              buy   *VARIABLE.–HUMAN*   *yesterday*

       lit = Nit bought what yesterday?

        What did Nit buy yesterday?

OBJECT

      A: Nít   sɨ́ː   [nǎŋsɨ̌ː]   mɨ̂ːawaːnníː

              buy   *book*   *yesterday*

       Nit bought a book yesterday.

WH-INDIRECT OBJECT

(3) Q: Nít   hây   năŋsɨ̌:   **[kʰray]**   mɨ̂:awa:nní:

         give   book   VARIABLE.+HUMAN   yesterday

   lit = Nit gave a book to whom yesterday?

   To whom did Nit give a book yesterday?

INDIRECT OBJECT

A: Nít   hây   năŋsɨ̌:   **[Lék]**   mɨ̂:awa:nní:

     give   book   yesterday

   Nit gave a book to Lek yesterday.

WH-POSSESSOR

(4) Q: Nít   ʔà:n   năŋsɨ̌:   kʰɔ̌:ŋ   **[kʰray]**   mɨ̂:awa:nní:

         read   book   of   VARIABLE.+HUMAN   yesterday

   lit = Nit read a book of who yesterday?

   Whose book did Nit read yesterday?

POSSESSOR

A: Nít   ʔà:n   năŋsɨ̌:   kʰɔ̌:ŋ   **[Lék]**   mɨ̂:awa:nní:

     read   book   of   yesterday

   Nit read Lek's book yesterday.

The examples in (1) through (4) establish that Thai wh-expressions occur in their base-generated position, i.e. Thai is a wh in-situ language. This chapter discusses wh in-situ licensing. I propose that in Thai wh in-situ constructions, wh-expressions are variables with no inherent interrogative force, i.e. they are underspecified for the wh-feature. As variables, they acquire a wh-construal by virtue of being in the scope of an interrogative operator. In particular, I propose that the syntactic relation between the operator and the variable is implemented in terms of the probe-goal relation (Chomsky 2000). The probe-goal relation requires the goal to match with the probe, where Match is defined as feature identity. I argue that the probe is a covert $Q_{[wh]}$ morpheme specified with a [wh] feature, and that this covert $Q_{[wh]}$ is base-generated in C from where it takes wh-scope and is matched with the goal.

For Thai, analyzing the relation between the covert $Q_{[wh}$ (in C) and the in-situ variable as an instance of the probe-goal relation has two major consequences. First, the proposed analysis derives the structural properties of Thai wh in-situ. In particular, it derives the absence of an asymmetry between wh-subjects and wh-objects, as well as the absence of an asymmetry between wh in-situ arguments and wh-adjuncts with respect to island effects. Second, the proposed analysis derives the interpretive properties of Thai wh in-situ. In particular, it derives the absence of pair-list readings in multiple wh-questions, as well as the absence of list-readings in wh-constructions that contain a quantifier.

The chapter is organized as follows. Section 2.2 discusses how goals, as variables, are matched in a wh-construction, and considers three alternative analyses: covert feature-movement, A'-binding, and feature-matching forced by the probe-goal relation. I argue that implementing an operator-variable relation as a probe-goal relation yields the best results. Section 2.3 presents evidence for the presence of a covert $Q_{[wh]}$ probe; it is this probe that provides the wh-feature that is copied onto the underspecified goal. Section 2.4 presents evidence that wh-expressions in Thai are underspecified variables whose construal is constrained by the syntactic context in which they occur. In section 2.5 I go on to argue that the structural constraints of the probe-goal relation account for the lack of asymmetry between wh-subjects and wh-objects with respect to how variables are construed in a wh-context. The proposed analysis also correctly predicts that there will be no differences between wh in-situ arguments and wh in-situ adjuncts with respect to island effects. In section 2.6, the chapter closes with a discussion of the interpretive properties of Thai wh in-situ constructions, as they relate to multiple wh-questions and to wh-questions that contain quantifiers (henceforth wh-quantifier interaction).

2.2 Underspecified goals in a wh-construction

I begin by considering how wh-expressions, as underspecified goals, are matched with the covert $Q_{[wh]}$ probe in a wh-construction. Consider again the following example of an in-situ wh-object:

(5) Nít sɨ: [ʔaray] mɨ̂:awa:nní:

       buy VARIABLE.–HUMAN yesterday

lit = Nit bought what yesterday?

    What did Nit buy yesterday?

One question that arises is the extent to which a wh in-situ construction has the same properties as a wh-movement construction. In the syntactic literature, two approaches have been pursued: (i) the abstract movement analysis, also called covert movement (e.g. Huang 1982); (ii) the A' binding analysis (e.g. Aoun 1985, Aoun&Li 1993b, Chang 1995). I consider each in turn.

2.2.1 LF abstract/covert movement analysis

It has been claimed that wh-expressions that occur in their base-generated position undergo LF movement (e.g. Huang 1982, Tsai 1994). This is illustrated in (6). (6a) is a structure where there is no movement of the wh-expressions in the surface form, while in (6b) the wh-expression undergoes covert movement from the in-situ position to the clause periphery.

(6) LF abstract/covert movement analysis

    a. S-structure [$_{IP}$ Subject Verb [$_{DP}$ **WH**]]

    b. LF [CP [$_{DP}$ **WH$_i$**] [$_{IP}$ Subject Verb **t$_i$**]]

As established above, Thai is a wh in-situ language. At first glance, covert movement appears to be a possible analysis. The argument for this kind of analysis is primarily based on the fact that wh-expressions cannot be contained within a syntactic island. Assuming that islands diagnose a movement relation (Ross 1967), covert movement must also be constrained from moving out of the islands, in the same way as the overt movement is.

(7) is an example of a wh in-situ language, Sinhala. Hagstrom (1998) takes the data in (7) as evidence for a covert movement analysis for this language due to its sensitivity to syntactic island constraints. The examples in (7) illustrate that wh-expressions cannot occur inside a complex noun phrase island, as in (7a), and an adjunct island, as in (7b). According to Hagstrom, the Q morpheme *də* covertly moves across the islands, hence yielding ungrammaticality.

14

SINHALA

(7) a. * oyaa [kay də   liyəpu potə] kieuwe

you who Q   wrote book read-E

[You read the book that who wrote?]   (Kishimoto 1992:56)

b. * [kau də   enə   kotə] Ranjit paadam   kəraminhitie?

who Q   came time Ranjit study   doing   was-E

[Ranjit was studying when who came?]   (Kishimoto 1992:58)

However, in Thai, wh-expressions—both wh-arguments and wh-adjuncts—are allowed to occur inside islands and show no island effects (cf. section 2.5). If there were a covert movement in Thai, we would predict island effects, which in fact do not occur, as shown in (8). We see that the examples in (8) are perfectly well-formed. Wh-expressions can occur inside a relative clause island, as in (8a), and an adjunct island, as in (8b), with no island violation I take this as evidence for not adopting a covert movement analysis for Thai.

(8) a.   kʰun cʰɔ̀ːp pleːŋ tʰîː **[kʰray]**   rɔ́ːŋ

you like   song comp VARIABLE. +human   sing

Who did you like the song such that x sang?

b.   kʰáw tʰùːk lâyʔɔ̀ːk pʰrɔ́ʔ (kʰáwᵢ) kʰamoːy   **[ʔaray]**

he   pass fire   because(he stea   VARIABLE. –human

What was he fired because he stole?

2.2.2 A' binding analysis

In an A' binding analysis, the relation between a wh-operator and a wh-expression is treated as an antecedent-anaphor/pronoun relation (Aoun 1985, Chang 1995, Sloan 1991). It has been observed that wh-expressions behave like anaphors (Aoun 1985, Chang 1995) or pronouns (Sloan 1991). They are subject to binding principles in the same way that anaphors and pronouns are. They, however, have a different binding domain in that they are A' bound by an A' binder—a covert operator OP$_{[wh]}$ in specifier of CP—for interpretation, rather than A bound by an A-antecedent. This is illustrated in (9).

(9)   A' binding analysis

        [CP OP$_{[wh]i}$ [IP Subject Verb [DP WH]$_i$]

In (9), the wh-expression is bound by a wh-operator; this binding relation crucially does not involve movement. As such, it is not subject to constraints on movement, such as subjacency. This analysis predicts the absence of island effects since wh-expressions can be bound by an A' binder OP$_{[wh]}$ generated in C position even when they occur inside an island. As we shall see below, Thai wh in-situ does not show island effects, so at first glance an A' binding analysis seems promising.

The A' binding analysis, however, cannot account for the fact that wh-expressions in Thai can have other interpretations. In addition to having a wh-construal, as in (10a), (10b) and (10c) illustrate that variable expressions can also be construed as negative polarity items (NPIs) in the context of negation, and as existential polarity items (EPIs) in a yes-no construction.

        WH-CONSTRUAL
(10)   a.   Nít   hěn   [kʰray]

                        see   *VARIABLE.+HUMAN*

                Who did Nit see?

        NPI-CONSTRUAL

        b.   Nít   **mây**   hěn   [kʰray]

                        neg   *see*   *VARIABLE.+HUMAN*

                Nit did not see **anyone**.

        EPI-CONSTRUAL

        c.   Nít   hěn   [kʰray]   **máy**

                        see   *VARIABLE.+HUMAN* $Q_{[polarity]}$

                Did Nit see **someone**?

Thus, in-situ variable expressions are not inherently interrogative. Rather, they are variables that acquire their interrogative, negative and existential force by being in the scope of the relevant operators. As underspecified goals, they automatically acquire the feature of the most

local c-commanding operators. In this way, the probe-goal analysis need not posit a dedicated operator position in Spec CP.

Moreover, since the non-wh-operators—Neg and $Q_{[yes-no]}$ are generated lower in the tree (see Chapter 3 for discussion of the position of Neg and $Q_{[yes-no]}$), they are not be appropriate binders in the A' binding analysis which locates the operator in Spec CP. Also, we will see in Chapter 2, section 2.5.4 that wh-rationale adjuncts in Thai undergo overt movement, unlike other wh-expressions. A concern that arises given such a unique characterization of wh-rationale adjuncts is how the A' binding analysis will capture the movement of the wh-adjuncts?

To conclude, the A' binding analysis does not account for the properties of Thai wh in-situ. It cannot explain wh-expressions' status as polarity items.

2.2.3 The probe-goal relation

In this section, I introduce the probe-goal relation (Chomsky 2000) and motivate why I adopt this probe-goal relation to analyze variable expressions in Thai. Note that all three approaches —the covert movement analysis, the A' binding analysis, and the probe-goal anlysis—treat the relation between the wh-feature and the wh-expression as an operator-variable relation. By hypothesis, Thai wh-expressions are variables whose interpretations are constrained by the syntactic domain in which they occur. I treat the operator-variable relation as a probe-goal relation. I propose that probes (as operators) and goals (as variables) are mediated through the Matching relation. Match is defined as feature identity between a probe and a goal (Chomsky 2000).

I consider the logical possibilities of how Match is satisfied by the probe-goal relation, and argue that Match in Thai is satisfied by feature "copying". There are (at least) four possible ways that the probe and the goal can enter into a Matching relation. First, the probe and the goal are featurally identical, as in (11a). Second, the probe and the goal are matched through a superset relation, as in (11b). That is, the probe has two features: F1 and F2 but the goal has one feature [F1]. Only F1 of the probe matches with the F1 of the goal. The probe and the goal in (11c), on the other hand, are matched through a subset relation. The probe has one feature [F1], while the goal has two features [F1] and [F2]. It is [F1] of the probe and the goal that matches. If feature specifications such as (11b-c) satisfy Match, then this implies that the

relevant notion of "feature identity" requires that the Probe and Goal share at least one feature. The last case in (11d) is of particular interest. Here, the probe has one feature [F1], while the goal has two features: one underspecified for a feature, and the other [F2].

POSSIBLE MATCHING RELATIONS

(11)		Probe	Goal
	a.	**[F1]**	**[F1]**
	b.	**[F1**, F2]	**[F1]**
	c.	**[F1]**	**[F1**, F2]
	d.	**[F1]**	[μ, F2]

I apply the possibilities established in (11) to actual wh-cases, as listed in (12).

(12) Feature specifications: Probe and Goal

Matching Relation	Probe	Goal	Predictions	Language
a. probe = goal	F1: [WH]	F1: [WH]	A language with a single general purpose wh-expression	Old Chinese
b. probe is a superset of goal	F1: [WH] F2 : ??	F1: [WH]	probe: F1 restricted to wh-contexts F2: ?? goal: F1 restricted to wh-contexts	??
c. probe is a subset of goal	F1: [WH]	F1: [WH] F2: [+human] [−human] …	probe: F1 restricted to wh-contexts goal: F1 restricted to wh-contexts F2: restricted to semantic features that are composed of wh-expressions (e.g. +human, +entity, +location, +time etc.)	Yorùbá
d. goal is underspecified for feature	F1: [WH]	F1: [μ] F2: [+human] [−human] …	probe: F1 restricted to wh-contexts goal: F1 is not restricted to wh-contexts F2: restricted to semantic features that are composed of wh-expressions (e.g. +human, +entity, +location, +time etc.)	Thai English French

Let us walk through (12) step by step. The first case in (12a) illustrates that matching is feature identity. The probe and the goal are featurally identical. This type of matching relation predicts a language with an invariant morpheme which generalizes for all wh-expressions. Old Chinese appears to be such a language that uses a single morpheme *he* for all general purpose wh-

expressions[1]. According to Wu (2005), *he* can be interpreted as 'what' (13a), 'where' (13b), 'when' (13c), 'how' (13d) and 'why' (13e). The interpretations are determined by syntactic positions and contexts in which it occurs.

OLD CHINESE[2]

(13) a.
	yu	**[he]**	yan
	I	*what*	*say*

What can I say?   (Shangshu, Gao Yao Mo)

b.
Zi	yu	**[he]**	wang
you	*want*	*where*	*go*

Where do you want to go?   (Zhanguoce, Qince)

c.
fang	**[he]**	wei	qi
particle	*when*	*to be*	*time*

When will be the time?   (Shijing, Qinfeng, Xiaorong)

d.
ru	**[he]**	sheng	zai	shang
you	*how*	*live*	*at*	*up*

How will you be able to live upon the earth?   (Shangshu, Pan Geng)

e.
wo	du	**[he]**	hai
I	*along*	*why*	*harm*

Why am I along harmed?   (Shijing, Xiaoya, Lu'e)

he[3] occurs in a preverbal object position in (13a), and it has the status of 'what'. But when it occurs as an object of directional verbs, it functions as 'where'. For 'when', 'how' and 'why', *he* occurs in a preverbal adverbial position. We see that Old Chinese illustrates Match as feature identity between the probe and the goal.

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[1] See Keying Wu's dissertation (2005) titled "Interrogatives in Old Chinese" (in preparation).
[2] The data in (13) is from different periods of time.
[3] *he*, however, cannot be interpreted as 'who'.

A second case to consider is where Match takes place when the probe is a superset of the goal, as in (12b). The probe has two features: [F1: WH] and [F2]. The second feature [F2] can be anything. The goal, on the other hand, has only one feature [WH] which is restricted to wh-contexts. We predict that such a language may use different question morphemes for different clauses (e.g. matrix or embedded clauses). To my knowledge, no such language is attested.

The third case in (12c) is that the probe is a subset of the goal. The probe carries only one feature which is [F1: WH], while the goal is given two features: [F1: WH] and [F2]. The [F2] feature can be a feature such as [+animacy] or [+human], etc. Languages that illustrate this kind of Matching relation will have wh-expressions functioning only with interrogative force but have variant morphemes for different wh-questions, unlike Old Chinese. Yorùbá is an example of such a language. The data (14a-b) is taken from Jones (2004) and (14c-f) from Cook (2004).

YORùBá

(14) a. **[ta]** ni ó ra ìwé   [+wh, +human]
  who *foc⁴* *3sg* *buy* *book*
  Who bought a book?

 b. **[ki]** ni Adé ra   [+wh, +entity]
  what *foc* *buy*
  What did Adé buy?

 c. **[níbo]** ni ó ti jòro   [+wh, +location]
  where *foc* *3sg* *em* *eat.mango*
  Where does she eat mangoes?

 d. **[ìgbà]** wo ni ó máa ń jòro [+wh, +time]
  time *when* *foc* *3sg* *hab* *prog* *eat.mango*
  When does she eat mangoes?

---

⁴ Yorùbá wh-words are accompanied by the presence of a focus marker *ni* (Déchaine 2001).

e.   **[báwo]** ni   Adé   se   tàlu   [+wh, +way]

       how   *foc*   *em*   *sell.drum*

       How did Adé sell drums?

f.   **[nítorí]** kí   ni   Adé   se   sere   [+wh, +reason]

       reason wh   *foc*   *em*   *play*

       Why did/does Adé play?

The last case to consider is (12d) where the probe is restricted to wh-contexts since it only carries the [F1: WH] feature. On the other hand, the goal is not restricted to wh-contexts since F1 of the goal is underspecified for a feature in the sense that [μ] needs to be filled by feature content. The underspecified goal is seeking for a probe that is specified for a feature. In this case, the probe has a [F1: WH] feature. The [wh] feature is then copied from the probe onto the underspecified goal. Now, the goal has a featural content. Not only does it have a feature, but its feature matches with [F1: WH] of the probe, creating feature identity for Match. Since the goal is underspecified for a feature, it is not restricted to a [wh] feature, or to any feature. This predicts that the goal can have interpretations other than wh-construal, depending on the feature of the probe that is copied onto the underspecified goal. I argue that Thai is such a language, i.e. the interpretation of the goal is constrained by the feature of the probe. The following examples illustrate how the interpretation of wh-expressions such as *k^{h}ray* [+human] can be interpreted as 'who', as in (15a), as 'anyone', as in (15b) or as 'someone', as in (15c).

(15)   THAI

WH-CONSTRUAL

a.   Nít   hĕn   **[k^{h}ray]**

          see   *VARIABLE. +HUMAN*

       Who did Nit see?

NPI-CONSTRUAL

b.   Nít   mây   hĕn   **[k^{h}ray]**

          neg   *see*   *VARIABLE. +HUMAN*

       Nit did not see **anyone**.

EPI-CONSTRUAL

c.   Nít   hĕn   **[kʰray]**   máy

            see   *VARIABLE. +HUMAN* $Q_{[polarity]}$

Did Nit see **someone**?

The above examples establish that variable expressions as goals are featurally underspecified in Thai. They enter the Matching relation by copying a feature specified on the probe. The underspecified nature of Thai variable expressions is illustrated, in (16), where we see that the full range of argument, locative, temporal, manner and reason expressions may have a wh-construal, an NPI-construal, or an EPI-construal.

		<u>PROBE</u>			<u>GOAL</u>
		[WH]	[NEG]	[POLARITY]	
(16)	*kʰray*	'who'	'anyone'	'someone'	[μ, +human]
	ʔaray	'what'	'anything'	'someone'	[μ, –human]
	tʰî:nǎy	'where'	'anywhere'	'somewhere'	[μ, +place]
	mî:aray	'when'	'anytime'	'sometime'	[μ, +time]
	yà:ŋray	'how'	'anyhow'	'somehow'	[μ, +way]
	tʰam-may	'why'	'any reason'	'some reason'	[μ, +reason]

This type of matching relation, whereby the goal is underspecified for a feature, is not specific to Thai. If we consider English and French, particularly in relative clauses and free relative constructions, we see that wh-expressions do not always have a wh-construal. That is, the interpretation of wh-expressions in English and French is also contextually determined. This is illustrated in (17) for English.

(17) ENGLISH

    a.   **Who** did John see?   [+wh, +human]

    b.   The man **who** John saw   [–wh, +human]

    c.   **Whoever** John saw   [–wh, +human]

In (17a), the wh-expression has a wh-construal in a wh-context. The wh-expression as a goal is underspecified for a feature, while the probe Q has a [+wh] feature. The goal is seeking for a probe and match in a [+wh] feature. Hence, the wh-expression in (17a) is construed as a wh-interrogative. In (17b), since the goal is underspecified for a feature, it is also looking for a probe that is specified for a feature to match with, in which case, the probe relative operator has a [−wh] feature. The goal matches with the probe specified with the [−wh] feature, and hence is not interpreted as an interrogative. While in (17c), the probe has a [−wh] feature, the goal copies [−wh] feature of the probe. They featurally match. Hence, the goal is construed as a free relative. This establishes that wh-expressions in English are also underspecified goals whose construal is constrained by the probe whose context they occur in.

French shows a similar pattern to English and Thai in that wh-expressions are not always interrogatives. In (18a) and (18b), the wh-expressions are underspecified goals. They are looking for a probe specified with a feature to be filled in by that feature. Then, they copy the [+wh] feature of the Q probe in a wh-context. In the context of a relative clause, the wh-expressions are not interrogatives (18c). This is because the probe has a [−wh] feature and they match with it. In a free relative construction (18d), the goal is interpreted as a free relative reading. This is due to the presence of a [−wh] feature on the probe that it matches with.

FRENCH

(18) a.
	Jean	a	vu	[qui]			[+wh, +human]
		has	seen	who			

Who did Jean see?

b.
[Qui]	est-ce	que	Jean	a	vu	[+wh, +human]
who	is-it	that		has	seen	

Who did Jean see?

c.
L'homme	[qui]	a	vu	Jean	[−wh, +human]
the man	who	has	seen		

The man who saw Jean

	d.	**[Quiconque]**	a	vu	Jean	[−wh, +human]
		whoever		*has*	*seen*	

Whoever has seen Jean

So far, I have claimed that the probe and the goal enter a Matching relation through feature identity, more specifically through feature copying in Thai. The goal in Thai is underspecified for a feature, in which case, probes are not restricted to [+wh] feature contexts. As we have seen, the feature of the probe determines the interpretation of the goal. The feature of the probe is copied onto the underspecified goal, be it [+wh] or [−wh]. The above examples show that this property is not specific to Thai, but is also attested in English and French. In those languages, wh-expressions have interrogative force (in wh-contexts) or non-interrogative force (in relative clause contexts) depending on the feature of the probe that they match with. A difference between Thai and English/French is that the probe-goal relation in Thai stops at Match, while in English the probe-goal relation also satisfies Agree and Move.

Agree is taken to be an operation that deletes uninterpretable features that render the probe and goal active in order for Agree to apply (Chomsky 2000: 123). It is Agree that leads to a deletion of an uninterpretable feature prior to LF. After the uninterpretatble feature is deleted, Agree can be (but need not be) accompanied by Move. Move is triggered by the EPP feature associated with the probe. The goal then will move to the probe, forming a specifier of the probe.

The question at this point is 'how does the analysis proposed here apply to other languages cross-linguistically?' Recall that in Old Chinese, as in (13), the wh-exprssion *he* can only have an interrogative reading. Hence, the probe-goal relation in Old Chinese enters a Matching relation by both probe and goal being specified for a [wh] feature. Hence, the probe and goal featurally match.

Similar to Old Chinese, wh-expressions in Yorùbá are always interrogative. Wh-expressions in Yorùbá occur in initial position, as illustrated in (14). Under the proposed analysis, the probe has a [wh] feature, while the goal carries two features: [wh] and another feature such as [+human], [−human], [+location], [+time], [+way] or [+reason]. The probe and goal featurally match in [wh] features. Then, the EPP property of the probe in C triggers overt movement of the goal to Spec CP.

In this dissertation, I argue that in Thai, the probe-goal relation is established via Match (without Move). (19) illustrates how other languages fit into the proposed analysis.

(19)

Feature Specifications	Match Probe [±wh]	Move Probe [±wh]	Move Probe [+wh]
Goal [+wh]	Old Chinese	*	*
Goal [+wh, F]	*	*	Yorùbá
Goal [μ, F]	Thai	English, French	*

I argue that the probe-goal relation is best represented as an operator-variable relation in Thai. The goal is featurally underspecified and not restricted to [wh] contexts and the underspecified goal must be filled in by the featural content can match with any feature of the probe through feature copying. This captures the fact that Thai wh-expressions are variables with no inherent interrogative force. They acquire different interpretations (wh-, NPI- and EPI-construals) by matching with the features on the probe, namely [Q: wh], [Neg] and [Q: polarity]. The Probe-goal relation is represented schematically below.

(20)   Probe-goal analysis

WH-CONSTRUAL

a.   [CP **probe : Q [wh]** [IP Subject Verb [**goal : μ**]]]

a'   [CP **probe : Q [wh]** [IP Subject Verb [**goal : [wh]**]]]

NEG-CONSTRUAL

b.   [CP Q$_{[wh]}$ [IP Subject [**probe: NEG** [Verb [**goal : μ**]]]]]

b'   [CP Q$_{[wh]}$ [IP Subject [**probe: NEG** [Verb [**goal : NEG**]]]]]

EPI-CONSTRUAL

c.   [CP Q$_{[wh]}$ [IP Subject [**probe: Q$_{[polarity]}$** [Verb [**goal : μ**]]]]

c'   [CP Q$_{[wh]}$ [IP Subject [**probe: Q$_{[polarity]}$** [Verb [**goal : polarity**]]]]

The proposed analysis, however, not only captures the status of Thai wh-expressions as variables, but also accounts for the absence of island effects. A probe matches in features with a goal such that the closest c-commanding probe—which need not be in the same clause—is the one that enters into the probe-goal relation. The present analysis predicts no island effects anywhere because the probe as $Q_{[wh]}$ that is introduced higher up in a matrix clause is the closest c-commanding probe that is copied onto the underspecified goal generated down below.

To summarize, I have claimed that the operator-variable relation in Thai is best implemented as the probe-goal relation. I have set out some core assumptions regarding how the probe-goal relation is established, and what conditions are imposed on this relation. I have discussed data from other languages that support the analysis. The next section motivates the presence of a covert $Q_{[wh]}$ morpheme that carries a wh-feature; it is this feature that is copied onto the underspecified goal and gives rise to wh-construals in Thai.

2.3 Identifying the probe: $Q_{[wh]}$

I argue that Thai wh-constructions contain an abstract Q morpheme that is specified for a [wh] feature. It is this $Q_{[wh]}$ operator that forces in-situ variables to be construed as wh-expressions. As we shall presently see, in Thai, the presence of this covert $Q_{[wh]}$ can be detected in both matrix and embedded clauses.

2.3.1 Comparing Thai, Japanese and Mandarin: matrix $Q_{[wh]}$

The presence of an abstract $Q_{[wh]}$ can be motivated by comparing Thai to other wh in-situ languages like Japanese and Mandarin. To form wh-questions, Japanese requires wh-words and the sentence-final particle *ka*, (21a). In contrast to this, with Mandarin, the sentence-final particle *ne* that occurs with wh-questions is optional, (21b). As for Thai, only the wh-expression is present: there is no overt $Q_{[wh]}$ morpheme in wh-questions, (21c).

(21) a. JAPANESE (Hagstrom 1998:15)

John-ga   **[nani-o]**   kaimasita **ka**

John-nom   what-acc   bought   Q

What did John buy?

b. MANDARIN (Cheng 1991:30)

Qiaofeng   mai-le   **[shenme]**   **(ne)**

buy-asp   what   (Q)

What did Qiaofeng buy?

c. THAI

Nít   sɨ̀:   **[ʔaray]**

buy   VARIABLE. –HUMAN

What did Nit buy?

Even though there is no overt $Q_{[wh]}$ morpheme in Thai[5], wh-expressions nevertheless receive an interrogative interpretation in a parallel fashion to wh-expressions in Japanese and Mandarin. This is summarized in (22)[6].

(22) THE REALIZATION OF $Q_{[wh]}$ IN THREE WH IN-SITU LANGUAGES

	$Q_{[wh]}$
a. Japanese	ka
b. Mandarin	(ne)
c. Thai	∅

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[5] Andrew Simpson pointed out that Thai has the optional occurrence of *lâ* for use in emphatic-insistent wh-question. I, however, treat this particle as an emphatic marker, rather than a $Q_{[wh]}$ particle.

[6] As shown in (21a) and (21b), overt $Q_{[wh]}$ *ka* and *ne* mark interrogative clauses in Japanese and Mandarin respectively. Note that when $Q_{[wh]}$ is overt, it appears sentence-finally. The position of $Q_{[wh]}$ is not significant to my claim but there may be a correlation between the position of $Q_{[wh]}$ and word order. The fact that $Q_{[wh]}$ *ka* appears as a question-final particle in Japanese reflects its word order as being consistent with a head-final language. As for Mandarin, despite its appearance of being head-final in some structures (i.e. *ne* appears as a clause-final particle), Mandarin is a head-initial language (Cheng 1991). One analysis that has been pursued for Mandarin is to generate the question particle in a head-initial position and front the IP to derive the sentence-final position of the question particle.

The parallel between Japanese, Mandarin and Thai can be accounted for by positing a covert $Q_{[wh]}$ morpheme. On this view, one would describe the distribution of $Q_{[wh]}$ as follows: in some languages it is overt (e.g., Japanese), in other languages it may be covert or overt (e.g., Mandarin), and in other languages it is always covert (e.g., Thai). In all three types of languages, it is the presence of $Q_{[wh]}$—whether overt or covert—that forces a wh-construal. In the next section, I present independent evidence for the presence of a covert $Q_{[wh]}$ in Thai.

2.3.2 Selectional restrictions: embedded $Q_{[wh]}$

In addition to the covert $Q_{[wh]}$ that occurs in matrix clauses, there are reasons to think that $Q_{[wh]}$ also occurs in embedded clauses in Thai. The evidence comes from the restrictions imposed by verbs on the clauses that they select. It is well-known that certain verbs require certain kinds of complements (Grimshaw 1979, Huang 1982). It is assumed that such selectional requirements are listed with each verb in its lexical entry. For example, in English, the verb 'ask' selects for [+wh] complements, as in (23). This contrasts with 'know', which selects for both [+wh] complements and [−wh] complements, as in (24). And yet other verbs such as 'think' select exclusively for [-wh] complements, as in (25).

ENGLISH

(23) a. He asked who read the book.

b. * He asked that Mary read the book.

(24) a. He knew who read the book.

b. He knew that Mary read the book.

(25) a. * He thought who read the book.

b. He thought that Mary read the book.

In Thai, the verb $t^h\check{a}{:}m$ 'ask' takes either a [+wh] NP or CP complement (i.e., an indirect question), (26a-b), but not a [-wh] CP complement. Just as the source of the interrogative force in matrix clauses is (covert) $Q_{[wh]}$ (26c), similarly in embedded clauses the presence of (covert) $Q_{[wh]}$ is forced by the selectional requirement of the verb 'ask', and the embedded wh-question construal in (26b) naturally follows.

(26) a. kʰáw   tʰǎːm   [NP kʰamtʰǎːm]

        he   *ask*   *question*

        He asked a question.

   b. kʰáw   tʰǎːm   [CP wâː[7]   [CP **kʰray**   ʔàːn náŋsɨ̆ː]

        he   *ask*   *comp*   *VARIABLE. +human*   *read book*

        He asked who read the book.

   c. * kʰáw   tʰǎːm   [CP wâː   [IP Nít ʔàːn náŋsɨ̆ː]

        he   *ask*   *comp*   *read* *book*

        He asked that Nit read the book.

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[7] The embedded clause meets the selectional requirement of the matrix verb *tʰǎːm* 'ask' which selects [+wh]. A wh-variable is bound by the most local operator available, in this case a covert $Q_{[wh]}$ operator. Since the complementizer *wâː* co-occurs with wh in-situ which by hypothesis needs a null $Q_{[wh]}$, this suggests that there are two C projections as shown schematically in (i).

(i)   [VP … 'ask'…   [CP [C $Q_{[wh]}$ …   [CP [C **wâː** …   [IP … variable …]]]]]]

As a result, the CP domain must be split into at least two projections: one projection that specifies the force of the sentence (ForceP) and another projection that determine the finiteness (FinP) following Rizzi's articulated CP structure (1997). Since $Q_{[wh]}$ contributes the interrogative force to the sentence and *wâː* introduces finite clauses, $Q_{[wh]}$ and *wâː* occupy Force and Fin respectively.

The following question arises that how can we determine that $Q_{[wh]}$ precedes *wâː* ? In (ii), the overt $Q_{[yes-no]}$ morpheme is appended after the matrix verb yielding matrix yes-no questions. I argue in the next chapter that both $Q_{[yes-no]}$ and $Q_{[wh]}$ are in complementary distribution, the position of the overt $Q_{[yes-no]}$ morpheme suggest that ForceP should precede FinP.

(ii)   kʰáw   rúː   **máy** [CP **wâː** [CP kʰray   ʔàːn náŋsɨ̆ː yùː]]

        he   *know* $Q_{[yes-no]}$ *comp* *VARIABLE. +HUMAN*   *read* *book* *prog*

        Did he know who was reading the book?

Like its English counterpart, the Thai verb *rú:* 'know' selects for either a [+wh] or a [–wh] complement. The presence of (covert) $Q_{[wh]}$ in the embedded C yields the construal in (27a-i), while the presence of (covert) $Q_{[wh]}$ in the matrix C yields the construal in (27a-ii). The latter reading predictably arises when the complement of *rú:* 'know' is [–wh]. That this verb can introduce a [–wh] complement is confirmed by the examples in (27b-c), which show that [–wh] NP and CP complements are possible.

(27)   a.   kʰáw   rú: [CP wâ: [CP **kʰray**   ʔà:n   náŋsɨ̌:]

          he   know   comp   VARIABLE. +HUMAN read   book

     = (i) He knew who read the book.

     = (ii) Who did he know read the book?

       b.   kʰáw   rú: [NP kʰwa:mciŋ]

          he   know   truth

          He knew the truth.

       c.   kʰáw   rú: [CP wâ: [IP Nít   ʔà:n   náŋsɨ̌:]

          he   know   comp   read   book

          He knew that Nit read the book.

The verb *kʰit* 'think', on the other hand, selects for only [–wh] complement CPs, (28a). It prohibits NP complements, (28b), as well as embedded wh-questions (28c-i). In (28c-i), because the verb 'think' does not select embedded wh-question, the embedded wh-question construal is not possible. However, the matrix wh-questions remains available, as (28c-ii), because there is always the possibility of howing a covert $Q_{[wh]}$ in the matrix clause.

(28)   a.   kʰáw   kʰít   [CP wâ: [IP Nít   ʔà:n   náŋsɨ̌:]

          he   think   comp   read   book

          He thought that Nit read the book.

       b.   * kʰáw   kʰít   [DP náŋsɨ̌:]

            he   think   book

            [* He thought the book.]

31

c.   k^{h}áw   k^{h}ít   [$_{CP}$ wâ: [$_{CP}$ **k^{h}ray**   Ɂà:n   náŋsɨ̌:]

he   think   comp   VARIABLE. +–HUMANread book

≠ (i) He thought who read the book.

= (ii) Who did he think read the book?

(29) provides a summary of the selectional restrictions requirement of the verbs behave in Thai.

(29)

	embedded [+wh]	matrix [+wh]
a. t^{h}ǎ:m 'ask'	√	×
b. rú: 'know'	√	√
c. k^{h}ít 'think'	×	√

To sum up, Thai and English show a a parallel behavior in how verbs select their complements and both languages have a covert $Q_{[wh]}$ in embedded [+wh] clauses. The data above supports the claim that there is a covert $Q_{[wh]}$ in Thai, and that this covert $Q_{[wh]}$ occurs in both matrix and embedded clauses.

2.4 Matching the $Q_{[wh]}$ probe

In the previous section, I motivated my claim that there is a covert $Q_{[wh]}$. In this section I argue that the goal in Thai is a variable underspecified for a wh-feature, and it matches in feature with this covert $Q_{[wh]}$ as the probe.

2.4.1 Deriving the wh-construal

A key claim of the present analysis is that in-situ expressions that are found in wh-constructions are not inherently specified for wh-features. Rather, as a variable, the interpretation of the in-situ expression is constrained by the operator that c-commands it. For example, in (30), it is the abstract $Q_{[wh]}$ in C that determines the wh-construal of the in-situ expression *k^{h}ray* in object position.

(30)   *kʰray* AS IN-SITU WH-OBJECT

Nít hěn   **[kʰray]**

      see   *VARIABLE. +HUMAN*

Who did Nit see?

Evidence in favor of analyzing *kʰray* as a variable comes from the fact that its interpretations are constrained by the feature of the probe it is copied onto. By copying the [wh] feature of the abstract Q probe, *kʰray* gets a wh-construal. By copying the [Neg] feature of the negative probe, *kʰray* is interpreted as a negative polarity item, (31). And by copying the [polarity] feature of the yes-no question marker, *kʰray* is interpreted as an existential polarity item, (32).

(31)   *kʰray* AS NEGATIVE POLARITY ITEM (NPI)

Nít   mây   hěn   **[kʰray]**

      neg   *see*   *VARIABLE. +HUMAN*

Nit did not see anyone.

(32)   *kʰray* AS IN EXISTENTIAL POLARITY ITEM (EPI)

Nít   hěn   **[kʰray]**   máy

      see   *VARIABLE. +HUMAN* $Q_{[polarity]}$

Did Nit see someone?

These data establish that the in-situ expression is a variable, i.e. it is not inherently specifed for wh-features (in contrast to English *who*), for negation (in contrast to English *nobody*) or for existential force (in contrast to English *someone*).

2.4.2 The goal as an underspecified variable

Regardless of whether variable expressions are construed as interrogatives, as negative polarity items, or as existential polarity items, their morphological composition is invariant. This is illustrated in (33) for the four main dialects of the Thai language, namely the Standard, Southern, Northeastern, and Northern variants.

(33) INVENTORY OF VARIABLE EXPRESSIONS IN DIALECTS OF THAI

FEATURE MAKE-UP	CONSTRUAL	Standard	Southern	Northeastern	Northern
[+human]	Who, anyone, someone	kʰ-ray	kʰ-râmy	pʰ-ăy	pʰ-ăy
[−human]	what, anything, something	ʔa-ray	(ʔay)-ráy	(ʔi)-yăŋ	ʔa-yăŋ
[+location]	where, anywhere, somewhere	(tʰîː)-năy	(tʰîː)-náy	săy or mɔ̀ŋ-dăy	tí-náy
[+time]	when, anytime, sometime	mîːa-ray	mîːa-ráy	mîː-dăy	mîː-dăy
[+reason]	why, any reason, some reason	tʰam-may	Sáy	hét-yăŋ	yá-yăŋ
[+way]	How, anyhow, somehow	yàːŋ-ray or(yaŋ)-ŋay	tʰam-pʰrîː or (yaŋ)-ráy	caŋ- dăy	ca-day

(33) reveals that all variable expressions in Thai are composed of two morphemes. They all share the same second morpheme, which is some form of –*(X)ay*: -*ay*, -*ray*, -*nay*, -*day*, -*may*, -*nay*. We have already established that these [μ-*(X)ay*] forms have the status of variable expressions that are underspecified for a feature. In terms of their morphosyntax, they are composed of two features: F1 and F2. Specifically, the first morpheme spells out the relevant F2 features, and I propose that the invariant second morpheme –*(X)ay* instantiates the variable underspecified for F1 feature, as in (34).

(34) GENERAL FORM OF THAI VARIABLE EXPRESSIONS

　　[[F2] [F1 μ *(X)ay*]]

I now illustrate how the morphosyntactic analysis in (34) accounts for the surface forms of Thai variable expressions. Consider first the elements which instantiate the F2 [+human] and [−human] values; they are analyzed as (35) and (36) respectively.

(35)　　　　[F2 [+HUMAN] [F1 μ *(X)ay*]]

a.　**kʰ-ray**　　　　　　　Standard

b.　**kʰ-râmy**　　　　　　Southern

c.　**pʰ-ăy**　　　　　　　Northeastern

d.　**pʰ-ăy**　　　　　　　Northern

　　'who, anyone, someone'

34

(36)　　　　[F2 [−HUMAN] [F1 μ *(X)ay*]]

a.　**ʔa**-ray　　　　　　　　Standard

b.　**(ʔay)**-ráy　　　　　　　Southern

c.　**(ʔi)**-yăŋ　　　　　　　Northeastern

d.　**ʔa**-yăŋ　　　　　　　Northern

　　'what, anything, something'

The F2 of locative and temporal variables are the [+place] and [+time] features, in which the morphemes can occur independently as prepositions (e.g. *tʰîː talàːt 'at market'* or *mîːa cháːw 'at morning'*).

(37)　　　　[F2 [p at.place] [F1 μ *(X)ay*]]

a.　**(tʰîː)**-năy　　　　　　　Standard

b.　**(tʰîː)**-náy　　　　　　　Southern

c.　săy or **mɔ̀ŋ**-dăy　　　　Northeastern

d.　**tí**-náy　　　　　　　Northern

　　'where, anywhere, somewhere'

(38)　　　　[F2 [p at.time] [F1 μ *(X)ay*]]

a.　**mîːa**-ray　　　　　　　Standard

b.　**mîːa**-ráy　　　　　　　Southern

c.　**mîː**-dăy　　　　　　　Northeastern

d.　**mîː**-dăy　　　　　　　Northern

　　'when, anytime, sometime'

The F2 of wh-rationale and wh-manner are [+reason] and [+way] respectively. The first morpheme of rational variable-expressions both variables can occur independently as a verb, while the first morpheme of manner expressions can occur independently.

(39)   [F2 [V do.reason] [F1 μ *(X)ay*]]

a. **tʰam**-may   Standard

b. **s-áy**   Southern

c. **hét-yăŋ**   Northeastern

d. **yá-yăŋ**   Northern

'why, any reason, some reason'

(40)   [F2 [N way] [F1 μ *(X)ay*]]

a. **yàːŋ**-ray or (yaŋ)-ŋay   Standard

b. **(yaŋ)-ráy**[8]   Southern

c. **caŋ**- dăy   Northeastern

d. **ca**-day   Northern

'how, anyhow, somehow'

The proposed analysis is supported by morphosyntactic evidence above that, in Thai the goal has two components: the first is a semantic constant (+human, –human, +place, +time, +reason, +way); the second component is the underspecified variable *–(x)ay*.

2.5 The structural properties of the probe-goal relation

In the previous section I introduced the claim that the wh-construal is constrained by probe-goal relation. In this section, I argue for a non-movement analysis of the probe-goal relation. That is, the probe-goal relation is established via Match without Move. In Thai, the probe $Q_{[wh]}$ is based-generated in C, c-commanding all wh-variables in the clause. The position of the probe predictably interacts with the Matching relation. This accounts for the lack of asymmetry between wh-subject and wh-object (with respect to how variables are construed in both positions and also the lack of asymmetry between wh in-situ arguments and wh in-situ adjuncts with respect to the absence of island effects).

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[8] Another way to say 'how' in the southern dialect is *tʰam-pʰrɨː* which literally means 'do how'.

2.5.1 The lack of an asymmetry between wh-subjects and wh-objects

Variable expressions are structurally matched with the feature of the probe is covert $Q_{[wh]}$ operator in C. This predicts that there should not be an asymmetry between wh-subjects and wh-objects because the goal in both positions is in the domain of the $Q_{[wh]}$ probe in C.

WH-SUBJECT

(41)   a.   **[probe: Q** [wh] **[goal: [μ]** [verb object]]]

       a'   **[probe: Q** [wh] **[goal: [wh]** [verb object]]]

WH-OBJECT

       b.   **[probe: Q** [wh] [subject verb **[goal: [μ]**]]]

       b'   **[probe: Q** [wh] [subject verb **[goal: [wh]**]]]

This prediction is borne out, as we see in (42).

(42)   a.   **[kʰray]**   hĕn   Nít

             VARIABLE. +HUMAN   *see*

             Who saw Nit?

       b.   Nít   hĕn   **[kʰray]**

                  see   *VARIABLE. +HUMAN*

             Who did Nit see?

The goal matches in feature with the closest probe (a covert $Q_{[wh]}$) and is in the c-command domain of the probe.

2.5.2 Long-distance probe-goal relation

In the previous section, I illustrated the probe-goal relation for contexts where both the probe and the goal are contained in the same clause. In this section, I consider long-distance probe-goal relations where the probe is in a matrix C, while the goal is in an embedded clause. I then argue that the present analysis predicts no island effects anywhere in Thai.

Examples of long-distance probe-goal relations are given below. All wh-expressions in embedded clauses—wh-subjects (43), wh-objects (44), wh-indirect objects (45) and wh-possessors (46)— only allow matrix wh-construals.

WH-SUBJECT

(43) John   kʰìt   wâ: [kʰray]   sɨ́:   năŋsɨ̌: ma:

      think   comp   VARIABLE. +HUMAN   buy   book   come

Who did John think bought a book?

WH-OBJECT

(44) John   kʰìt   wâ: Nít   sɨ́:   [ʔaray]   ma:

      think   comp   buy   VARIABLE. –HUMAN   come

lit = John thought Nit bought what.

What did John think Nit bought?

WH-INDIRECT OBJECT

(45) John   kʰìt   wâ: Nít   hây   năŋsɨ̌: [kʰray]

      think   comp   give   book   VARIABLE. +HUMAN

lit = John thought Nit gave a book to whom.

Whom did John think Nit gave a book to?

WH-POSSESSOR

(46) John   kʰìt   wâ: Nít   ʔàːn   năŋsɨ̌: kʰɔ̌ːŋ   [kʰray]

      think   comp   read   book   of   VARIABLE. +HUMAN

lit = John thought Nit read a book of who.

Whose book did John think Nit read?

We have already seen in section 2.2.2 that, in Thai, the verb 'think' selects exclusively for [-wh] complements. Since the verb 'think' does not select embedded wh-questions, an embedded wh-construal is not possible. One question that arises is how the goal in (43-46) gets a matrix wh-construal. It is the covert $Q_{[wh]}$ probe in the matrix clause that makes the matrix wh-construal possible. The underspecified goal in the embedded clause looks for a probe to match in [wh] feature; in this case, it is the matrix $Q_{[wh]}$. A key claim of the present analysis is that such long-distance probe-goal relations are possible as long as no other operator intervenes.

2.5.3 No island effects with wh in-situ arguments

The present analysis correctly predicts an absence of island effects. It also correctly derives the absence of asymmetry between wh in-situ arguments and wh-adjuncts (see section 2.5.4) with respect to island effects[9].

The data given from (47) through (49) show that wh in-situ arguments are able to occur in any island without creating island effects. Because the probe $Q_{[wh]}$ is base-generated in the matrix C, the goal copies the [wh] feature from the probe thereby satisfying Match. Note that such long-distance probe-goal relations allow the goal to occur in an island.

If the goal were to undergo covert wh-movement from a relative clause island, we would expect (47) to be ungrammatical. However, (47) is a grammatical sentence. This is consistent with the claim that there is no covert wh-movement of the goal in Thai.

RELATIVE CLAUSE ISLAND

(47) Q: kʰun cʰɔ̂ːp [NP pleːŋ tʰîː [CP **kʰray** rɔ́ːŋ]]

      you like song comp VARIABLE. +HUMAN sing

      Who did you like the song such that x sang?

    A: Britney Spears

If there were covert wh-movement, then extraction of the goal from a sentential subject island is expected to be ungrammatical. However, (48) is well-formed with the goal inside the island

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[9] Note that the term "island" is used for ease of exposition. No node is assumed to be a "barrier" intrinsically.

matching the [wh] feature of the probe base-generated in the matrix C. This suggests that no covert movement of the goal takes place. The goal matches in feature with the probe through a long-distance relation.

(48)   SENTENTIAL SUBJECT ISLAND

Q: [NP karn[10]   tʰîː [IP Nít   mân   kàp   **kʰray**]] tʰamhây mɛ̂ː kʰɔ́ːŋ Nít   mây   pɔːcay

   nom   comp engage with VARIABLE. +−HUMAN cause   mother of neg   please

   That Nit got engaged with who upset his mother.

A: John

If there were covert wh-movement, it would not be possible for the goal to move out of an adjunct island. However, (50) is a grammatical sentence having the goal take scope outside the island. This supports the claim that the probe $Q_{[wh]}$ is base-generated high up in the clause, and there is no covert movement. The probe-goal relation is only mediated by Match.

ADJUNCT ISLAND

(49)   Q: kʰáwᵢ   tʰùːk   lâyʔɔ̀ːk [pʰrɔ́ʔ   (kʰáwᵢ)   kʰamoːy   **ʔaray**]

      he   pass   fire   because(he)   steal   VARIABLE. −HUMAN

      What was he fired because he stole?

   A: ŋən

         Money

Now let us consider a wh-island in (50). There appears to be a wh-island effect in Thai: the wh-island prevents the wh-expression *ʔaray* 'what' from being to be construed as questioning an embedded clause as shown in (50-ii). The only available interpretation in (50) is yes-no matrix question, where the verb 'know' takes [+wh] complement, as in (50-i).

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[6] Sentential nominalizer and complementizer are optional.

(50) WH-ISLAND[11]

  Q: kʰun rú: **máy**[12] wâ: Dang hěn **ʔaray**

    you *know* *yes-no* *comp* *see* *VARIABLE. –HUMAN*

  = (i) Do you know what Dang saw?

  ≠ (ii)What do you know whether Dang saw?

  A: rú:

   know

  Yes, I do.

The proposed analysis predicts no island effects. (50) seems to contradict such claim. However, I show schematically below in (51) that my analysis predicts what looks like a wh-island effect in (50). Recall that the verb 'know' takes a [+wh] or a [-wh] complement. We expect that the presence of the probe in the embedded C is the closest probe where the goal matches (by feature copying) in [wh] feature yielding wh-embedded scope construal in (50-i). The reason that wh-matrix scope construal in (51-ii) is not available is because the goal cannot skip the closest c-command probe to agree with the probe in the matrix C due to locality conditions.

(51) a. [IP Subject Q$_{[yes-no]}$ Verb [CP **Q[+wh]** [IP Subject Verb [**variable**]]]]

   b. [IP Subject **Q**$_{[yes-no]}$ Verb [CP Q[–wh] [IP Subject Verb [**variable**]]]]

---

[11] Andrew Simpson pointed out the data in (i) as a wh-island effect example because (i) cannot have a matrix wh-construal.

(i) kʰáw rú: kʰray sɨ: ʔaray
  he *know* *who* *buy* *what*
 = He knew who bought what.
 ≠ What did he know who bought?

The fact that (i) cannot have a matrix wh-construal suggests that there is a wh-island effect in Thai, just as in Japanese. I leave this for future research.

[12] See chapter 3 for a detailed discussion of the internal structure of the yes-no marker *máy*.

This example illustrates how the goal matches with the closest probe. This data supports my claim that probe-goal relation in Thai is constrained by a locality condition such that the closest c-commanding probe is the one that enters into the probe-goal relation.

Overall, the point of this section was to show that there is no evidence for movement of the goal in Thai. Rather the goal is base-generated and can enter into a long-distance relationship with the probe. And this is supported by the lack of island effects.

2.5.4 No island effects with wh in-situ adjuncts

I have shown that wh-expressions in Thai are in-situ in argument positions—be it subjects, objects, indirect object and possessors. I show, in this section, that wh-adjuncts also occur in their base-generated position and match with the covert probe $Q_{[wh]}$ in the matrix C, the same way wh-arguments do. The proposed analysis predicts that , like wh-arguments, wh-adjuncts will not show island effects. As before, the long-distance probe-goal relation is established through Match. In Thai, wh-adjuncts also occur in the same position as the corresponding non-wh expression in declarative sentences. This is shown in (52) for wh-locative adjuncts, in (53) for wh-temporal adjuncts, and in (54) for wh-manner adjuncts.

(52)   WH-LOCATIVE ADJUNCT

    Q: Nít   sɨ̀ː   waːy   **[(tʰîː) nǎy]**

              buy   *wine*   *VARIABLE. PLACE*

    Where did Nit buy a bottle of wine?

    LOCATIVE ADJUNCT

    A: Nít   sɨ̀ː   waːy   **tʰîː**   **hâːŋ**

              buy   *wine*   *at*   *mall*

    Nit bought it at a mall.

(53)   WH-TEMPORAL ADJUNCT

    Q: Nít   riː ancòp   **[mɨ̂ːarày]**

              graduate   *VARIABLE. TIME*

    When did Nit graduate?

TEMPORAL ADJUNCT

A: Nít   ri:ancòp   **mîːa   piː   tʰîːlǽːw**

       graduate   *at*   *year*   *last*

Nit graduated last year.

(54) WH-MANNER ADJUNCT

Q: Nít   kʰàp   rót   pen   **[yaŋŋay]**

       drive   *car*   *be*   *VARIABLE. WAY*

How did Nit drive?

MANNER ADJUNCT

A: Nít   kʰàp   rót   **rew**

       drive   *car*   *fast*

Nit drove fast.

The examples above establish that all wh-expressions in Thai occur in their base-generated position. I assume that wh-adjuncts are right-adjoined to IP corresponding to their surface forms.

(55) [CP Q[WH] [IP SUBJECT VERB [IP WH-ADJUNCT]]]

If the probe Q[wh] is base-generated in the matrix C, this predicts that wh-adjuncts should be able to occur inside an island without creating any island effects, the same way wh in-situ arguments do. The data turn out to be just as predicted.

The example (56)[13] shows a wh-locative adjunct in a relative clause island. Crucially, a matrix wh-reading is possible.

If there were covert wh-movement, the sentence should not allow a matrix wh-reading because the probe Q[wh] would have to move out of an island to the matrix C.

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[13] When wh-adjuncts are in the island, as in (56), long answer-forms seem to be required. Because the attached sites can be ambiguous, the verbs in the matrix or embedded clause need to be included in the answer to disambiguate the two readings: a matrix or an embedded wh-construal.

We would expect the sentence to be ungrammatical. However, (57) is grammatical. This suggests that no covert movement of the goal occurs. Instead, the goal matches in feature with the probe through a long-distance probe-goal relation.

(56) RELATIVE CLAUSE ISLAND: WH-LOCATIVE ADJUNCT

    a.   Q: kʰun   cə: [NP krapăw [CP tʰî: Nít   tʰamhă:y]]   **tʰî:năy**

          you   *find*   *purse*   *comp*   *lose VARIABLE.PLACE*

          Where did Nit lose her purse that you found?

          A: tʰamhă:y   bon   rótme:

          lost   *on*   *bus*

          (he) lost (it) on the bus.

Similarly, a wh-locative adjunct can occur in a sentential subject island. As before the goals matches in the [wh] feature of the probe $Q_{[wh]}$, which lies outside the island. If there were a covert movement of the goal, we would expect (58) to be ungrammatical. However, (58) is a well-formed sentence.

(57) SENTENTIAL SUBJECT ISLAND: WH-LOCATIVE ADJUNCT

    Q: [kʰun mân kàp Nít **tʰî:năy**] tʰamhây mæ̂: Nít kròːt]]

        you *engage* *with* *VARIABLE.PLACE* *cause* *mother* *angry*

        Where did you get engaged to Nit upset Nit's mother?

    A: tʰî: ráːn   ʔaːhăːn

        at   *store*   *food*

        That I got engaged with Nit at a restaurant upset Nit's mother.

Wh-temporal adjuncts show a similar pattern for both relative clause islands and sentential subject islands. If the goal were to move from inside an island, we would expect (58) and (59) to be ungrammatical. However (58) and (59) are well-formed. Therefore, no movement of the goal crosses the islands.

(58) RELATIVE CLAUSE ISLAND: WH-TEMPORAL ADJUNCT

    Q: kʰun   cə: [NP krapăw [CP tʰî: Nít   tʰamhă:y   **mɨ̌:arà}]]**

          you   *find*   *purse*   *comp*   *lose*   *VARIABLE.TIME*

          When did Nit lose her purse that you found?

    A: Nít   tʰamhă:y   mɨ̌:awa:nní:

                  lose   *yesterday*

          Nit lost it yesterday.

(59) SENTENTIAL SUBJECT ISLAND: WH-TEMPORAL ADJUNCT

    Q: [kʰáw klàp tʰɨ̌:ŋ bâ:n **mɨ̌:aràŋ]**   tʰamhây   mæ̂:   krò:t

          he   *come*   *arrive* *home* *VARIABLE.TIME* *cause*   *mother angry*

          When did that he got back upset your mother?

    A: ti: sì:

          at   *four*

          That he came home at 4am upset his mother.

Wh-manner adjuncts show the same pattern as the wh-adjuncts discussed above in that they can be contained inside the islands, as illustrated in (60) for relative clause islands and in (61) for sentential subject islands.

(60) RELATIVE CLAUSE ISLAND: WH-MANNER ADJUNCT

    Q: kʰun   cə: [NP krapăw [CP tʰî: Nít   tʰamhă:y   **yaŋŋay]]**

          you   *find*   *purse*   *comp*   *lose*   *VARIABLE.WAY*

          How did Nit lose the purse that you found?

    A: Nít   pay   lɨ:m   wáy   tʰî: hɔ̌:ŋnám

                  go   *forget*   *at*   *restroom*

          Nit lost (it) at a restroom.

(61) SENTENTIAL SUBJECT ISLAND: WH-MANNER ADJUNCT

Q: [kʰáw kʰàp rót **yaŋŋay**] tʰamhây rót cʰon

he drive car *VARIABLE.WAY* cause car crash

How did that he drive the car cause the car crashed?

A: kʰàp mây rawaŋ

drive neg careful

That (he) drove carelessly cause the car crashed.

All the examples above illustrate a long-distance relation between the probe and goal which parallels the case of wh in-situ arguments. This is consistent with the claim that the relation between the probe and the goal does not involve movement with respect to island effects; rather the goal matches the probe through a long-distance relation. Considering wh in-situ arguments and wh in-situ adjuncts together, the evidence in the section strongly suggests that the syntactic position of the probe $Q_{[wh]}$ in Thai is base-generated in the matrix C.

Notice that I have not yet discussed wh-rationale adjuncts. It is because they behave differently from the rest of the wh-adjuncts. On the one hand, like other adjunct expressions, wh-rational adjuncts can occur in the same position as the corresponding non-wh expression. This is illustrated in (62).

(62) WH-RATIONALE ADJUNCT

Q: Nít la:ʔɔ̀k [**tʰammay**]

quit VARIABLE.REASON

Why did Nit quit?

A: Nít la:ʔɔ̀k **pʰrɔ́ʔ bɨ̀:a**

quit because bore

Nit quit because (she is) bored.

However, wh-rationale adjuncts can occur in embedded clause, as in (63), in which case there may be in-situ (63a), undergo partial movement (63b), or undergo long-distance movement (63c).

(63) WH IN-SITU

    a.   kʰáw   kʰít   wâː   Nít   laːʔɔ̀k   **[tʰammay]**

        he   *think*   *comp*   *quit*   *VARIABLE.REASON*

        Why did you think Nit quit?

INTERMEDIATE SPEC CP

    b.   kʰáw   kʰít   wâː   **[tʰammay]**   Nít   laːʔɔ̀k

        he   *think*   *comp*   *VARIABLE.REASON*   *quit*

        Why did you think Nit quit?

MATRIX SPEC CP

    c.   **[tʰammay]**   kʰáw   kʰít   wâː   Nít   laːʔɔ̀k

        VARIABLE.REASON   *he*   *think*   *comp*   *quit*

        Why did you think Nit quit?

Moreover, wh-rational adjuncts, unlike other adjuncts, appear to be sensitive to island effects, as in (64). (64a) is ungrammatical when wh-rationale adjuncts occurs inside the relative clause island. (64b) also does not allow 'why' to extract out of the relative clause island. (64c), on the contrary, is grammatical but it only has a wh-matrix construal.

(64) RELATIVE CLAUSE ISLAND: WH-RATIONALE ADJUNCT

    a. * kʰun   cʰɔ̀ːp   [NP năŋsɨ̌ː   [CP tʰîː   Nít   kʰɨ̀aːn   **tʰammay**]]

        you   *like*   *book*   *comp*   *write*   *VARIABLE.REASON*

        [Why did Nit write the book that you liked?]

    b. * kʰun   cʰɔ̀ːp   **tʰammay**ᵢ   [NP năŋsɨ̌ː   [CP tʰîː   Nít   kʰɨ̀aːn   tᵢ]]

        you   *like*   *VARIABLE.REASON*   *book*   *comp*   *write*

        [Why did Nit write the book that you liked?]

    c.   **[tʰammay**ᵢ   kʰun   cʰɔ̀ːp tᵢ [NP năŋsɨ̌ː   [CP tʰîː   Nít   kʰɨ̀aːn   tᵢ]]

        VARIABLE.REASON you   *like*   *book*   *comp*   *write*

    = (i)   Why did you like the book that Nit wrote?

    ≠ (ii)   Why did Nit write the book that you liked?

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The data in (64) contradicts what we saw earlier for other adjunct expressions where the probe-goal relation is established via Match rather than Move. Taken together, (63) and (64) show that wh-rationale adjuncts in fact undergo overt movement, as evidenced by their sensitivity to island effects. Two questions arise: (i) 'what triggers the movement?', (ii) 'why is Move only specific to wh-rationale adjuncts?' Although I do not discuss wh-adjuncts in this dissertation, it is likely that an EPP-feature requires the goal to move to the specifier of CP. But why does EPP only force the movement of wh-rationale adjuncts? This is beyond the scope of this dissertation. I leave this area for future research.

2.6 The interpretive properties of the probe-goal relation

In this section, I discuss the interpretive properties of Thai wh in-situ construction, as they relate to multiple wh-questions and to wh-questions that contain quantifiers (wh-quantifier interaction). I show that the present analysis (i.e. Match without Move) correctly accounts for the absence of pair-list readings[14] in Thai. I have already argued that Thai wh-construction contain an abstract $Q_{[wh]}$ probe that is base-generated in C. By base-generating the probe in C, we predict that multiple wh-questions cannot have a pair-list readings in Thai because both goals are necessarily in the scope of $Q_{[wh]}$. This accounts for the fact that Thai multiple wh-questions only allow a single-pair answer reading.

Using the same generalization on multiple wh-questions with questions that contain quantifiers, we also correctly predict that when $Q_{[wh]}$ takes scope over both a quantifier and a variable, a list answer is not possible. The present analysis correctly accounts for the fact that Thai only allows single answers in wh-questions that contain quantifiers.

2.6.1 Multiple wh-questions

The proposed analysis correctly derives the interpretive correlates of Thai multiple wh-questions which are consistent with Hagstrom (1998)'s generalizations on how single-pair and pair-list readings are derived in multiple wh-questions. His generalizations are as follows.

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[14] A multiple wh-question can be answered with a single-pair answer, answered by a single proposition referred as 'the single-pair reading' or a list of pair referred as 'the pair-list reading'.

(65) MULTIPLE WH-QUESTIONS: SINGLE-PAIR READING

A multiple wh-question gets a single-pair reading when all wh-expressions are in the scope of $Q_{[wh]}$ (adapted from Hagstrom 1998:72).

[PROBE: $Q_{[wh]}$ [**WH-SUBJECT** VERB **WH-OBJECT**]]

(66) MULTIPLE WH-QUESTIONS: PAIR-LIST READING

A multiple wh-question gets a pair-list reading when not all wh-expressions are in the scope of $Q_{[wh]}$ (adapted from Hagstrom 1998: 72).

[**WH-OBJECT**$_i$ [PROBE: $Q_{[wh]}$ [**WH-SUBJECT** VERB t_i]]

Adopting Hagstrom's generalizations, this predicts that a pair-list reading should be unavailable in Thai because both goals are in the scope of the probe $Q_{[wh]}$ generated in C, i.e. all wh-arguments are always in the scope of $Q_{[wh]}$. Thus, the structure of Thai multiple wh-questions predictably satisfy the conditions for a single-pair reading only.

(67) THAI MULTIPLE WH-QUESTION: SINGLE PAIR READING ONLY

[PROBE: $Q_{[wh]}$ [**VARIABLE** VERB **VARIABLE**]]

The data in (68) turns out just as predicted. (68) only has a single-pair answer reading. **A pair-list reading that asks for specific things to be exhaustively paired with people is not available.**

(68) √ SINGLE-PAIR READING

* PAIR-LIST READING

Q: **[kʰray]** sɨ: **[ʔaray]** ma:

VARIABLE.+HUMAN   *buy*   *VARIABLE. – HUMAN*   *come*

Who bought what?

A: Nít sɨ: kʰanǒm ˙ ma:

buy   *snack*   *come*

Nit bought some snack.

A: Nít sɨ: pʰǒnlamáy cí:ap kʰɔ́:ŋwǎ:n Korn kʰɨ́:aŋdɨ:m

buy   *fruit*   *dessert*   *beverage*

Nit bought some fruits, Ciap bought some desserts and Korn bought beverages.

The probe-goal correctly predicts that only single-pair answers are possible with multiple wh-questions in Thai. This is further supported by the behavior of multiple wh-questions when they are inside islands. Again, we predict that pair-list readings be unavailable, as confirmed by (69-71). The data below support the claim that there is no covert movement of the probe. The probe and goal relation is entered via Match (without Move). If there were a covert movement, we would expect such examples to be ungrammatical because the goal would move out of an island (i.e. a relative clause island, a sentential subject island and adjunct island). However, all the examples below are grammatical, crucially only the single-pair reading is available, as predicted.

(69) √ SINGLE-PAIR READING: RELATIVE CLAUSE ISLAND

* PAIR-LIST READING

Q: kʰun cʰɔ́:p [NP ple:ŋ tʰî: [IP **kʰray** rɔ́:ŋ **tʰammay**]]

you   *like*   *song*   *comp*   *VARIABLE.+HUMAN*   *sing*   *VARIABLE. REASON*

What is the reason such that you liked the song x sang?

A: cʰán cʰɔ́:p ple:ŋ tʰî: Satiŋ rɔ́:ŋ pʰrɔ́ʔ (kʰáw) mi: ʔèkkalák cʰapʰɔ́ʔ tua

I   *like*   *song comp*   *sing*   *because (he)*   *has*   *character*   *specially*   *self*

I liked the song that Sting sang because he has a unique style of his own.

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(70) √ SINGLE-PAIR READING: SENTENTIAL SUBJECT ISLAND

      * PAIR-LIST READING

Q: [NP karn tʰîː [IP **kʰray** tʰalɔ́ʔ kàp **kʰray** kan]] tʰamhây Nít kròːt

nom compVARIABLE.+HUMAN fight with VARIABLE.+HUMAN dist cause angry

lit = Who fought with who made Nit angry?

Who fighting with who made Nit angry?

A: Níŋ   tʰalɔ́ʔ kàp Rɔːn tʰamhây   Nít   kròːt

            fight   *with*   *cause*   *angry*

lit = Ning fought with Ron made Nit angry.

Ning fighting with Ron made Nit angry.

(71) √ SINGLE-PAIR READING: ADJUNCT ISLAND

      * PAIR-LIST READING

Q: [IP Nít kròːt [IP pʰrɔ́ʔ Níŋ kʰɔ̌ː hây **kʰray**   sɨ́ː **ʔaray**   kan]]

angry because   ask give VARIABLE.+HUMAN buy VARIABLE.+HUMAN dist

Nit was angry because Ning asked who to buy what?

A: Nít kròːt   pʰrɔ́ʔ Níŋ   kʰɔ̌ː hây Rɔːn sɨ́ː burìː

    angry   *because*   *ask* *give*   *buy* *cigarette*

Nit was angry because Ning asked Ron to buy a cigarette.

To conclude, the present analysis does not allow a pair-list interpretation because wh-expressions are always in the scope of the probe. What this section showed us is that my analysis correctly predicts that multiple wh-questions in Thai can only receive a single-pair reading. And this supports the claim that no movement of the goal ever takes place in Thai. The goal matches in feature with the probe in the matrix C. This explains why no pair-list reading is available because all wh-expressions are in the scope of the $Q_{[wh]}$. In the next section, I turn to wh-constructions that contain both a wh-expression and a quantifier. I show that the present analysis also makes the right prediction that only single answers are possible when wh-expressions and quantifiers interact.

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2.6.2 Wh-Quantifier interaction

In this section, I look at scope interpretation between wh-expressions and quantifiers in Thai. How do they interact under the assumption that the probe $Q_{[wh]}$ is base-generated? The claim that Hagstrom makes is that the distribution of a single answer and list answer are derived in quantifier/wh-questions of this kind have a structure very much like those of multiple wh-questions.

(72) WH-QUANTIFIER INTERACTION: SINGLE ANSWER

A wh-construction that contains a quantifier gets a single answer when both question and quantifier are in the scope of $Q_{[wh]}$.

(73) WH-QUANTIFIER INTERACTION: LIST ANSWER

A wh-construction that contains a quantifier gets a list answer when the quantifier is not in the scope of $Q_{[wh]}$

Consider how the probe-goal relation holds in Thai under the system Hagstrom proposes. When the universal quantifier is a subject and the wh-expression is an object, observe that only a single answer is possible (74). Similarly, only a single answer is available in (75) where the wh-expression is a subject and the universal quantifier is an object.

(74) √ SINGLE ANSWER
   * LIST ANSWER

Q:	tʰúkkʰon	sɨ́:	[ʔaray]	ma:
	every-cl	*buy*	*VARIABLE.–HUMAN*	*come*

   What did everyone buy?

A:	tʰúkkʰon	sɨ́:	kʰɨ́:aŋdɨ:m	ma:
	every-cl	*buy*	*beverage*	*come*

   Everyone bought beverages.

# A:	Nít	sɨ́:	pʰǒnlamáy	cíap	kʰɔ́:ŋwǎ:n	Korn	kʰɨ́:aŋdɨ:m
		buy	*fruit*		*dessert*		*beverage*

   Nit bought fruits, Jiap bought desserts, Korn bought beverages.

(75) √ SINGLE ANSWER

   * LIST ANSWER

   Q: [kʰray]   sɨ: kʰɔ́ːŋ   tʰúkyàŋ

         VARIABLE.+HUMAN   *buy*   *thing*   *every-cl*

         Who bought everything?

   A: Nít

The present analysis correctly accounts for the fact that only the single answer is available. The single-answer reading is associated with a structure where the probe Q$_{[wh]}$ takes scope over both the wh-expression and the universal quantifier, as illustrated in (76).

(76) SINGLE ANSWER

   a.   [CP probe : Q$_{|WH|}$ [IP ∀ [VP VERB **WH-OBJECT**]]]

   b.   [CP probe : Q$_{|WH|}$ [IP **WH-SUBJECT** [VP VERB ∀]]]

The lack of asymmetry between the wh-object/QP-subject and wh-subject/QP-object with respect to ambiguity/non-ambiguity in Thai is expected under a non-movement probe-goal relation, consistent with Hagstrom's generalization of how single-answer vs. list-answer readings can be derived.

Now let us consider wh-quantifier interaction in relation to islands. In (77), the quantifier and wh-expression both are inside the adjunct island and it only gives rise to a single answer reading. If we were to assume that the quantifier undergoes covert movement, we would expect either a list-answer reading or ungrammaticality assuming that movement in general is island sensitive[15]. But this is not the case. (77) does not show an ambiguity and is a well-formed sentence. Therefore, I conclude that neither quantifiers nor wh-expressions not undergo covert movement. They are in the scope of the probe Q$_{[wh]}$ in C, and predictably allow only a single-answer reading to the question.

---

[15] It has been observed in the syntactic literature that a scopal ambiguity arises in a wh-construction where they contain both a wh-expression and a quantifier, in particular, when the wh-expression is a object and a quantifier is an subject (e.g. English: May 1985, Chinese: Aoun and Li 1993). They are ambiguous in that there are two possible readings: single and list answer reading. To disambiguate the scope distinction between the two readings, the quantifier undergoes covert movement (quantifier raising) to have scope over the Q allowing the list answer reading.

(77) √ SINGLE ANSWER

    * LIST ANSWER

Q: kʰáw   krò:t pʰrɔ̂ʔ Nít kʰɔ̌: hây   **tʰúkkʰon** sɨ́: **[ʔaray]**

he   angry because ask give every-cl buy VARIABLE.+HUMAN

What is he angry because Nit asked everyone to buy?

A: kʰáw   krò:t pʰrɔ̂ʔ Nít   kʰɔ̌: hây **tʰúkkʰon**   sɨ́:   wa:y

he   angry because   ask give every-cl   buy wine

He is angry because Nit asked everyone to buy wine.

\#   A: kʰáw   krò:t pʰrɔ̂ʔ Nít   kʰɔ̌: hây Ník sɨ́: pʰɔ̌nlamáy

he   angry because   ask give   buy fruit

cíːap   kʰɔ̌:ŋwǎːn   Korn kʰɨ́ːaŋdɨːm

dessert   beverage

He is angry because Nit asked Nick to buy fruits, Jiap desserts, Korn beverages.

The following example is provided in support of my claim that no quantifier raising (no QR) takes place in Thai. Notice that in (78), the universal quantifier is outside the adjunct island. We would not expect any island effects, even though it raises. If the quantifier were to raise to have scope over $Q_{[wh]}$, we expect an ambiguity in that both single-answer and list-answer readings should be possible. (78) however only has single-answer reading. This confirms that quantifiers in Thai do not undergo QR. Since quantifers do not raise, the quantifier and the wh-expression are both in the domain of the probe $Q_{[wh]}$ in the matrix C. This is why the single-answer reading is the only available. We see that proposed analysis correctly predicts the absence of such ambiguity.

(78) √ SINGLE ANSWER

    * LIST ANSWER

Q: **tʰúkkʰon** krò:t pʰrɔ̂ʔ   Nít kʰɔ̌: hây kʰáw sɨ́: **[ʔaray]**

every-cl angry because   ask give he buy VARIABLE.+HUMAN

What is everyone angry because Nit asked them to buy?

A: tʰúkkʰon   kròːt   pʰrɔ́ʔ   Nít   kʰɔ́ː   hây   kʰáw   síː   lâw

every-cl   angry   because   ask   give   he   buy   alcohol

Everyone is angry because Nit asked them to buy alcohol.

To summarize, Thai fits into the system Hagstrom (1998) has developed. These examples have shown that using Hagstrom's generalization regarding the distribution of single-answer versus list-answer readings is compatible with my claim that the goal does not undergo covert movement. Rather, the goal matches in feature with the probe in the matrix C without Move.

2.6.3 Some complications

This section considers how pair-list answer readings arise in Thai. We see, in (79), that Thai requires the overt distributive operator *kan* to give rise to such readings. In fact, it can only receive a pair-list answer where each person must pair with an object they purchase[16].

(79)   *   SINGLE-PAIR READING

√   PAIR-LIST READING

Q: [kʰray]   síː   [ʔaray]   kan   maː

VARIABLE.+HUMAN   buy   VARIABLE.−HUMAN   dist   come

Who bought what?

\#   A: Nít   síː   kʰanǒm   maː

buy   snack   come

Nit bought some snack.

---

[16] D-linked wh-expressions in multiple wh-questions only allow the pair-list reading.

Q: lûːk   kʰon   nǎy   cʰɔ́ːp   kin   ʔahǎːn   bæ̀ːp   nǎy
child   cl   variable like   eat   food   kind   variable
Which child likes to eat which kind of food?

A: Nít   cʰɔ́ːp   kin   kʰanǒm cíːap   kʰɔ́ːŋwǎːn   Korn   pʰǒnlamáy
like   eat   snack   dessert   fruit
Nit likes to eat snacks, ciap likes to eat desserts, Korn likes to eat fruits.

Following Hagstrom (1998), pair-list readings should not be possible because both D-linked wh-expressions are in the scope of $Q_{[wh]}$. This suggests that pair-list readings will result just as long as the D-linked wh-expressions can be understood to be plural sets, and it may not have anything to do with being under the scope of $Q_{[wh]}$, contra with Hagstrom's generalization. The difference between D-linked and bare wh-expressions remains to be accounted for.

A: Nít sɨ́ː pʰɔ̌nlamáy cìːap kʰɔ̌ːŋwǎːn Korn kʰɨ̌ːaŋdɨ́ːm

    bring   *fruit*   *dessert*   *beverage*

    Nit bought some fruits, Ciap bought some desserts and Korn bought beverages.

Wh-expressions in (79) only have a pair-list answer reading (i.e. plural and distributive readings). It is the morpheme *kan* that gives the reading to (79). *kan* occurs in a wide range of syntactic environments with differing semantic interpretations (e.g. as an adverb equivalent to 'together', as a reciprocal pronoun equivalent to 'each other', as a plural marker or as a distributive marker) Following Stein (1981), I assume that *kan* is a plural and a distributive marker, equivalent to 'all' and 'each' in English. This morpheme takes scope over the entire proposition and gives pair-list readings to 'who' and 'what' such that 'who' and 'what' have more than one member, even though the wh-expressions are in the scope of the $Q_{[wh]}$ probe.

However, the interesting observation is that the pair-list reading that arises with *kan* occurs even when wh-expressions are in the scope of $Q_{[wh]}$. This suggests that wh-expressions in Thai may be inherently singular, as such, they would be compatible only with Hagstrom's generalization on the single-pair reading.

Wh-quantifier interactions show a similar pattern in that in Thai, list-answer readings are derived by appending the distributive marker *kan* adjacent to the wh-object, the same way that pair-list answer readings are derived in multiple wh-questions. *kan* has scope over the universal quantifier and the wh-expression allowing a list-answer to occur as shown in (80).

(80)   * SINGLE ANSWER

      √ LIST ANSWER

      Q: **tʰúkkʰon**   **sɨ́ː**   **[ʔaray]**   **kan**   **maː**

          every-cl   *buy*   *VARIABLE.–HUMAN*   *dist*   *come*

      What did everyone buy?

      A: Nít   sɨ́ː   pʰɔ̌nlamáy cìːap   kʰɔ̌ːŋwǎːn   Korn kʰɨ̌ːaŋdɨ́ːm

                 buy   *fruit*   *dessert*   *beverage*

      Nit bought fruits, Jiap bought dessert, Korn bought beverage.

However, when the quantifier 'each' is used, list answers are allowed even without the distributive marker *kan*. This may be because the quantifier is inherently distributive, while 'everyone' is inherently collective. We saw that this is not predicted by Hagstrom's generalization and this remains to be accounted for. I leave this for future research.

(81) * SINGLE ANSWER

√ LIST ANSWER

Q: **tæ̀ːlakʰon**   sɨ̌ː   **[ʔaray]**   maː

every-cl   *buy*   *VARIABLE.–HUMAN*   *come*

What did each person buy?

A: Nít   sɨ̌ː   pʰǒnlamáy   cíːap   kʰɔ̌ːŋwǎːn   Korn   kʰɨ́ːaŋdɨːm

buy   *fruit*   *dessert*   *beverage*

Nit bought fruits, Jiap bought dessert, Korn bought beverage.

In this chapter, I have presented a non-movement analysis of wh-constructions in Thai and I have considered some of its consequences. I have analyzed the syntactic relation between the operator and the variable in term of the probe-goal relation. The probe-goal relation requires the goal as a variable to seek for the closest probe (an abstract $Q_{[wh]}$) and enter into a Matching relation through feature copying, here a [wh] feature. I have presented evidence for the claim that there is an abstract $Q_{[wh]}$ probe. I have also shown that wh-expressions in Thai are underspecified variables whose construal is constrained by the operator whose domain they occur in. Lastly, I have discussed the two major consequences of my claim that the covert $Q_{[wh]}$ probe is base-generated in C position from where it assigns wh-scope. First, the present analysis correctly predicts the distribution of Thai wh in-situ. Particularly, it derives the absence of an asymmetry between wh-subjects and wh-objects, as well as the absence of an asymmetry between wh in-situ arguments and wh-adjuncts with respect to island effects. Second, its accounts for restrictions on interpretation in multiple wh-questions, as well as in wh-questions that contain a quantifier.

Chapter 3

Variables as polarity items

3.1 Matching probes for polarity

In the previous chapter, I proposed that a wh-construal arises via a probe-goal relation between an invisible $Q_{[wh]}$ (in C) and a variable (in situ). I further argued that the relation between the $Q_{[wh]}$ and the variable does not involve movement, as evidenced by the parallelism between wh-subjects and wh-objects on the one hand, and by the absence of island effects on the other hand. Moreover, base-generating the probe in C correctly predicts that, with multiple wh-questions, only the single-pair reading is available. Finally, we also make the right prediction that only single-answer readings arise in questions that contain wh-words and quantifiers. This is because both the variable and the quantifier are in the scope of the $Q_{[wh]}$ probe.

A central claim of the proposed analysis developed in Chapter 2 is that in-situ wh-expressions are not inherently interrogative. Rather, they are variables that acquire their interrogative force by copying the [wh] feature of a covert Q. This analysis predicts that the same elements which appear in wh-contexts will appear in other contexts, and that their interpretation will be constrained by the operator whose scope they occur in. This prediction is confirmed, in that the same elements that are construed as wh-expressions in wh-contexts have the status of polarity items in other contexts. This chapter explores how the goal (as a variable expression) matches the relevant probe in NPI and EPI environments. In particular, in the context of negation, variable expressions function as Negative Polarity Items (NPIs). NPIs are matched with the [neg] feature on the probe. In a yes-no construction, variables function as Existential Polarity Items (EPIs). EPIs are matched with the [polarity] feature on the probe.

The following examples illustrate how the interpretation of a variable expression such as $k^h ray$ [+human] is contextually determined. In the absence of an overt operator, $k^h ray$ is interpreted as a wh-expression equivalent to 'who', as in (1a). As argued in the previous chapter, the wh-construal reflects the presence of a covert $Q_{[wh]}$ in C. In the presence of negation ($m\hat{a}y$), the variable expression $k^h ray$ is interpreted as a negative polarity item[17] equivalent to 'anyone', as in

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[17] The contexts that license English NPI are found to license Thai EPIs (i.e. yes-no questions, modals). There is no clear-cut distinction between NPIs and EPIs except that EPI 'someone' in Thai have narrower scope than NPIs 'anyone' in English.

(1b). And in the presence of a yes-no question marker (*máy*), the variable expression *kʰray* is interpreted as an existential polarity item equivalent to 'someone', as in (1c).

WH-CONSTRUAL

(1)   a.   Nít   hěn   [kʰray]¹⁸

                    see   *VARIABLE.+human*

            Who did Nit see?

* WH-CONSTRUAL

√ NPI-CONSTRUAL

    b.   Nít   **mây**   duːtʰùːk   [kʰray]

                    neg   *insult*   *VARIABLE. +human*

≠ (i)   **Who** did Nit not insult?

= (ii)   Nit did not insult **anyone**.

* WH-CONSTRUAL

√ EPI-CONSTRUAL

    c.   kʰáw   hěn   [kʰray]   **máy**

                 he   *see*   *VARIABLE. +human* $Q_{[polarity]}$

≠ (i)   **Who** did he see?

= (ii)   Did he see **someone**?

The availability of the NPI and EPI construals with variable expressions is syntactically conditioned. Thus, while the wh-construal is freely available, the NPI/EPI construal shows a subject/non-subject asymmetry. As we have seen in (1), in object position a variable expression such as *kʰray* may have a wh-construal, an NPI- construal or an EPI-construal. In contrast to

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[18] Wh-expressions can also be interpreted as EPI and not being under scope of the probes mentioned. They, however, are accompanied by an overt existential quantifier *baŋ* 'some', in which case, c-command relation does not hold between the probe and the goal.

(i)   Nít   hěn   [kʰray]   baŋkʰon

                 see   *VARIABLE.+human*   *some-cl*

    ≠ **Who** did Nit see?

    = Nit saw **someone**.

(ii)   [kʰray]   baŋkʰon   hěn   Nít

       VARIABLE. +human   *some-cl   see*

    ≠ **Who** saw Nit?

    = **Someone** saw Nit.

this, in subject position *kʰray* only has a wh-construal (2a); the NPI- and EPI-construals are unavailable, (2b-c).

√ WH-CONSTRUAL

(2) a. **[kʰray]** hĕn Nít

variable. +human *see*

Who saw Nit?

√ WH-CONSTRUAL

* NPI-CONSTRUAL

b. **[kʰray]** **mây** cʰɔ̌ːp Nám

variable. +human *neg* *like*

= (i) Who does not like Nam?

≠ (ii) Anyone does not like Nam.

* WH-CONSTRUAL

* EPI-CONSTRUAL

c. ***[kʰray]** hĕn kʰáw **máy**

variable. +human *see* *he* $Q_{[polarity]}$

≠ (i) Who saw him Nam?

≠ (ii) Has someone seen him?

We will see that the interpretation assigned to a variable expression is predictably determined by whether or not the c-command relation holds between the operator (as probe) and the variable expression (as goal). In order to enter a Matching relation, the goal must be in the domain of the probe. Note that the Matching relation is defined through feature identity when the feature of the probe is copied onto the underspecified goal. A domain is defined by the c-command relation. The goal must be c-commanded by the probe in order to be in the domain of the probe. Example (2b) clearly illustrates that the goal (in subject position) is not c-commanded by the negative probe, hence it is not in the domain of the probe. An NPI construal is unavailable. Sections 3.2 and 3.3 examine the details of the subject/object asymmetry with NPI- and EPI-construals in negative and yes-no question contexts.

Another way in which the availability of NPI- and EPI-construals with variable expressions is syntactically conditioned concerns complement/adjunct asymmetries. Recall that a variable expression in complement position (of a matrix clause) may have a wh-, an NPI-, or an EPI-construal, (3). This contrasts with variable expressions in adjunct position, which only have a wh-construal, (4).

√ WH-CONSTRUAL

(3) a.   Nít   hěn   **[kʰray]**

            see   *VARIABLE. +human*

    Who did Nit see?

√ NPI-CONSTRUAL

b.   Nít   **mây**   duːtʰùːk   **[kʰray]**

            neg   *insult*   *VARIABLE. +human*

    Nit did not insult anyone.

√ EPI-CONSTRUAL

c.   kʰáw   hěn   **[kʰray]**   **máy**

        he   *see*   *VARIABLE. +human* $Q_{[polarity]}$

    Has he seen someone?

√ WH-CONSTRUAL

(4) a.   Rɔːn   rɔ́ːŋhâːy   **[tʰammay]**

            cry   *VARIABLE.reason*

    Why did Ron cry?

* NPI-CONSTRUAL

b. * Rɔːn **mây** rɔ́ːŋhâːy **[tʰammay]**

          neg   *cry*   *VARIABLE.reason*

[Ron did not cry for any reason.]

* EPI-CONSTRUAL

c. * Rɔːn rɔ́ːŋhâːy **[tʰammay]** **máy**

          cry   *VARIABLE.reason* $Q_{[polarity]}$

[Did Ron cry for some reason?]

I show that such complement/adjunct asymmetries arise from the interaction of the syntactic position of the probe and goal. The present analysis predicts that manner and reason wh-adverbials never receive an NPI- or EPI-construal because they are not c-commanded by the probe. This follows from the position of the relevant probes: negative *mây* and the yes-no question marker *máy* are generated lower than I and higher than V. This is discussed in section 3.4.

Another way in which NPI- and EPI-construals are syntactically conditioned concerns their distribution in embedded clauses. Depending on the selectional properties of the matrix verb, a variable expression in an embedded clause can have either a wh-construal (5a), an NPI-construal (5b), or an EPI-construal (5c).

√ WH-CONSTRUAL

(5) a. Lék **mây** dây tʰǎːm wâː **[kʰray]** duːtʰùːk Cɔːn

          not   *past*   *ask*   *comp*   *VARIABLE. +human*   *insult*   *John*

    Lek did not ask **who** insulted John.

√ EMBEDDED NPI-CONSTRUAL

b. Lék **mây** kʰít wâː **[kʰray]** duːtʰùːk Cɔːn

          not   *think*   *comp*   *VARIABLE. +human*   *insult*   *John*

    Lek did not think that **anyone** insulted John.

√ EMBEDDED EPI-CONSTRUAL

c.   Lék   kʰít   **máy**   wâː   [kʰray]   duːtʰùːk   Cɔːn

     think   yes-no   comp   VARIABLE. +human   insult   John

     Did Lek think that **someone** insulted John?

Wh-, NPI- and EPI-construals in embedded clauses are a side-effect of locality conditions. I show that the goal and its matching probe are constrained by a locality condition such that the closet c-commanding probe is the one that enters into the probe-goal relation. This is discussed in section 3.5.

3.2 Subject/non-subject asymmetry with NPI-construal

As discussed in the preceding chapter, the proposed analysis correctly predicts that, in wh-contexts, there is no asymmetry between wh-subjects and wh-objects since both goals are in the domain of the probe $Q_{[wh]}$ in C. On the other hand, we expect a subject/non-subject asymmetry in NPI- and EPI-contexts: wh-subjects are outside the c-command domain of the probe, and thus do not receive NPI- and EPI-construals. This section examines the distribution of NPI-construals, and the next section examines the distribution of EPI-construals.

As predicted, variable expressions in subject position only have a wh-construal as shown in (6). In (6), the subject is not in the domain of the negative probe because Neg is generated lower than the goal. Therefore, the [Neg] feature of the probe cannot be copied onto the underspecified goal and cannot receive an NPI-construal. However, the variable is inside the c-command domain of the $Q_{[wh]}$ probe. The [wh] feature of the Q probe can thus be copied onto the goals which receives a wh-construal.

WH-SUBJECT: √ WH-CONSTRUAL

  * NPI-CONSTRUAL

(6)   a.   [kʰray]   **máy**   cʰɔ́ːp   Nám

          VARIABLE. +human   neg   like

     = (i)   **Who** does not like Nam?

     ≠ (ii) **Anyone** does not like Nam.

POSSESSOR SUBJECT: √ WH-CONSTRUAL

                   * NPI-CONSTRUAL

b.   mă: kʰɔ̌ːŋ   **[kʰray]**   **mây**   hàw   sày   Nít

       dog   *of*   *VARIABLE. +human*   *neg*   *bark*   *at*

= (i)   **Whose** dog did not bark at Nit?

≠ (ii)   **Anyone**'s dog did not bark at Nit.

In object position, on the other hand, variable expressions receive only an NPI-construal, as in (7). Though the variables are in the domain of both negation and the $Q_{[wh]}$ probe, only the closest c-commanding probe, in this case the negative probe, is qualified to provide a feature for the goal to copy. This explains the unavailability of the wh-construal. We will see that the matching relation of the probe and goal in Thai is syntactically constrained by a locality restriction.

WH-OBJECT: * WH-CONSTRUAL

              √ NPI-CONSTRUAL

(7)   a.   Nít   **mây**   duːtʰùːk   **[kʰray]**

                  neg   *insult*   *VARIABLE. +human*

≠ (i)   **Who** did Nit not insult?

= (ii)   Nit did not insult **anyone**.

POSSESSOR OBJECT: * WH-CONSTRUAL

                   √ NPI-CONSTRUAL

b.   Nít   **mây**   yɨːm   kʰɔ̌ːŋ   kʰɔ̌ːŋ   **[kʰray]**

            neg   *borrow stuff*   *of*   *VARIABLE. +human*

≠ (i)   **Whose** belongings did Nit not borrow?

= (ii)   Nit did not borrow **anyone**'s belongings.

We correctly predict the same for indirect objects in that they can have an NPI-construal. The data is given in (8).

(8)   INDIRECT OBJECT: * WH-CONSTRUAL

√ NPI-CONSTRUAL

Nít   **mây** hây   ŋən   [kʰray]

neg   give   money   VARIABLE. +human

≠ (i) To **Whom** did Nit not give the money?

= (ii) Nit did not give the money to **anyone**.

The above confirms that there is a subject/non-subject split with respect to the NPI-construal. The next step in understanding what makes an NPI-construal possible is to identify the syntactic position of negation.

3.2.1 The position of negative *mây*

In Thai, negative *mây* occurs in preverbal position. I show in the examples below that *mây* is generated closest to the verb relative to tense, modality and aspect marking. Note that Thai is a language that lacks overt tense marking. In (9a), the negative *mây* simply appears before the predicate. In (9b), the sentence contains a modal (i.e. the future marker), and negation immediately precedes the verb. Examples (9c) and (9d) further confirm the preverbal position of negative *mây*. We see that some aspect markers (e.g. imperfective) appear preverbally, while others (e.g. progressive) appear postverbally but negation still precedes the predicates.

TENSE: PRESENT

(9)   a.   kʰáw   **mây**   cʰɔ́ːp   Nám

he   neg   like

He does not like Nam.

MODALITY: FUTURE MARKER

b.   kʰáw   **cà?**   mây   kin   kʰâːw

he   fut   neg   eat   rice

He will not eat the rice.

ASPECT MARKER: PROGRESSIVE

c. kʰáw **mây** dây[19] **kin** kʰâːw **yùː**

he *neg* *past* *eat* *rice* *prog*

He.is not eating the rice.

ASPECT MARKER: IMPERFECTIVE

d. kʰáw **yaŋ** **mây** dây **kin** kʰâːw

he *imperf* *neg* *past* *eat* *rice*

He hasn't eaten the rice yet.

This establishes that negation occupies a position somewhere between the Subject and the Predicate (VP). Assuming that the Subject sits in Spec IP, then Neg is positioned between I and V, as in (10a). With respect to the potential c-command relations, note that while negative *mây* c-commands the object, it does not c-command the subject. Contrast the structural position of the overt negative with that of the covert $Q_{[wh]}$ in C: the latter c-commands both the subject and the object, as in (10b). Finally, consider the structure in (10c), which has both $Q_{[wh]}$ and negative *mây*: here the object is c-commanded by two operators (Neg and $Q_{[wh]}$), while the subject is c-commanded by only one operator ($Q_{[wh]}$).

(10) a. $[_{IP}$ Subject [Infl] $[_{NegP} [_{Neg}$ **mây**] $[_{VP}$ V Object]]]

  b. $[_{CP} [_{C}$ **Q[wh]**] $[_{IP}$ Subject [Infl] $[_{VP}$ V Object]]]

  c. $[_{CP} [_{C}$ **Q[wh]**] $[_{IP}$ Subject [Infl] $[_{NegP} [_{Neg}$ **mây**] $[_{VP}$ V Object]]]]

With these structures in mind, consider the predictions made by the proposed analysis regarding the construal of variable expressions. The essential claims of the probe-goal relation are such that a goal enters into a relation with a probe if and only if the following three conditions are met.

(i) Feature identity: The probe-goal satisfies Match, which requires probe and goal to have identical features.

(ii) C-command condition: The probe must c-command the goal.

(iii) Locality: Match is satisfied by the most local probe.

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[19] The morpheme *dây* can be treated as a past tense marker (Kanchanawan 1978), a verb (Sookgasem 1990) or as a modal (Warotamasikkhadit 1996). See Visonyanggoon (2000) for details.

Applying this to the structures in (10), we predict the following construals. First, in the presence of an overt negative probe, a goal will have an NPI-construal in object position, but not in (matrix) subject position, (11a). This follows from the c-command restriction on the probe-goal relation. Second, in the presence of the covert $Q_{[wh]}$ probe, goals will have a wh-construal in both subject and object position, as in (11b). Again, this follows from the c-command restriction on the probe-goal relation. Third, in the presence of overt negation and a covert $Q_{[wh]}$ probe, a goal in object position will have an NPI-construal, while a goal in subject position will have a wh-construal, as in (11c). The unavailability of the NPI-construal for the subject position follows from the c-command restriction. The unavailability of the wh-construal for the object position follows from the locality restriction.

(11) a. $[_{IP}$ ***NPI-subject** [Infl] $[_{NegP}$ [Neg **mây**] $[_{VP}$ V √**NPI-object**]]]

 b. $[_{CP}$ $[_C$ $Q_{[wh]}$] $[_{IP}$ √**wh-subject** [Infl] $[_{VP}$ V √**wh-object**]]]

 c. $[_{CP}$ $[_C$ $Q_{[wh]}$] $[_{IP}$ √**wh-subject** [Infl]$[_{NegP}$ [Neg **mây**]$[_{VP}$ V √**NPI-object**]]]]

As we shall see, these predictions are borne out.

3.2.2 (The absence of) NPI-construal in subject position

In the context of negation, goals (as variables) function as NPIs when they match the [Neg] feature of an overt Neg probe. However, in the presence of negation, subjects receive only a wh-construal, the NPI-construal is unavailable. This is illustrated in (12).

√ WH-CONSTRUAL

* NPI-CONSTRUAL

(12) a. **[kʰray]**   **mây** cʰɔ̌ːp Nám

 VARIABLE. +human   *neg*   *like*

 = (i) Who does not like Nam?'

 ≠ (ii) Anyone does not like Nam.'

√ WH-CONSTRUAL

* NPI-CONSTRUAL

b. **[ʔaray]**   **mây dây lòn sây Nám**

    VARIABLE.–human   *neg past fall at*

= (i) What didn't hit Nam?

≠ (ii) Anything didn't hit Nam.

For goals in subject position, the analysis correctly predicts the absence of an NPI-construal (due to the c-command restriction) and the possibility of a wh-construal (again due to the c-command restriction). To see this, consider the structure in (13). In (13a), Neg does not c-command the subject position, so the goal cannot be construed as an NPI. In (13b), the goal is closest to and c-commanded by $Q_{[wh]}$, so it can be (and must be) construed as a wh-expression.

(13) a.   [$_{CP}$ [$_C$ $Q_{[wh]}$] [$_{IP}$ ***NPI-subject** [Infl] [$_{NegP}$ [$_{Neg}$ **mây**] [$_{VP}$ V Object]]]]

      b.   [$_{CP}$ [$_C$ **$Q_{[wh]}$**] [$_{IP}$ √**wh-subject** [Infl] [$_{NegP}$ [$_{Neg}$ mây] [$_{VP}$ V Object]]]]

The question that arises is 'how do we get a NPI-construal in subject position?' My analysis predicts that a negative probe needs to be introduced higher up than the variable in subject position in order to license it as schematically illustrated in (14b).

(14) a.   [$_{IP}$ ***NPI-subject** [Infl] [$_{NegP}$ [$_{Neg}$ **mây**] [$_{VP}$ V Object]]]

      b.   **Neg** [$_{IP}$ √**NPI-subject** [Infl] [$_{VP}$ V Object]]]]

The data in (15) turns out just as predicted. The goal in subject position indeed matches in feature with the Neg probe introduced higher. Therefore, the goal is in the c-command domain of the Neg probe and can receive an NPI-construal. Morever, this expression *mâymiːkʰray* can only occur with the subject but, not the object, as shown by the contrast between (15a) and (15b).

VARIABLE-SUBJECT: * WH-CONSTRUAL

√ NPI-CONSTRUAL

(15) a.   **mâymi:[kʰray][20]**   cʰɔ:p   Nám

neg- exist- VARIABLE. +human   like

≠ (i) Who does not like Nam?

= (ii) No one likes Nam.

(lit. 'There isn't anyone who likes Nam')

VARIABLE-OBJECT: * WH-CONSTRUAL

* NPI-CONSTRUAL

b. * Nám   cʰɔ:p   **mâymi:[kʰray]**

like   *neg- exist- VARIABLE. +human*

[Nam likes no one.]

The fact that (15b) is ungrammatical suggests that with morphologically complex negation *mâymi:kʰray*), the Neg probe is introduced outside IP. If it were introduced inside the IP preceding the existential verb *mi:* 'have' in the same way as in morphologically simplex negation *mây* is, an NPI-construal should be available in object position. We saw from the example (15a) above that the availability of the NPI-construal for the subject position follows from the c-command restriction.

The proposed analysis also correctly predicts that the locality restriction will force the NPI reading on the variable *kʰray* 'who' in both subject and object position because the probe Neg *mâymi:kʰray* 'not-have-who' is closer to the variable than the probe $Q_{[wh]}$. This is confirmed by (17).

(16)   a. $[_{CP}$ $[_C$ $Q_{[wh]}$] $[$**Neg** $[_{IP}$ √**NPI-subject** [Infl] $[_{VP}$ V *wh-object]]]]

            b. $[_{CP}$ $[_C$ $Q_{[wh]}$] $[$**Neg** $[_{IP}$ √**NPI-subject** [Infl] $[_{VP}$ V √**NPI-object**]]]]

---

[20] *mâymi:kʰray* has a bi-clausal structure.

(17)   **mâymi:[kʰray]**   cʰɔːp   **[kʰray]**

neg- exist- VARIABLE. +human like   VARIABLE. +human

≠ (i)   **Who** does **nobody** like?

= (ii) **Nobody** likes **anyone**.

To summarize, regarding goals in subject position, we see that the locality condition holds between the probe and goal relation in Thai. The (overt) Neg operator *mây* cannot be a probe for the subject because Neg does not c-command the subject. The (covert) $Q_{[wh]}$ operator in C can be a probe for the subject because $Q_{[wh]}$ does c-command the subject position. Consequently, the subject of a matrix clause (predictably) gets a wh-construal, but not an NPI-construal. We return in section 3.5 to a discussion of the construal of subjects in embedded clauses.

3.2.3 NPI-construal in object position

With goals in object position, we predict that only the NPI-construal is available. This is because the Neg operator is the closest c-commanding probe for the goal. This prediction is borne out, as shown by the examples in (18)[21].

* WH-CONSTRUAL

√ NPI-CONSTRUAL

(18) a.   Nít   **mây**   duːtʰùːk   **[kʰray]**

neg   insult   VARIABLE. +human

≠ (i)   Who did Nit not insult?

= (ii) Nit did not insult anyone.

---

[21] Echo wh-construal is possible but it is contextually restricted. A pause before the variable must be present, and extra morpheme *rɨ:* 'or' is required sentence-finally. In the present analysis, this would be an instance of local displacement of the variable expression so as to satisfy the locality restriction with respect to the scope of $Q_{[wh]}$. I leave formalizing this aspect of my analysis to future research.

* WH-CONSTRUAL

√ NPI-CONSTRUAL

b.   Nít   **mây**   hěn   **[ʔaray]**

            neg   *see*   *VARIABLE.–human*

≠ (i) What did Nit not see?

= (ii) Nit did not see anything.

The NPI construal in (18) is illustrated structurally in (19). The generalization is that a wh-construal is not available in an NPI context because the closest c-commanding probe is Neg. Thus, the goal cannot match in [wh] feature with the probe Q by skipping Neg, as this would violate the locality restriction.

(19) a.   [$_{IP}$ *<u>NPI-subject</u> [Infl] [$_{NegP}$ [$_{Neg}$ **mây**] [$_{VP}$ V √**NPI-object**]]]

      b.   [$_{CP}$ [$_C$ **Q[wh]**] [$_{IP}$ √<u>wh-subject</u> [Infl] [$_{NegP}$ [$_{Neg}$ **mây**] [$_{VP}$ V *wh-object]]]]

The licensing condition[22] between the probe and the goal is (predictably) syntactically conditioned by the c-command relation.

3.3 Subject/non-subject asymmetry with EPI-construal

The proposed analysis correctly predicts that, in NPI-contexts, there is a subject/non-subject asymmetry in that goals in subject position do not receive NPI-construals because they are outside the c-command domain of the probe Neg. While goals in non-subject position get NPI-construals because they are in the c-command domain of the probe Neg. This section examines the distribution of EPI-construals.

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[22] I observe that in Thai D-linked questions 'which' receive NPI-construals 'any' from being licensed by the negative probe in a parallel fashion to bare variables that variables in object position can only be construed as an NPI. Variables in subject position, however, receive only a wh-construal.

(i)   pʰǒm   mây   hěn   **faràŋ**   kʰon   nǎy   ma: tɔ:wâ: pratʰê:t   tʰay
         he   *neg*   *see*   *foreigner*   *cl*   *which*   *come*   *blame*   *country*   *Thai*
        He don't see **any** foreigner blame Thailand.

(ii)   **faràŋ**   cʰâ:t   nǎy   mây   tɔ:wâ: pratʰê:t   tʰay
        foreigner   *country*   *which*   *neg*   *blame*   *country*   *Thai*
        Which country did not blame Thailand?

We shall see in the data below that, in EPI-contexts, goals in object position show the same pattern of how variables are construed as those in NPI-contexts. However, goals in subject position behave differently. In NPI-contexts, they are construed as a wh-construal, while there is no interpretation available for them in EPI-contexts. We see in (20) that the ungrammaticality results when goals occur in subject position in a yes-no construction.

VARIABLE-SUBJECT: * WH-CONSTRUAL
                    * EPI-CONSTRUAL

(20) a.   *   [kʰray]   cʰɔːp   Nám   **máy**

           VARIABLE. +human   *like* $Q_{[polarity]}$

        [Does someone like Nam?]

VARIABLE-SUBJECT: * WH-CONSTRUAL
                    * EPI-CONSTRUAL

b.   *   **[ʔaray]**   lòn   sây   Nám   **máy**

           VARIABLE. –human   *fall*   *at* $Q_{[polarity]}$

        [Did something fall down and hit Nam?]

POSSESSOR SUBJECT: * WH-CONSTRUAL
                    * EPI-CONSTRUAL

c.   *   mă: kʰɔːŋ   **[kʰray]**   hàw   sây   Nít   **máy**

        dog   *of*   *VARIABLE. +human*   *bark*   *at* $Q_{[polarity]}$

        [Did someone's dog bark at Nit?]

Variable expressions in non-subject position, on the other hand, are able to be construed as EPI-construals in the same way as those of NPI-contexts. In (21), all variables in non-subject position—variable-object, variable-possessor or variable-indirect object—are in the domain of the $Q_{[polarity]}$. Therefore, goals as variables match with the [polarity] feature of the probe $Q_{[yes-no]}$ and receive EPI-construals.

VARIABLE-OBJECT: * WH-CONSTRUAL

√ EPI-CONSTRUAL

(21) a.   Nít   duːtʰùːk   **[kʰray]**   **máy**

                insult   *VARIABLE. +human* $Q_{[polarity]}$

≠ (i)   **Who** did Nit not insult?

= (ii)   Did Nit insult **someone?**

b.   Nám   kʰəːy   cʰɔ̀ːp   **[ʔaray]**   **máy**

                ever   *like*   *VARIABLE.–human* $Q_{[polarity]}$

≠ (i)   **What** did Nam ever like?

= (ii)   Did Nam ever like **something**?

POSSESSOR SUBJECT: * WH-CONSTRUAL

√ EPI-CONSTRUAL

c.   Nít   yɨːm   kʰɔ̀ːŋ   kʰɔ̀ːŋ   **[kʰray]**   **máy**

                borrow stuff   *of*   *VARIABLE. +human* $Q_{[polarity]}$

≠ (i)   **Whose** belongings did Nit not borrow?

= (ii)   Did Nit borrow **someone**'s belongings?

INDIRECT OBJECT: * WH-CONSTRUAL

√ EPI-CONSTRUAL

d.   Nít   dây   hây   ŋən   **[kʰray]**   **máy**

                give   *money*   *VARIABLE. +human* $Q_{[polarity]}$

≠ (i)   To **Whom** did Nit not give the money?

= (ii)   Did Nit give the money to **someone?**

The above confirms that there is a subject/non-subject split with respect to the EPI-construal. The next step in understanding what makes an EPI-construal possible is to identify the syntactic position of $Q_{[polarity]}$.

3.3.1 The position of the yes-no question marker ($Q_{[polarity]}$) máy

I argue that the yes-no question marker *máy* is an allomorph of negative *mây*. Yes-no questions in Thai can be formed by appending a disjunctive phrase *rɨ̌: mây* 'or not'[23] immediately after the (affirmative) predicate (22a). Negation, however, can be dropped, leaving the disjunctive morpheme clause-finally[24]. The disjunctive marker *rɨ̌:* can also be dropped leaving the negation morpheme *mây* realized with a rising tone *mǎy* or a high tone *máy* (22b).

(22) a.

kʰáw	cʰɔ́ːp	Nám	rɨ̌:	mây	(cʰɔ́ːp)
he	like		or	neg	like

Does he like Nam or not?

b.

kʰáw	cʰɔ́ːp	Nám	máy
he	like		$Q_{[polarity]}$

Does he like Nam?

When the conjunction *rɨ̌:* 'or' is absent, as in (22b), negative *mây* is instead marked by either a rising tone *mǎy* (in a literary form) or a high tone *máy* (in a colloquial speech) in order to be identified as a yes-no question. Thus, the *mǎy/máy* that occurs in yes-no questions is an allomorph of negative *mây*.

Another piece of evidence supporting the treatment of *mây* and *máy* as allomorphs comes from the fact that polar *máy* cannot co-occur with negative *mây* (23a). This implies that *mây* and *máy* are in complementary distribution, and occupy the same syntactic position. In (23b), negative *mây* can co-occur with the disjuctive marker *rɔ̌:* 'or', in which case it is interpreted as a taq question.

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[23] This type of yes-no question is described as an alternative question (A-not-A question) where two disjunctive alternatives, an affirmative proposition and the corresponding a negated propostion, are questioned.

[24] In a colloquial speech, the vowel *ɨ:* is lowered to *ɔ̌:*.

(i)

kʰáw	cʰɔ́ːp	Nám	rɔ̌:
he	like		or

Does he like Nam?

(23) a. * kʰáw **mây** cʰɔ:p Nám **máy**

      he   *neg*   *like* $Q_{[polarity]}$

      [Does he like Nam?]

b. kʰáw **mây** cʰɔ:p Nám **rɔ̌:**

      he   *neg*   *like*   *or*

      Doesn't he like Nam?

If this analysis is correct, it implies that polar *máy* in (23a) is generated in the same position as negative *mây*. Despite the surface appearance of $Q_{[polarity]}$ in postverbal position, Neg and $Q_{[polarity]}$ occupy the same position above the predicate (VP) but below the subject as illustrated in (24).

(24)
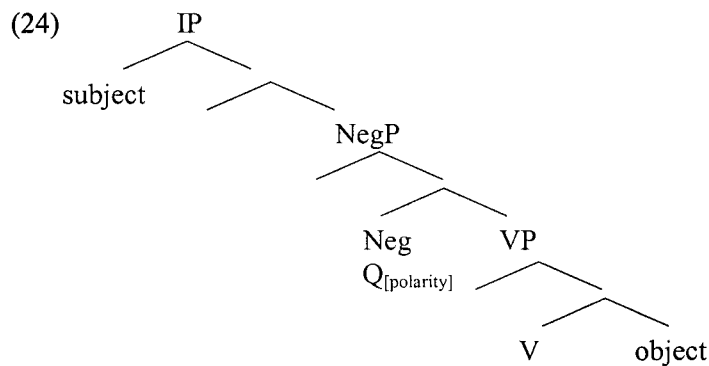
With this structure, VP fronting is required in yes-no constructions. The prediction made by the syntactic position of an (overt) yes-no question marker *máy* is that goals will have an EPI-construal in object position, but not in (matrix) subject position. The unavailability of the EPI-construal for the subject position follows from the c-command restriction, as illustrated in (25).

(25) a.   [IP *__NPI-subject__ [Infl] [NegP [Neg **mây**] [VP V √__NPI-object__]]]

    b.   [IP *__EPI-subject__ [Infl] [NegP [$Q_{[polarity]}$ **máy**] [VP V √__EPI-object__]]]

A possible alternative analysis would be that a yes-no question has an adjoined coordinate structure, in particular a conjoined VP, as in (26). The surface form would be derived by eliding the whole VP in a negative conjunct. The disjunct 'or' is omitted and the negation *mây* is marked by a high tone *máy* instead of a falling tone.

(26) a. k^háw c^hɔ̀ːp   Nám   **rɨ̀ː**   **mây**   [$_{VP}$ e]

      he   *like*   *or*   *not*

      Does he like Nam him or does he not like Nam?

    b. k^háw c^hɔ̀ːp   Nám   **(rɨ̀ː)**   **máy**   [$_{VP}$ e]

      he   *like*   *or*   *not*

      Does he like Nam him or does he not like Nam?

(26b) would have the structure shown below:

(27)
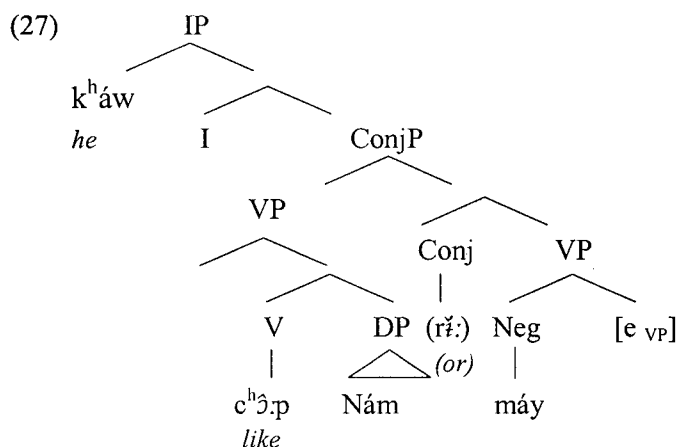
This structure predicts the same restriction on the Matching relation in that a goal in subject position will not have an EPI-construal because the conjoined phrase does not c-command the subject. It gives the same prediction as my analysis does since both negation *mây* and *máy* are generated in the Neg position. However, the conjoined VP analysis cannot provide the reason why the negation *mây* changes its tone from falling to a high tone after the elision of the disjunction 'or'.

In the next section, I discuss how the position of the probes correctly predicts the asymmetry between variable-subjects and variable-objects in an EPI environment where only goals in object position can match with the [polarity] feature of the $Q_{[yes-no]}$ probe.

3.3.2 (The absence of) EPI-construal in subject position

We saw from the examples above that EPI-construals are not available in subject position. This can be explained by a syntactic matching condition that goals in subject position are not in the domain of the probe $Q_{[polarity]}$ and thus cannot receive EPI-construals. This follows from the position of the yes-no question marker *mǎy* which I claim is generated lower than the subject.

This raises the question of why a wh-construal is not available. We would expect $Q_{[wh]}$ which is generated higher than the subject and is the closest c-commanding probe available to provide a feature to be copied and yields a wh-construal. The sentences, however, turn out to be ungrammatical and there is no interpretation available.

This data suggests that $Q_{[wh]}$ and $Q_{[polarity]}$ cannot co-occur. While $Q_{[wh]}$ is [+Q, +wh], $Q_{[polarity]}$ is [+Q, −wh]. They are both Q in that they type a clause (Cheng 1991) as a wh-question or a yes-no question. However, they cannot co-occur. When $Q_{[polarity]}$ is present, it blocks $Q_{[wh]}$ in C position. There can only be one Q operator—be it with either a wh- or a polarity-feature. Since $Q_{[polarity]}$ (a yes-no question marker) is already present in (28), no $Q_{[wh]}$ is allowed in C position. The goal in subject position, as a result, is left unspecified. This explains why there is no interpretation available for the goal. And it supports the central claim of the proposed analysis that wh-expressions are not inherently interrogative. Rather, they are pure variable expressions that need to be matched. And the matching relation between the probe and goal in Thai is syntactically conditioned.

With this claim, the present analysis predicts that no wh-construals are available in an EPI-context. Just as expected, the data in (28), where $Q_{[polarity]}$ is present in a multiple wh-question, is ungrammatical. The lack of the interpretation of the goal in subject position accounts for the ungrammaticality of (28).

(28) * [kʰray]   hěn   [ʔaray]   **mǎy**

     VARIABLE. +human   *see*   *VARIABLE. −human* $Q_{[polarity]}$

     [who saw something?]

The question that arises is 'can goals in subject position ever get an EPI-construal in an EPI-context?' The proposed analysis predicts that they cannot get EPI-construals because they are not in the c-command domain of the $Q_{[polarity]}$ probe in order to be matched. Another way in which EPI-construals will become available for goals in subject position is by introducing another probe higher than subject position thus allowing them to copy its [polarity] feature and be construed as EPI-construals. The data below turns out as predicted. The morpheme *mi:* equivalent to 'exist' is introduced preceding the goal in subject position. This suggests that *mi:* behaves as an existential operator which is generated higher than IP and thus provides a feature for the goal to copy. The goal subject in (29a) now receives an EPI-construal yielding a well-formed sentence.

In (29b), we see that the existential operator (as probe) c-commands both variable-subject and variable-object. The proposed analysis predicts that (29b) should be possible without a need to introduce another probe (i.e. $Q_{[polarity]}$). Since there is no $Q_{[polarity]}$, (29b), as expected, is interpreted as EPI construals in a declarative sentence.

(29) a. **mi:[kʰray]**   hěn   **[ʔaray]**   **máy**

       exist- VARIABLE. +human   *see*   *VARIABLE.–human* $Q_{[polarity]}$

       Did someone see something?

       (lit. 'was there someone who saw something?')

   b. **mi:[kʰray]**   hěn   **[ʔaray]**

       exist- VARIABLE. +human   *see*   *VARIABLE.–human*

       Someone saw something.

The data in (30) confirms that the existential operator is indeed generated outside the IP and this expression can only occur with subject in the same way as *mâymi:kʰray* 'neg-exist-variable. +human' have an NPI-construal in subject position.

(30) * Nám hĕn **mi:** **[ʔaray]**

       see   *exist- VARIABLE.—human*

[Did Nam see something?]

That the existential operator *mi:* is generated outside the IP is confirmed by the example in (30), which show that *mi:* cannot occur with a goal in object position[25]. *m:i* is an existential verb that takes an IP.

(31) a.   [IP ***EPI-subject** [Infl] [NegP [Neg **máy**] [VP V √**EPI-object**]]]

      b.   [VP [V **mi:**][IP√ **EPI-subject** [Infl][NegP [Neg **máy**][VP V√**EPI-object**]]]]

The data below illustrates how subjects (32) receive EPI-construals. The existential verb *mi:* c-commands the subject and thus provides a feature to a goal to copy. This accounts for the availability of the EPI-construal for the subject position and it is consistent with the c-command restriction on the probe-goal relation.

VARIABLE-SUBJECT: * WH-CONSTRUAL

               √ EPI-CONSTRUAL

(31) a.   **mi:[kʰray]**   cʰɔːp   Nám   **máy**

             exist- VARIABLE. +human   *like*   *Q[polarity]*

             Did someone like Nam?

      b.   **mi:[ʔaray]**   lòn   sây   Nám   **máy**

             exist- VARIABLE.—human *fall*   *at*   *Q[polarity]*

             Did something fall down and hit Nam?

---

[25] This is similar to what Cheng (1991) discusses about *you* 'have' in Mandarin Chinese. In order for indefinite subjects to be construed as an EPI, *you* 'have' must occur preceding them.

POSSESSOR SUBJECT: * WH-CONSTRUAL

√ EPI-CONSTRUAL

c. **mi:** mă: (kʰɔ̌:ŋ) **[kʰray]** hàw sày Nít **máy**

exist *dog* *(of)* *VARIABLE. +human* *bark* *at* $Q_{[polarity]}$

Did someone's dog bark at Nit?

To sum up, because the $Q_{[polarity]}$ probe is generated lower than the subject position, variable expressions in subject position cannot be filled by featural content. As we saw from the examples above, the unavailability of the EPI-construal results from the absence of a probe to provide a feature for the goal to copy in subject position. This reflects the fact that wh-expressions in Thai are pure variables that need to be filled in order to be interpreted. The variable-subjects, however, are able to be interpreted as EPIs when an overt existential operator is present (higher than the subject position). This confirms the c-command relation does hold in Thai.

3.3.3 EPI-construal in object position

With variable expressions in object position (both direct and indirect objects), the analysis correctly predicts that only the EPI-construal is available. This is because $Q_{[polarity]}$ is the only c-commanding probe for the goal. There is no need for the overt existential operator *mi:* to be introduced. This is illustrated in the data below.

VARIABLE-OBJECT: * WH-CONSTRUAL

√ EPI-CONSTRUAL

(33) a. Nít du:tʰù:k **[kʰray]** **máy**

insult *VARIABLE. +human* $Q_{[polarity]}$

≠ (i) **Who** did Nit not insult?

= (ii) Did Nit insult **someone?**

b. Nám kʰə:y cʰɔ̌:p **[ʔaray]** **máy**

ever *like* *VARIABLE. –human* $Q_{[polarity]}$

≠ (i) **What** did Nam ever like?

= (ii) Did Nam ever like **something?**

POSSESSOR OBJECT: * WH-CONSTRUAL

√ EPI-CONSTRUAL

c.   Nít   yɨːm   kʰɔ́ːŋ   kʰɔ́ːŋ   **[kʰray]**   **máy**

             borrow stuff   of   VARIABLE. +human $Q_{[polarity]}$

  ≠ (i)   **Whose** belongings did Nit not borrow?

  = (ii) Did Nit borrow **someone**'s belongings?

INDIRECT OBJECT: * WH-CONSTRUAL

√ EPI-CONSTRUAL

d.   Nít   dây   hây   ŋən   **[kʰray]**   **máy**

             give   money VARIABLE. +human $Q_{[polarity]}$

  ≠ (i)   To **Whom** did Nit not give the money?

  = (ii) Did Nit give the money to **someone?**

To summarize, I have shown that subject/non-subject asymmetries predictably arise from the interaction of the syntactic position of the probe and goal. The availability of NPI-and EPI-construals with variable expressions is syntactically restricted by the c-command relation and the locality condition between the probe and goal. Moreover, the goal needs to be filled by featural content in order to be interpreted. If no probe is available to provide a feature for the goal to copy, ungrammaticality results.

3.4 An asymmetry between wh-arguments and wh-adjuncts

The previous two sections have established that the construal of variable expressions is syntactically conditioned. We have seen that while the (covert) Q[wh] has sentential scope, negative *mây* and the yes-no operator *máy* have VP scope. Because Q[wh] can scope over any argument, any argument can get a wh-construal. In contrast to this, because negative *mây* and the yes-no operator *máy* attach at the VP-level, only VP-internal arguments can get NPI- and EPI-construals. There is yet another way in which syntactic restrictions on variable expressions manifests itself, namely when variable expressions occur in adjunct position. In particular, adjunct rationale and manner expressions predictably fall within the domain of the (covert) Q[wh], but outside the scope of negative *mây* and the yes-no operator *máy* . This is illustrated in (34) and (35), which show that only the wh-construal is available for rationale and manner adjuncts respectively.

√ WH-CONSTRUAL

(34) a. Rɔːn rɔ́ːŋhâːy **[tʰammay]**

          cry   *VARIABLE. reason*

    Why did Ron cry?

* NPI-CONSTRUAL

b. * Rɔːn **mây** rɔ́ːŋhâːy **[tʰammay]**

          neg   *cry*   *VARIABLE. reason*

    [Ron did not cry for any reason.]

* EPI-CONSTRUAL

c. * Rɔːn rɔ́ːŋhâːy **[tʰammay]** **máy**

          cry   *VARIABLE. reason* $Q_{[polarity]}$

    [Did Ron cry for some reason?]

√ WH-CONSTRUAL

(35) a. kʰáw kʰàp rót **[yaŋŋay]**

          he   *drive* *car*   *VARIABLE. way*

    How did he drive a car?

* NPI-CONSTRUAL

b. * kʰáw **mây** kʰàp rót **[yaŋŋay]**[26]

   he neg drive car VARIABLE. way

   [He did not drive a car anyhow]

* EPI-CONSTRUAL

c. * kʰáw kʰàp rót **[yaŋŋay]** **máy**

   he drive car VARIABLE. way $Q_{[polarity]}$

   [Did he drive a car somehow?]

The data in (34) and (35) raise the question of what blocks variable expressions in adjunct position from having an NPI- or EPI-construal. The absence of the NPI- or EPI-construal straightforwardly follows the probe-goal analysis, in particular from the c-command restriction on the probe-goal relation.

The relevant structure of wh-adjuncts is illustrated in (36). Manner and reason wh-adverbials are adjoined to IP—outside the VP domain—and thus do not receive an NPI- or EPI-construals because they are not c-commanded by the Neg and $Q_{[polarity]}$ probe, which are generated lower than wh-expressions. This also accounts for why adjuncts can have a wh-construal since they are in the c-command domain of the $Q_{[wh]}$ probe.

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[26] Although *yaŋŋay* 'how' cannot occur in this context, it is possibly for it occur in the context below. However, it cannot be interpreted as an NPI. 'how' only receives a wh-construal because it is not c-commanded by the probe Neg.

(i)   kʰáw **mây** dâːy tɔ̀ːp yaŋŋay
        he   neg   past answer how
= (i)   How did he not reply?
≠ (ii) He did not reply in any way.

(36)

```
              CP
           /      \
          /        \
         C          IP
       Q[wh]      /    \
            IP       adjunct²⁷   √ WH-CONSTRUAL
          /    \                 * NPI-CONSTRUAL
        ...    /   \             * EPI-CONSTRUAL
             I     /    \
                 Neg      VP
               Q[yes-no]  /  \
                        V    ...
```
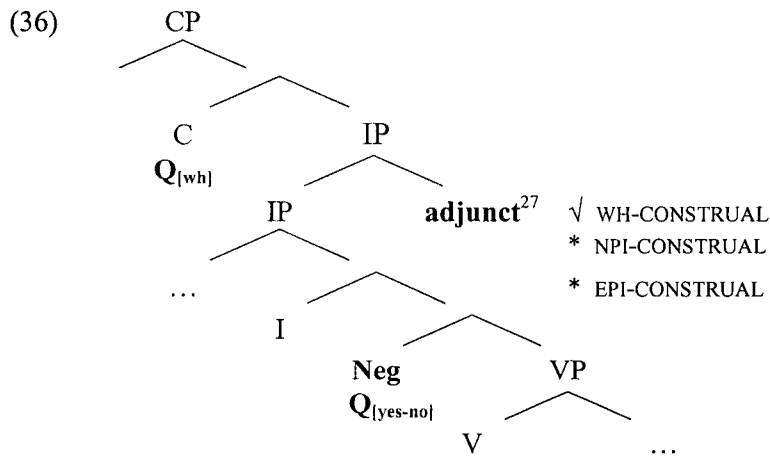
To sum up, the unavailability of NPI- and EPI-construals of adjuncts follow from the probe-goal analysis. Because they are not within the c-command domain of Neg and $Q_{[polarity]}$, they then cannot receive NPI- and EPI-construals. This explains why there is an argument/adjunct split with respect to polarity construals. As we shall see, in the next section, subject/non-subject and complement/adjunct asymmetries no longer hold when we examine variable expressions in embedded clauses. This is due to the availability of a probe in a matrix clause and the side-effect of locality restrictions that holds between a probe and a goal in Thai.

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[27] There is independent evidence in Thai that wh-adverbials are adjoined to IP. The sentence in (i) in English is ambiguous.

(i) John didn't leave Mary because he loved her.
    = John loved Mary, so he didn't leave her.
    = John left Mary, but not because he loved her. (with the focus intonation on LOVED)

(i) has two interpretations. The 'because' clause has scope over negation in the first reading suggesting that it is adjoined to IP, while negation has scope over the 'because' clause in the second reading suggesting it is adjoined to VP. Then, we would predict that in Thai only the first reading is allowed. The prediction is borned out

(i) kʰáw **mây** dây tʰiŋ Nít pay pʰrɔ́ʔwâ: kʰáw rák tʰɔ:
    he neg past leave   Nit *go because* *he love she*
    He loved Nit, so he did not leave her.

3.5 Matrix/embedded scope asymmetries

This section shows how the locality restriction applies to the probe-goal relation when the goal (i.e. variable expression) is in an embedded clause. I briefly review how matrix verbs impose selectional restrictions on embedded clauses (already discussed in Chapter 2). I then show how variable expressions in embedded clauses may be in a probe-goal relation with the closest operator. As we shall see, many of the NPI- and EPI-construals that are unavailable in matrix clauses, become possible in embedded clauses. In particular, variables in embedded subject position can get NPI- and EPI- construals under the scope of a matrix negative operator or matrix yes/no question operator. Similarly, variables in embedded adjunct position can get NPI- and EPI-construals under the scope of a matrix negative operator or matrix yes/no question operator. Thus the subject/non-subject asymmetry that holds of matrix clauses predictably does not hold of embedded clauses. And the argument/adjunct asymmetry that holds of matrix clauses predictably does not hold of embedded clauses.

3.5.1 Selectional restrictions

Recall that Thai verbs select their complements in the same way as English verbs do. The verb 'ask' selects for a [+wh] complement, but not a [-wh] complement. This contrasts with 'know', which selects for both [+wh] and [–wh]-complements. And yet other verbs such as 'think' select exclusively for [-wh] complements. This is illustrated in (37).

√ EMBEDDED WH-QUESTION CONSTRUAL
* MATRIX WH-QUESTION CONSTRUAL

(37) a. k^háw t^hǎːm   [$_{CP}$ wâ: [$_{CP}$ **k^hray**   ?àːn   náŋsǐ:]

             he   *ask*   *comp*   *VARIABLE. +human*   *read*   *book*

= (i)   He asked who read the book.

≠ (ii)   Who did he ask read the book?

√ EMBEDDED WH-QUESTION CONSTRUAL

√ MATRIX WH-QUESTION CONSTRUAL

b.   kʰáw   rúː   [$_{CP}$ wâː   [$_{CP}$ **kʰray**   ʔàːn   náŋsɨ̌ː]

he   know   comp   VARIABLE. +human   read   book

= (i)   He knew who read the book.

= (ii)   Who did he know read the book?

* EMBEDDED WH-QUESTION CONSTRUAL

√ MATRIX WH-QUESTION CONSTRUAL

c.   kʰáw   kʰɨt   [$_{CP}$ wâː   [$_{CP}$ **kʰray**   ʔàːn   náŋsɨ̌ː]

he   think   comp   VARIABLE. +human   read   book

≠ (i)   He thought who read the book.

= (ii)   Who did he think read the book?

In (37a), the wh-expression can only have an embedded wh-question construal, just as expected. The (covert) Q$_{[wh]}$ that is forced by the selectional requirement of the verb 'ask' provides a feature for the goal to copy. The wh-expression in (37b), on the other hand, has both an embedded wh-question and a matrix wh-question construal. The matrix wh-question reading arises when the complement of the verb 'know' is [-wh]. In (37c), the verb 'think', mentioned, selects only [-wh] complement CPs, so an embedded wh-question construal is thus not possible. The wh-expression receives a matrix wh-question construal from the presence of the (covert) Q$_{[wh]}$ probe in the matrix C instead.

The examples above show how a wh-expression in an embedded clause can have either an embedded wh-scope or a matrix wh-scope depending on the selectional properties of the matrix verb. So far, we have only seen that embedded wh-subjects can only receive a wh-construal. Why are embedded NPI- and EPI-subject construals not available? The reason simply is that there is only one c-commanding probe, namely the covert Q$_{[wh]}$.

As we shall presently see that many of the NPI- and EPI-construals that are unavailable in a matrix clause, become possible in embedded clauses. In particular, variables in embedded subject position can get NPI- and EPI- construals under the scope of a matrix negative operator or matrix yes/no question operator.

3.5.2 Embedded NPI and EPI subjects

This section shows how variable expressions in embedded clauses are in a probe-goal relation with the closest operator. The proposed analysis correctly predicts that NPI- and EPI-construals are possible for embedded subjects when the Neg and $Q_{[polarity]}$ probes are introduced in a matrix clause. To see this, consider the examples below where the matrix verb 'think' occurs with Neg or $Q_{[polarity]}$. A matrix negative operator or matrix yes/no question operator will (predictably) forces an NPI- or EPI-construal on embedded subjects because they are closer to the variables. Note that 'think' only selects for [-wh] complements. As a result, an embedded wh-construal should not be possible in this case. This is illustrated in (38) and (39).

VARIABLE-SUBJECT: * WH-CONSTRUAL

√ EMBEDDED NPI-CONSTRUAL

√ EMBEDDED EPI-CONSTRUAL

(38) a.

kʰáw	mây	kʰít	wâː	[kʰray]	cʰɔ̀ːp	Nám
he	*neg*	*think*	*comp*	*VARIABLE. +human*	*like*	

He did not think **anyone** liked Nam.

b.

kʰáw	kʰít	máy	wâː	[kʰray]	cʰɔ̀ːp	Nám
he	*think*	$Q_{[porality]}$	*comp*	*VARIABLE. +human*	*like*	

Did he think that **someone** liked Nam?

(39) POSSESSOR SUBJECT: * WH-CONSTRUAL

√ EMBEDDED NPI-CONSTRUAL

√ EMBEDDED EPI-CONSTRUAL

a.

kʰáw	mây	kʰít	wâː	ŋən	kʰɔ̌ːŋ	[kʰray]	cà?	sɨ̌ː	Nít	dây
he	*neg*	*think*	*comp*	*money*	*of*	*VARIABLE. +human*	*fut*	*buy*		

He did not think that **anyone**'s money could buy Nit.

b.

kʰáw	kʰít	máy	wâː	ŋən	kʰɔ̌ːŋ	[kʰray]	cà?	sɨ̌ː	Nít	dây
he	*think*	$Q_{[polarity]}$	*comp*	*money*	*of*	*VARIABLE. +human*	*fut*	*buy*		

Did he think that **someone**'s money could buy Nit?

The above examples confirm that NPI- and EPI-construals are indeed available for variable expressions in embedded subject position. We have already seen that in embedded clauses, where two probes are available and both c-commands the goal, the closest probe is the one that enters into the probe-goal relation, consistent with the locality restriction. The relevant structures for a verb such as 'think' are given in (40).

(40)

[CP[C **Q[wh]**] [IP Subject [NegP [Neg **mây**][VP think [IP √**NPI-subject** [VP V Object]]]]]

[CP [C **Q[wh]**][IP Subject [NegP [Neg **Q[polarity]**]][VP think[IP √**EPI-subject**[VP V Object]]]

In contrast to the verb 'think', we predict the opposite for the verb 'ask', namely only wh-construal are possible for variable expressions in an embedded subject position. Why is this so? Since 'ask' selects exclusively for [+wh] complements, $Q_{[wh]}$ is forced (due to the selectional restriction) to be closer to the variable in subject position than the Neg and $Q_{[polarity]}$ probe in the matrix clause, as illustrated in (41).

(41)

[IP Subject [NegP [Neg **mây**][VP ask [CP [C **Q[wh]**] [IP √**WH-subject** [VP V Object]]]]]

[IP Subject [NegP[Neg **Q[polarity]**] [VP ask [CP [C **Q[wh]**] [IP √**WH-subject** [VP V Object]]]

The data below supports this prediction, and show the interpretation of variable expressions in Thai is constrained by the locality condition.

VARIABLE-SUBJECT: √ WH-CONSTRUAL

       * EMBEDDED NPI-CONSTRUAL

       * EMBEDDED EPI-CONSTRUAL

(42) a. kʰáw **mây** dây tʰǎːm wâː **[kʰray]** cʰɔ̌ːp Nám

     he *neg*   *ask* *comp* *VARIABLE. +human* *like*

    He did not ask who liked Nam.

  b. kʰáw dây tʰǎːm **máy** wâː **[kʰray]** cʰɔ̌ːp Nám

     he *ask $Q_{[porality]}$* *comp* *VARIABLE. +human* *like*

    Did he ask who liked Nam?

(43) POSSESSOR SUBJECT: √ WH-CONSTRUAL

                * EMBEDDED NPI-CONSTRUAL

                * EMBEDDED EPI-CONSTRUAL

a.   kʰáw **mâY** dâY tʰǎːm wâː ŋən kʰɔ̌ːŋ **[kʰray]** sɨ́ː Nít dâY

       he   *neg*   *ask comp money of VARIABLE. +human buy*

       He did not ask whose money could buy Nit.

b.   kʰáw dâY tʰǎːm **máY** wâː ŋən kʰɔ̌ːŋ **[kʰray]** sɨ́ː Nít dâY

       he   *ask $Q_{[polarity]}$ comp money of VARIABLE. +human buy*

       Did he ask whose money could buy Nit?

To summarize, we see that the matching restriction on the probe-goal relation, on the one hand, accounts for the subject/non-subject asymmetry that holds of matrix clauses, and on the other hand accounts for the absence of such an asymmetry in embedded clauses. Variables in an embedded suject position can get NPI- and EPI-construals under the scope of a matrix negative operator or a matrix yes/no question operator.

3.5.3 Embedded NPI and EPI adjuncts

The main question, for this section, is what blocks wh-adjuncts from polarity licensing. Why can only arguments be polarity items? It is not that adjuncts can never be polarity items, but in matrix clauses, the only available probe that c-commands the adjuncts is $Q_{[wh]}$. This explains why adjuncts can only get wh-construals. The proposed analysis predicts that adjuncts can receive polarity construals in embedded clauses in the same way as arguments in embedded subject positions can.

As illustrated in (44), wh-adjuncts in embedded clauses are matched with the feature of a matrix overt Neg or a matrix $Q_{[polarity]}$ probe. Wh-adjuncts that are adjoined to IP are in the c-commanding domain of those two probes. They thus are and (must be) construed as NPIs and EPIs. Recall that we saw above (section 3.4) that, in matrix clauses, the Neg and $Q_{[polarity]}$ operators are generated below wh-adjuncts, and this is why they are excluded from having NPI- and EPI-construals in those contexts.

(44)

```
        CP
       /  \
      C    IP
    Q[+wh]  / \
          I    \
        Neg VP
        Q[yes-no]  / \
                  V   CP
                     /  \
                    C    IP
                    |   /  \
                  wâ:  IP   adjunct  * WH-CONSTRUAL
                      / \            √ NPI-CONSTRUAL
                    ...  \           √ EPI-CONSTRUAL
                     I    \
                   Neg    VP
                   Q[yes-no] / \
                            V   ...
```
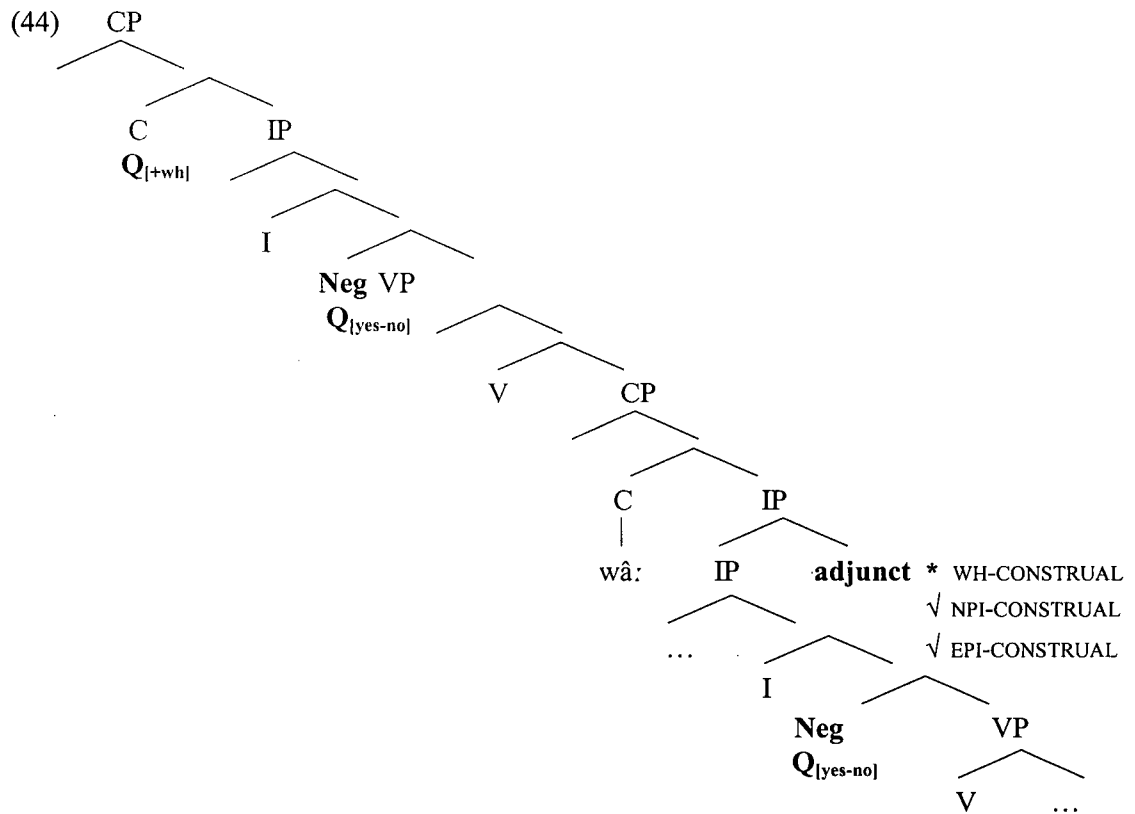
The data turns out as predicted: in embedded contexts, adjuncts can have NPI– and EPI–construals.

* WH-CONSTRUAL

√ NPI-CONSTRUAL

(45) a.　kʰáw　**mây**　kʰít　wâ:　Nít　tʰamrá:y　kʰonʔɨ.n　dây　　**[yaŋŋay]**

　　　　　he　*neg*　*think*　*comp*　　*hurt*　*person-other*　*VARIABLE. way*

　　　　He did not think that Nit could hurt the other people anyhow.

* WH-CONSTRUAL

√ EPI-CONSTRUAL

b.　kʰáw　kʰít　**máy**　wâ:　Nít　tʰamrá:y　kʰonʔɨ.n　dây　　**[yaŋŋay]**

　　　he　*think*　$Q_{[polarity]}$ *comp*　*hurt*　*person-other*　*VARIABLE. way*

　　Did he think that Nit could hurt the other people somehow?

(46) a.

kʰáw	mây	kʰəːy	kʰít	wâː	Nít	càʔ	riːan	pay	[tʰammay]
he	neg	ever	think	comp		fut	study	go	VARIABLE. reason

He has never thought that Nit will study for any reason.

b.

kʰáw	kʰəːy	kʰít	mây	wâː	Nít	càʔ	riːan	pay	[tʰammay]
he	ever	think	Q*[polarity]*	comp		fut	study	go	VARIABLE. reason

Has he ever thought that Nit will study for some reason?

The proposed analysis correctly predicts that the availability of the NPI- and EPI-construal with variable expressions is syntactically conditioned.

3.6 Extending the analysis: comparatives, modals, if-clauses

Wh-expressions can have NPI- and EPI-construals when they occur in other contexts such as comparatives, modals and if-clauses. They show the same pattern with respect to a subject/object asymmetry as those in negative and yes-no question contexts. The proposed analysis can thus be extended to account for variable expressions in such contexts.

In the presence of the comparative $k^w à$: 'more than', the variable expression in (47a) $k^h ray$ has an NPI-construal. Because the goal is in the domain of the probe, the goal copies presumably a [degree] feature from the probe. An NPI construal, on the other hand, is unavailable in (47b) because the goal in subject position is not c-commanded by the comparative probe, hence it is not in the domain of the probe.

* WH-CONSTRUAL

√ NPI-CONSTRUAL

(47) a.

Nít	kèːŋ	kʷàː	[kʰray]	nay	hɔ̂ːŋ
	smart	more than	VARIABLE.+HUMAN	in	room

≠ (i)   Anyone is smarter than Nit in class.

= (ii)   Who is smarter than Nit in class?

√ WH-CONSTRUAL

* NPI-CONSTRUAL

b.   **[kʰray]**   kèːŋ   **kʷàː**   Nít   nay   hɔ́ːŋ

       VARIABLE.+HUMAN   *smart*   *than*   *in*   *room*

≠ (i)   Anyone is smarter than Nit in class.

= (ii)   Who is smarter than Nit in class?

As predicted, in the presence of a modal *kʰuːan càʔ* 'should', *kʰray* has an EPI-construal in object position. In this case, the modal probe provides a [modal] feature for the goal to copy. The goal in subject position, on the other hand, cannot copy the [modal] feature from the probe introduced lower.

√ WH-CONSTRUAL

* EPI-CONSTRUAL

(48)   a.   Nít   **kʰuːan càʔ**   hǎː   **[kʰray]**   maː   cʰûːay

          should will   *find*   *VARIABLE.+HUMAN*   *come*   *help*

= (i)   Nit should find someone to help her.

≠ (ii)   Who should help Nit?

√ WH-CONSTRUAL

* EPI-CONSTRUAL

b.   **[kʰray]**   kʰuːan càʔ   maː   cʰûːay   Nít

       VARIABLE.+HUMAN   *should will*   *come*   *help*

≠ (i)   Someone should help Nit.

= (ii)   Who should help Nit?

In the if-clause context, we correctly predict the absence of a subject/object asymmetry because the probe is introduced higher than the goal in both object and subject position, illustrated in (49). The conditional probe *tʰâː* 'if' c-commands both the object (49a) and the subject (49b). This explains an availability of EPI-construals of the goal in both positions.

* WH-CONSTRUAL

√ EPI-CONSTRUAL

(49) a.   **t^{h}â:**   Mærî: du:t^{h}ù:k   **[k^{h}ray]** kɔ̂:   k^{h}u:an cà?   k^{h}ɔ́:t^{h}ô:t

     if   *Mary*   *insult*   *VARIABLE.+HUMAN* *should* *will*   *apologize*

     If Mary insults someone, (she) should apologize.

* WH-CONSTRUAL

√ EPI-CONSTRUAL

    b.   **t^{h}â:**   **[k^{h}ray]**   du:thù:k   k^{h}un kɔ̂:   k^{h}ɔ́:hây bɔ̀:k

     if   *VARIABLE.+HUMAN*   *insult*   *you*   *ask give tell*

     If someone insults you, (you) can tell (me).

The above data shows that NPI- and EPI-construals in comparatives *k^{w}à:*, modals *k^{h}u:an cà?* and conditional clauses headed by *t^{h}â:* are also captured by the proposed analysis.

3.7 Summary

In this chapter, I argued that the elements which are construed as wh-expressions in wh-contexts do not have inherent interrogative force in Thai. I analyzed these elements as variable expressions whose interpretation was structurally determined by the probe-goal relation. As underspecified goals under the domain of a $Q_{[wh]}$ operator, the [wh] feature of the probe Q is copied onto the goal, yielding as a wh-construal. Under the domain of negation, the goal matches the [Neg] feature, functioning like a Negative Polarity Item (NPIs) equivalent to 'any'. And as underspecified goals under the domain of a yes-no question marker, these variable expressions behave like Existential Polarity Items (EPIs) equivalent to 'some'. Finally, we have seen that the probe-goal relation is subject to a c-command restriction (the probe must c-command the goal) and to a locality restriction (the goal matches with the closest probe).

The proposed analysis correctly predicts the presence of subject/non-subject asymmetries, as well as complement/adjunct asymmetries in matrix clauses. It also captures the fact that such asymmetries with respect to NPI- and EPI-construals only hold in matrix clauses. Thus, while NPI- and EPI-construals are unavailable with subject and adjunct in matrix clauses, they are available in embedded clauses. This is because a matrix negative probe or a matrix yes-no question probe c-commands the embedded goal. The availability of NPI- and EPI-construals in

embedded clauses is a side-effect of the locality condition that requires that the closest c-commanding probe is the one that enters into the probe-goal relation.

Chapter 4
Wh-expressions at the left edge of the clause:
contrastive wh-clefts

4.1 Introduction

Consider the wh-questions in (1), which all involve the subject of an embedded clause getting a wh-construal. In (1a), we see that the variable expression k^hray appears in-situ. As discussed in the previous two chapters, in the absence of any other overt operator, a variable expression such a k^hray is under the scope of a (covert) $Q_{[wh]}$ operator in the matrix C. As argued for in Chapter 2, this operator-variable relation is an instance of the probe-goal relation. Crucially, the Matching relation between the probe and the goal does not induce Move. With this in mind, consider the examples in (1b) and (1c), where the variable expression appears to have undergone movement: in (1b) to an intermediate position (called "partial wh-movement"), and in (1c) to a clause-initial position (called "long-distance wh-movement").

THAI WH IN-SITU

(1) a. k^{h}un   k^{h}ít   wâ: [k^{h}ray]   rák   Nít

      you   *think*   *comp*   *VARIABLE.+HUMAN*   *love*

      Who do you think loves Nit?

      (lit. 'You think **who** loves Nit?')

THAI APPARENT PARTIAL WH-MOVEMENT

   b. k^{h}un   t^{h}ǎ:m   wâ: [k^{h}ray t^{h}î:]   Nám   k^{h}ít   wâ: rák   Nít

      you   *ask*   *comp*   *VARIABLE.+HUMAN det think*   *comp*   *love*

      You asked **who** Nam thinks loves Nit.

THAI APPARENT LONG-DISTANCE WH-MOVEMENT

   c. [k^{h}ray t^{h}î:]   k^{h}un   t^{h}ǎ:m   wâ: Nám   k^{h}ít   wâ: rák   Nít

      VARIABLE.+HUMAN def you ask comp   *think*   *comp*   *love*

      Who did you say that Nam thinks loves Nit?

At first glance, taken together, the examples in (1a-c) suggest that, in addition to wh in-situ, there is also partial and long-distance wh-movement in Thai. This apparent three-way split might seem unsurprising, given that there is independent cross-linguistic evidence for the

distinction between wh in-situ, partial wh-movement and long-distance wh-movement. For example, languages such as Mandarain exhibit wh in-situ, in that wh-words remain in their base-generated position, (2a). In contrast to this, other languages such as German permit wh-words to move to an intermediate position, as in (2b): this is called partial wh-movement. And finally, in languages like English, wh-words move to a clause-initial position, as in (2c): this is called long-distance wh-movement.

MANDARIN WH IN-SITU

(2) a.   Huangrong   xiangxin   Guojing   mai-le   **[shenme]**

                          believe   *buy-asp*   *what*

What did Huangrong believe that Qiaofeng bought?   (Cheng 1991:194)

GERMAN PARTIAL WH-MOVEMENT

b.   Was   meinst du   **[wen]** (daβ) sie   wirklich   liebt

    [+wh] *think* *you* *who*   *that* *she*   *really*   *loves*

Who do you think that she really loves?   (Müller & Sternefeld 1993: 486)

ENGLISH LONG-DISTANCE WH-MOVEMENT

c.   **[What]**   did   you   think   (that) Joey   bought?

Despite the surface parallels between the Thai examples in (1b-c) and the corresponding examples of partial and long-distance wh-movement in (2b-c), in this chapter and the next, I will argue that all wh-expressions in Thai are in-situ. Crucially, apparent cases of partial and long-distance wh-movement involve the obligatory presence of the determiner $t^h\hat{\imath}$: immediately following the wh-expression. This is illustrated in (3) and (4) for Thai "partial" and "long-distance" wh-movement respectively. The determiner $t^h\hat{\imath}$: must co-occur with the wh-expressions in apparent cases of partial and long-distance wh-movement, as in (3a) and (4a). Without the presence of $t^h\hat{\imath}$:, the sentences become ungrammatical as shown in (3b) and (4b).

(3) a. k^hun $t^h\check{a}$:m   wâ: **[k^hray $t^h\hat{\imath}$:]** Nám k^hít wâ: rák Nít

        you   *ask* _ *comp*   *VARIABLE.+HUMAN def*   *think* *comp* *love*

        You asked **who** Nam thinks loves Nit.

b. * kʰun   tʰăːm   wâː   [kʰray]   Nám   kʰít   wâː   rák   Nít

you   ask   comp   VARIABLE.+HUMAN   think   comp   love

[You asked **who** Nam thinks loves Nit.]

(4) a. **[kʰray tʰîː]**   kʰun   tʰăːm   wâː   Nám   kʰít   wâː   rák   Nít

VARIABLE.+HUMAN def you ask comp   think   comp   love

Who did you say that Nam thinks loves Nit?

b. * **[kʰray]**   kʰun   tʰăːm   wâː   Nám   kʰít   wâː   rák   Nít

VARIABLE.+HUMAN you ask   comp   think   comp   love

[**Who** did you say that Nam thinks loves Nit?]

The remainder of this chapter is devoted to showing that *tʰîː* clauses such as those in (3a) and (4a) involve clefting. In particular, I argue that *tʰîː* clauses are contrastive wh-clefts, and as such are the reduced counterparts of contrastive *pen* clefts. Contrastive *pen* clefts have an overt nominalizer (*kʰon*), an overt copula (*pen*), and an overt determiner (*tʰîː*). The clefted element may be a nominal expression, as in (5a), or a wh-expression, as in (5b). The reduced counterparts of contrastive clefts appear in (6). I adopt the convention of referring to reduced contrastive clefts such as (6a) as "reduced clefts", and reduced contrastive wh-clefts such as (6b) as "reduced wh-clefts".

LONG-DISTANCE CONTRASTIVE CLEFT

(5) a. Ník   **tʰîː**   cʰán   kʰít   wâː   **pen**   **kʰon**   tʰam   caːn   tæ̀ːk

def   I   think   comp   be   nom   cause   plate   break

Nick was the one that I think broke a plate.

LONG-DISTANCE CONTRASTIVE WH-CLEFT

b. [kʰray]   **tʰîː**   kʰun   kʰít   wâː   **pen**   **kʰon**   tʰam   caːn   tæ̀ːk

VARIABLE.+HUMAN def   you think comp   be   nom   cause   plate   break

Who was the one you think that broke a plate?

REDUCED LONG-DISTANCE (CONTRASTIVE) CLEFT

(6) a.   Ník   tʰîː   cʰán   kʰít   wâː   tʰam   caːn   tæ̀ːk

            def   I   think   comp   cause   plate   break

      Nick was the one I think that broke a plate.

REDUCED LONG-DISTANCE (CONTRASTIVE) WH-CLEFT

     b.   [kʰray   tʰîː]   kʰun   kʰít   wâː   tʰam   caːn   tæ̀ːk

            VARIABLE.+HUMAN   def   you   think   comp   cause   plate   brake

      Who was the one you think that broke a plate?

I argue that (5) and (6) have the same structure. On this view, the reduced counterparts in (6) lack an overt copula, and lack an overt nominalizer. A notable property of reduced wh-clefts is that they can only allow bare wh-expressions equivalent to English 'who' or 'what'. Discourse-linked wh-expresions equivalent to English 'which N', on the other hand, are infelicitous with contrastive wh-cleft and their reduced counterparts. This is illustrated in (7). We will return to this in chapter 5.

(7) a. # [kʰon nǎy   tʰîː]   pen   kʰon   tʰam   caːn   tæ̀ːk

            cl   which   def   be   nom   cause   plate   brake

      Which one was the one that broke a plate?

     b. # [kʰon nǎy   tʰîː]   tʰam   caːn   tæ̀ːk

            cl   which   def   cause   plate   brake

      Which one was the one that broke a plate?

The remainder of the chapter shows that apparent instances of partial and long-distance wh-movement are in fact reduced wh-clefts. Section 4.2 discusses the semantics of contrastive clefts with the overt copula *pen*. Section 4.3 looks at the syntax of contrastive *pen* clefts and shows that the cleft clause is a nominalized clause marked by *kʰon*. Sections 4.4 and 4.5 show that the semantics and syntax of reduced wh-clefts have the same properties as contrastive wh-clefts. Section 4.6 closes the chapter by considering the consequences of analyzing apparent cases of wh-movement as reduced wh-clefts.

4.2 The semantics of contrastive clefts with the overt copula *pen*

In Thai, contrastive clefts have the following semantic properties:

(i)   The cleft clause is associated with an existential presupposition.

(ii)   The cleftee is associated with a uniqueness presupposition.

(iii)   The cleftee is associated with contrastive focus.

Consider how these properties are exemplified in (8).

(8)   [$_{DP}$Ník t^{h}î:]   pen   [$_{nP}$ k^{h}on   t^{h}am   ca:n   tæ̀:k]

          def   *be*   *nom*   *cause   plate   break*

      Nick was the one that broke a plate.

Here the cleft clause corresponds to nP, which as we shall see below is in fact a nominalized clause. This cleft clause has an existential presupposition in the sense that it presupposes the existence of someone who broke the plate. In (8), the cleftee is a DP, here *Nik t^{h}î:*. This DP has a uniqueness presupposition: in this example Nick is the unique individual that satisfies the existential presupposition introduced by the cleft clause. As we shall see below, the source of the uniqueness presupposition is the definite marker *t^{h}î:*. The cleftee, in addition to satisfying a uniqueness presupposition, is also contrastively focused, and so *Nik* is here contrasted with any other accessible discourse referent. Thus, (8) can be uttered in situation where *Nik*, and noone else, broke a plate. I will show that it is the *pen* copula that is the source of this contrastive focus.

4.2.1 Contrastive clefts have an existential presupposition

One of the semantic properties of contrastive clefts in Thai is that that the cleft clause is associated with an existential presupposition. To illustrate this, the example (8) is repeated below.

(9) [DP Ník tʰîː] pen [nP kʰon   tʰam   caːn   tæ̀ːk]

     def   be   nom   cause plate   break

     Nick was the one that broke a plate.

→   Existential presupposition: x broke a plate

One of the clearest ways of showing the presence of an existential presupposition is to create a context where such a presupposition is explicitly denied. In such contexts, we expect that contrastive clefts will be infelicitous. The following context is provided to exemplify the presence of an existential presupposition in Thai clefts.

(10) S1   mâymiːkʰray   tʰam   caːn   tæ̀ːk

             nobody   cause   plate   break

             Since nobody broke a plate,...

a.   nân   mǎːykʰwaːmwâː [Rɔːn mây   dây   tʰam   caːn   tæ̀ːk]

      that   mean   neg   cause plate break

      ...it follows that Ron did not brake a plate.

b. # nân   mǎːykʰwaːmwâː mây cʰây [Rɔːn tʰîː pen kʰon tʰam caːn tæ̀ːk]

      that   mean   neg yes   def be nom cause plate break

      ...it follows that it was not Ron that broke a plate.

(10a) is felicitous because an existential presupposition is unexpected in a non-clefted clause. In contrast to this, (10b) is infelicitous because the cleft induces an existential presupposition due to the open variable in the cleft clause. As such, the contradiction between the absence of the existential presupposition and a cleft clause results in infelicity.

* WH-CONSTRUAL

√ NPI-CONSTRUAL

c.   Nít   kèːŋ   kʷàː   [kʰray]   nay   hɔ̂ːŋ

      smart than   VARIABLE.+HUMAN in   room

      Nit   is   smarter   than   anyone   in   class.

4.2.2 Contrastive clefts have a uniqueness presupposition

Another semantic property of contrastive clefts in Thai is that the cleftee is associated with a uniqueness presupposition. In a cleft focus, only the unique value can be substituted for the focus position x.

(11) [$_{DP}$Ník tʰîː] pen [$_{nP}$ kʰon tʰam caːn tæːk]

       def   *be*   *nom*   *cause* *plate* *break*

   Nick was the one that broke a plate.

→   Existential presupposition: x broke plate

→   Uniqueness presupposition: x = only Nit

To illustrate, I use the sentence in the context (11). In a situation containing a contextually given set of individuals, a unique individual has to be picked out from the set (12).

   INDIVIDUALS IN DOMAIN: {Nick, Nat, New}

(12) CONTEXT: Nick broke a plate, but Nat and New didn't; i.e. only Nick broke a plate.

   a.   x   tʰam caːn tæːk

         cause *plate* *break*

   X broke a plate.

   b.   alternative propositions

     {Nick broke a plate, Nat broke a plate, New broke a plate}

     focus value of the open proposition

   c.   [$_{DP}$Ník tʰîː] pen [$_{XP}$ kʰon tʰam caːn tæːk]

         def   *be*   *nom*   *cause* *plate* *break*

   Nick was the one that broke a plate.

I use an additive particle test to show that Thai contrastive clefts are associated with a uniqueness presupposition. We expect that contrastive clefts should not be compatible with additive particles due to their uniqueness presupposition. In the focus position of a cleft, there is a presupposition that the proposition holds true of no other individual than the set referred to in the focus position. Shank (2004) claims that in a focus construction, when a speaker does

not aim to contradict another speaker by asserting an alternative proposition, but merely wants to add more information, the speaker can do so by adding an additive particle such as 'also' or 'too' as long as the alternative set of individuals is taken as a true proposition in the given context.

(13) INDIVIDUALS IN DOMAIN: {Nick, Nat, New}

CONTEXT: Nick and Nat each broke a plate, but New didn't.

a. # **Ník**   **tʰîː**   **pen**   kʰon   tʰam   caːn   tæ̀ːk

                def   *be*   *nom*   *cause*   *plate*   *break*

   Nát   **kɔ̀ː**   **dûːay**   **tʰîː**   **pen**   kʰon   tʰam   caːn   tæ̀ːk

        also   *together*   *def*   *be*   *nom*   *cause*   *plate*   *break*

Nick was the one that broke a plate. Nat was **also** the one that broke a plate.

b. # **Ník**   **tʰîː**   **pen**   kʰon   tʰam   caːn   tæ̀ːk

                def   *be*   *nom*   *cause*   *plate*   *break*

   lǽʔ   **Nát**   **kɔ̀ː**   **tʰam**   **mɨ̌ːan**   **kan**

        and   *also*   *do*   *same*   *each*

Nick was the one that broke a plate and so did Nat.

(13) however demonstrates that only a unique value is acceptable in a cleft focus construction. When an additive particle is inserted, the sentences become infelicitous as seen in (13a) and (13b). This is what we predict if Thai contrastive clefts are indeed associated with a uniqueness presupposition. (13) supports this claim and also suggests that focus and cleft focus differ in this respect. In a cleft focus, there is a presupposition that the proposition holds true of no other individual(s) than the set referred to in the focus position. And in Thai, the uniqueness presupposition is triggered by the morpheme *tʰîː* which I argue in the next section introduces a definite interpretation on the NP it associated with. And it is this morpheme *tʰîː* that imposes a uniqueuess requirement on the cleftee.

4.2.3 Contrastive clefts have a contrastive focus

Contrastive *pen* clefts encode a contrastive focus reading which comes from the definite marker *tʰîː* that introduces a definite reading on the NP that it marks in a nominal predicational

construction. I begin this section by introducing *tʰîː* as a definite maker[19]. *tʰîː* functions as a definite marker in characterizational copula sentences (Kuno and Wongkhomthong 1981). When *tʰîː* is acting as a definite marker, it is only restricted to characterizational *pen* copula sentences which take a nominalized clause. The example in (15) illustrates the relevant context.

(15) CONTEXT: B is talking to A about *Nik*, but there are two Nicks in their high school who they both know: one is a university lecturer, and the other is a high school drop out. A is not sure if they are talking about the same *Nik*, so he asks B to identify which *Nik* is under discussion.

A: kʰun   pʰûːt   tʰɨ́ːŋ   [**Ník năy**]

 you   talk   about   VARIABLE

 Which Nick are you talking about?

 (lit. You are talking about Nick which?)

B1: Ník   **tʰîː**   pen   ?acaːn

   def   be   teacher

 The Nick who is a university lecturer (as opposed to the Nick who is a high school drop out)

---

[19] This departs from the traditional view, which treats *tʰîː* as a complementizer introducing complement and relative clauses (cf. Hoonchamlong 1991, Visonyanggoon 2000, Wannapaiboon 2001). I also treat this morpheme as a complementizer in relative clauses in the next chapter. There are two complementizers in Thai that can be used to introduce complement clauses: *tʰîː* and *wâː*. While *tʰîː* introduces infinitive clauses, *wâː* introduces finite clauses.

(i) Nít tâ cay   tʰîː   cà? pen kʰruː
   intend   comp will be   teacher
 Nit intends to be a teacher.

(ii) Nít tâ cay   wâː   cà? pen kʰruː
   intend   comp will be   teacher
 Nit$_i$ intends that (she$_i$) will be a teacher.

As for relative clauses, they can be introduced by *tʰîː* but not by *wâː*.

(ii) a. n ŋsɨ̌ː (lêm) tʰîː   Nít yàːkdây   pʰæː mâːk
     book (cl)   comp   want   expensive very
   The book that Nit wanted to buy was very expensive.

  b. * n ŋsɨ̌ː (lêm) wâː   Nít yàːkdây   pʰæː mâːk
     book (cl)   comp   want   expensive very
   The book that Nit wanted to buy was very expensive.

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B2: # Ník   pen   ʔacaːn

           be   *teacher*

Nick is a university lecturer.

In (15B1), a specific definite interpretation correlates with the presence of *tʰîː*, this suggests that *tʰîː* should be treated as a definite marker. If *tʰîː* were acting as a complementizer in a relative clause, we would expect the sentence to be infelicitous because it is a sentence fragment, illustrated in the context below.

A: kʰun   pʰûːt   tʰɨ́ːŋ   [**Ník   năy**]

        you   *talk*   *about*   *VARIABLE*

        Which Nick are you talking about?

        (lit. You are talking about Nick which?)

B1: # Ník   **tʰîː**   sɔ̌ːn   mahǎːwítʰayaːlay

           def   *teach*   *university*

The Nick that teaches at a university lecturer.

B2:   pʰûːt   tʰɨ́ːŋ   Ník   **tʰîː**   sɔ̌ːn   mahǎːwítʰayaːlay

        Talk   *about*   *def*   *teach*   *university*

        (I) am talking about the Nick that teaches at a university lecturer.

In this context, the definite marker *tʰîː* is obligatory. I claim that it is the morpheme *tʰîː* that encodes a uniqueness presupposition. We saw in (15) the presence of the overt *pen* copula in nominal predicates. In Thai, predicational/characterizatinal contexts are distinct from equative/identificational contexts: the former requires the *pen*, the latter requires the copula *kʰɨ́ː* (Kuno and Wongkhomthong 1981). This is illustrated in (16).

(16)   a.   cʰán   **pen**   kʰruː

           I   *be*   *teacher*

        I am a teacher.

b.   *   cʰán   **kʰɨ:**   kʰru:

           I   *be*   *teacher*

           I am a teacher.

According to Kuno and Wongkhomthong (1981), the contrast between (16a) and (16b) is attributable to the nature of characterizational sentences such that 'being a teacher' is one of the characteristics that the subject possesses. (16b) is ungrammatical due to the mismatch between a characterizational sentence and the use of the identificational copula *kʰɨ:* in the sentence.

The above example shows the context where *pen* can occur and *kʰɨ:* cannot. The next example shows the opposite, namely a context where *kʰɨ:* can occur and *pen* cannot.

(17) a.   Ník   **kʰɨ:**   kʰon   tʰî: cʰán   rák

                      be   *cl*   *comp*   *I*   *love*

            Nick is the one that I love.

b.   *   Ník   **pen**   kʰon   tʰî: cʰán   rák

                      be   *cl*   *comp*   *I*   *love*

            Nick is the one that I love.

(17a) is an identificational sentence such that the speaker identifies the person who she loves. This is compatible with the identificational nature of *kʰɨ:*. (17b), on the other hand, produces a conflict by the use of characterizational copula pen in an identificational context, and hence the sentence is ungrammatical.

Contrastive clefts are only compatible with the characterizational copula *pen*, as shown in (18). When the identificational copula *kʰɨ:* is used, the sentence is ill-formed and does not gave a contrastive focus interpretation. We see that there is a correlation between the presence of the *pen* copula and the availability of a contrastive focus reading.

(18)   CONTEXT: A mother is furious to know that her expensive china was broken into pieces. She looks fiercely at Nick, Nat and New. Nat suddenly bursts out and utters (18a) that Nick is the one who did it, NOT him.

a.   *pen* AS A CHARACTERIZATIONAL COPULA

Ník   tʰîː   **pen**   kʰon   tʰam

def   *be*   *nom*   *do*

Nick was the one who did it.

b.   *kʰɨː* AS AN IDENTIFICATIONAL COPULA

*Ník   **tʰîː**   **kʰɨː**   kʰon   tʰam

def   *be*   *nom*   *do*

[Nick was the one who did it.]

To summarize, we have seen that contrastive *pen* clefts have the following three semantic properties: an existential presupposition (due to the open variable in the cleft clause), a uniqueness presupposition (due to the definite marker *tʰîː*), and a contrastive focus (due to the characterizational copula *pen*). I now consider the syntactic properties of contrastive clefts.

4.3 The syntax of contrastive clefts with overt *pen*

Contrastive *pen* clefts have the following syntactic properties:

(i)   The cleftee is in the subject position of the *pen* copula.

(ii)   The cleft is a nominalized clause with the nominalizer *kʰon*.

(iii)   The morpheme *kʰon* is a subject oriented nominalizer.

The example in (19) illustrates a contrastive cleft where the cleftee is introduced by the definite marker *tʰîː*. The cleft is a nominalized clause headed by the nominalizer *kʰon*. This nominalized clause is coindexed with its cleftee linked by the characterizational copula *pen*.

(19) [Ník   tʰîː]   ´pen .   [NomP kʰon   tʰam   caːn   tæːk]

      def   *be*   *nom*   *cause*   *plate*   *break*

      Nick was the one that broke a plate.

The structure is shown in (20). The characterizational *pen* copula takes a nominal predicate (here a nominalized clause) which in turn combines with a DP subject. The cleftee is a DP

marked by the definite morpheme *t^{h}ì:*. The cleft part is a nominalized clause headed by the nominalizer *k^{h}on*. Assuming the nP as a nominalized phrase, the referential argument in the specifier of nP is co-indexed with a pro subject.

(20)

```
                    IP
           ┌─────────┴────┐
         DP               ┌───┴──────┐
      ╱──────╲            I          nP
      Ník tʰì:            │      ┌────┴────┐
                         pen    Rᵢ     ┌───┴────┐
                         be            n        vP
                                       │    ┌───┴────┐
                                      kʰon  proᵢ    ┌──┴─────┐
                                                    v         VP
                                                    │     ┌───┴────┐
                                                   tʰam   NP       V'
                                                   cause ╱──╲      │
                                                       caːn        V
                                                       plate      tæ̀ːk
                                                                  break
```
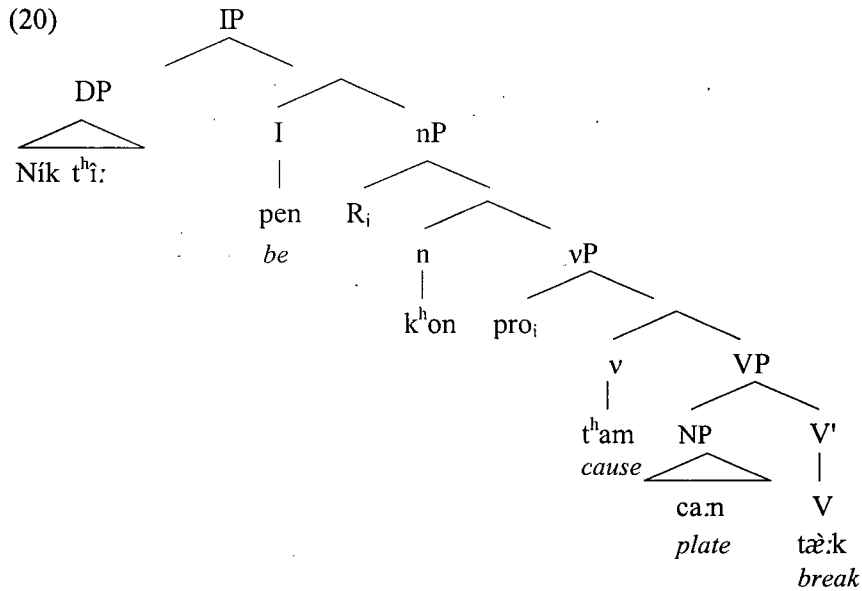
4.3.1 *k^{h}on* as a subject oriented nominalizer

In this section, I argue that the morpheme *k^{h}on* acts as a subject-oriented nominalizer in contrastive *pen* clefts. The nominalized clause behaves like a normal noun. To test whether *k^{h}on* is a real nominalizer, one can introduce the future maker *cà?* in the sentence. We expect that when the future marker is introduced, the sentence will be ill-formed because the nominalizer and the verb cannot be separated. This is confirmed by the data in (21).

(21) a.   **k^{h}on   câ:ŋ**

   nom   employ

   an employer

b. * **k^{h}on   cà?   câ:ŋ**

   nom   fut   employ

   [a future employer]

In additon to occurring pre-verbally, $k^h on$ also occurs post-verbally, as in (22a), in which case it functions as an indefinite pronoun rather than a nominalizer. The introduction of a future marker in such contexts is well-formed, (22b).

(22) a. pro câːŋ   **k^hon**

        employ one

≠ (i) an employee

= (ii) (pro) employs someone.

    b. pro **càʔ**   câːŋ   **k^hòn**

        fut   *employ*   *one*

       (pro) will employ someone.

We predict that if a nominalized clause like $k^h on$ *câːŋ* in (23a) indeed behaves like a noun phrase, it should have the same distribution as ordinary nominal expressions. For example, it can be modified (23b), quantified (23c) or pluralized by adding a numeral and classifier (23d).

(23) a.   c^hán   pen   [k^hon   câːŋ]

        I   *be*   *nom*   *employ*

        I am an employer.

    b.   [k^hon   câːŋ]   cay   ráːy

        nom   *employ heart*   *cruel*

        The employer is cruel.

    c.   [k^hon   câːŋ]   baːŋ   k^hon   cay   ráːy

        nom   *employ some*   *cl*   *heart*   *cruel*

        Some employers are cruel.

    d.   ŋaːn   níː   miː   [k^hon   câːŋ]   pràmaːn   hâː   k^hon

        job   *dem*   *exist*   *mon*   *employ about*   *five*   *cl*

        In this project, there are about 5 employers.

A nominalizer the morpheme k^hon is subject-orientd[29]. When we try to nominalize the object with the nominalizer k^hon, the sentence becomes ungrammatical, as in (24a). An object can only be nominalized if it is first promoted to subject vial passivization, as in (24b).

(24) a.　　k^{h}on　　câ:ŋ　　k^{h}un

　　　　　　nom　　employ you

　　　　　　an employer

　　b. *　k^{h}on　　k^{h}un　　câ:ŋ

　　　　　　nom　　you　　employ

　　　　　　[an employee]

　　b.　　k^{h}on　　**t^{h}ù:k**　　câ:ŋ

　　　　　　nom　　pass　　employ

　　　　　　an employee

In a contrastive cleft, the cleft clause is nominalized by the nominalizer k^hon. In so much as it appears that the cleft clause in contrastive *pen* clefts is nominalized, only the subject argument is available. Morevoer, the nominalizer k^hon can only nominalize the subject of a transitive verb, as shown in (25-28). The (b) examples of (26-28) show that the nominalizer *nák* is used for intransitive.

(25) a.　　**k^{h}on**　　kèp　　ŋən

　　　　　　nom　　collect　money

　　　　　　a bill collector/ a waiter

　　b.　　**k^{h}on**　　tæ̀:ŋ　　bâ:n

　　　　　　nom　　decoratehouse

　　　　　　an interior designer

---

[29] However, we will see in the next chapter that it can also appear as a classifier, in which case it is not subject restriction interpretations. That is, when there is no subject restriction, we have a relative clause.

c. **kʰon** tʰam suːan

nom do garden

a gardener

d. **kʰon** pùːay

nom sick

a sicker

(26) a. * **kʰon** wîŋ

nom run

[a runner]

b **nák** wîŋ

nom run

a runner

(27) a. * **kʰon** rɔ́ːŋ

nom sing

[a singer]

b. **nák** rɔ́ːŋ

nom sing

[a singer]

(28) a. * **kʰon** dəːntʰaːŋ

nom travel

[a traveler]

b. **nák** dəːntʰaːŋ

nom travel

a traveler

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Consistent with its status as a nominalized clause, we predict that no future marking is allowed in the cleft clause. The prediction is borne out. In (29a), when the future tense marker is introduced before contrastive *pen* copula, the copula is now associated with the future tense meaning 'will be'. The example in (29b), as expected, is ill-formed when the nominalizer and its verbs get separated by the future tense marker.

(29) a.

kʰáw	tʰîː	**càʔ**	pen	kʰon	hěn	pʰíː
he	det	fut	be	nom	see	ˌghost

He **will be** the one who sees the ghost.

b. *

kʰáw	tʰîː	pen	kʰon	**càʔ**	hěn	pʰíː
he	det	be	nom	fut	ghost	see

[He is the one who **will** see the ghost.]

To summarize, there is an asymmetry between subject and object when the *kʰon* nominalizer is introduced; only subjects of transitive verbs can be nominalized. The next two sections explore the semantic and syntactic properties of contrastive wh-clefts and argue that the apparent cases of partial and long-distance wh-movement are in fact instances of contrastive wh-clefts.

4.4 The semantics of reduced contrastive wh-clefts

This section shows that the semantics of reduced wh-clefts have the same properties as contrastive wh-clefts. I compare contrastive wh-clefts, the apparent cases of "partial" and "long-distance" wh-movement and wh in-situ. I show that there are semantic parallels between contrastive wh-clefts and the apparent cases of wh-movement, while wh in-situ lacks such properties. I propose that apparent cases of wh-movement involve no movement but are in fact reduced wh-clefts.

In Thai, contrastive wh-clefts have the following semantic properties:

(i)   The cleft clause is associated with an existential presupposition.

(ii)   The cleftee is associated with a uniqueness presupposition.

(iii)   The cleftee is associated with contrastive focus.

Consider how these properties are exemplified in (30).

(30) [DP kʰray   tʰîː]   **pen**   [NomP **kʰon**   tʰam   caːn   tæ̀ːk]

      VARIABLE.+HUMAN def   *be*   *nom*   *cause plate break*

      Who was the one that broke a plate?

As we saw the cleft clause is in fact a nominalized clause. This cleft clause has an existential presupposition in the sense that it presupposes the existence of someone who broke the plate but we do not know who that person was. In (30), the cleftee is a DP, here *kʰray tʰîː*. This DP has uniqueness presupposition: in this example 'who' seeks the unique individual that satisfies the existential presupposition introduced by the cleft clause. As before, the source of the uniqueness presupposition is the definite marker *tʰîː*. The cleftee, in addition to satisfying a uniqueness presupposition, is also contrastively focused (due to the *pen* copula), and so the wh-expression is here contrasted with any other accessible discourse referent. Thus, (30) can be uttered in a situation where there is a presupposition that the proposition holds true of no other individual that the set referred to in the focus position.

4.4.1 Reduced contrastive wh-clefts have an existential presupposition

I argue that apparent cases of wh-movement are reduced wh-clefts. I use a question-answer pair diagnostic to show that apparent cases of wh-movement are associated with an existential presupposition parallel to contrastive wh-clefts. Reduced wh-clefts require an existential presupposition of someone as an answer, the same way that contrastive wh-clefts do. Wh in-situ, on the other hand, is not associated with an existential presupposition. To illustrate this, consider a context where the answer to the wh-question is the empty set 'no one'. Such an answer is infelicitious with wh-clefts (31a-b), but felicitious with wh in-situ (31c).

CONTRASTIVE WH-CLEFTS

(31) a. Q: [**kʰray]**   tʰîː   pen   kʰon   tʰam   caːn   tæ̀ːk

        VARIABLE.+HUMAN   *def*   *be*   *nom*   *cause plate break*

        Who was the one that broke a plate?

A: #mây   mi: nî

neg   *have*

No one

REDUCED WH-CLEFTS

b. Q: **[kʰray]**   tʰî: tʰam   ca:n   tæ̀:k

      VARIABLE.+HUMAN   *def*   *cause*   *plate*   *brake*

      Who was the one that broke a plate?

A: #mây   mi: nî

neg   *have*

No one

WH IN-SITU

c. Q: **[kʰray]**   tʰam   ca:n   tæ̀:k

      VARIABLE.+HUMAN   *cause*   *plate*   *brake*

      Who broke a plate?

A: mây   mi: nî

neg   *have*

No one

'No one' is infelicitous as an answer in (31a-b) because the existence presupposition requires that the set of propositions in the domain is not empty. In contrast to this, 'no one' is a felicitous answer to wh in-situ because an existential presupposition is not expected in (31c).

4.4.2 Reduced contrastive wh-clefts have a uniqueness presupposition

Using the same question-answer test, one can show that reduced wh-clefts have the same semantic property as contrastive wh-clefts in that a speaker expects a unique entity to be singled out. Thus, while contrastive wh-clefts and their reduced counterpart do not permit more than one person to be singled out (32a-b), wh in-situ questions do (32c).

CONTRASTIVE WH-CLEFTS

(32) a. Q: [kʰray]   tʰĭː   pen   kʰon   tʰam   caːn   tæ̀ːk

       VARIABLE.+HUMAN   *def*   *be*   *nom*   *cause*   *plate*   *break*

       Who was the one that broke a plate?

       A: #Ník   Nát

          Nick,   Nat

REDUCED WH-CLEFTS

   b. Q: **[kʰray]**   **tʰĭː**   tʰam   caːn   tæ̀ːk

       VARIABLE.+HUMAN   *def*   *cause*   *plate*   *brake*

       Who was it that broke a plate?

       A:# Ník   Nát

         Nick,   Nat

WH IN-SITU

   c. Q: **[kʰray]**   tʰam   caːn   tæ̀ːk

       VARIABLE.+HUMAN   *cause*   *plate*   *brake*

       Who broke a plate?

       A: Ník   Nát

          Nick,   Nat

In this section, I look at another semantic property that contrastive wh-clefts share with their reduced counterparts: both are associated with a contrastive focus.

4.4.3 Reduced wh-clefts have a contrastive focus

One of the clearest ways of showing the presence of a contrastive focus reading is to create a context where such a contrastive reading is explicitly accepted. In such contexts, we expect that answers that encode a contrastive focus reading are felicitous with contrastive wh-clefts and reduced wh-clefts, but are infelicitous with wh in-situ. The data below turn out just as expected.

We see that the apparent cases of wh-movement have the same inherent contrastive focus reading found in contrastive wh-clefts (33a-b).

CONTRASTIVE WH-CLEFTS

(33) a. Q: [kʰray]   tʰî: pen   kʰon   tʰam   caːn   tæ̀ːk

           VARIABLE.+HUMAN   det   be   nom   cause plate break

      Who was the one that broke a plate?

      A: Ník   pen   kʰon   tʰam   mây   cʰây   Nát

          be   nom   cause neg   yes

      Nick was the one who did it and Nat wasn't the one who did it.

REDUCED WH-CLEFTS

      b. Q: [kʰray]   tʰî: tʰam   caːn   tæ̀ːk

           VARIABLE.+HUMAN   det   cause plate brake

      Who was the one that broke a plate?

      A: Ník   pen   kʰon   tʰam   mây   cʰây   Nát

          be   nom   cause neg   yes

      Nick was the one who did it and Nat wasn't the one who did it.

WH IN-SITU

      c. Q: [kʰray]   tʰam   caːn   tæ̀ːk

           VARIABLE.+HUMAN   cause plate brake

      Who broke a plate?

      A: # Ník   pen   kʰon   tʰam   mây   cʰây   Nát

           be   nom   cause neg   yes

      Nick was the one who did it and Nat wasn't the one who did it.

We thus conclude that Thai does not exhibit "partial" and "long-distance" wh-movement, though superficially it looks as if it does. The apparent instances of wh-movement are attributable to contrastive wh-clefts. The section shows that reduced wh-clefts have the same semantic properties as contrastive wh-clefts, as summarized (34).

(34)

Semantic properties	Contrastive wh-clefts	Reduced wh-clefts
i. Existential presuppostition	√	√
ii. Uniqueness presupposition	√	√
iii. Contrastive focus	√	√

This section has focused on the semantic properties of contrastive wh-clefts. I now consider the syntactic properties of wh-clefts and show that reduced wh-clefts have the same properties as wh-clefts.

4.5 The syntax of reduced contrastive wh-clefts

The syntactic structure of a contrastive wh-cleft is shown in (35). The cleftee is a wh-expression marked by the definite marker $t^h\tilde{\imath}$. The cleft is a nominalized clause headed by the nominalizer $k^h on$. This nominalized clause is coindexed with its cleft linked by the characterizational copula *pen*. The wh-expression matches in feature with the c-commanding probe Q$_{[wh]}$ base-generated in C position. Hence, wh-expression in subject position of *pen* copula is construed as wh-interrogative satisfying probe-goal relation.

(35)

```
CP
├── C
│   └── Q[wh]
│       │
│       DP
│       ├── kʰray
│       │   who
│       └── D
│           │
│           tʰî:
└── IP
    ├── I
    │   └── pen
    │       be
    └── nP
        ├── Rᵢ
        │   └── n
        │       └── kʰon
        └── vP
            ├── Agentᵢ
            └── v
                ├── tʰam
                │   cause
                └── VP
                    ├── NP
                    │   └── caːn
                    │       plate
                    └── V
                        └── tæːk
                            break
```
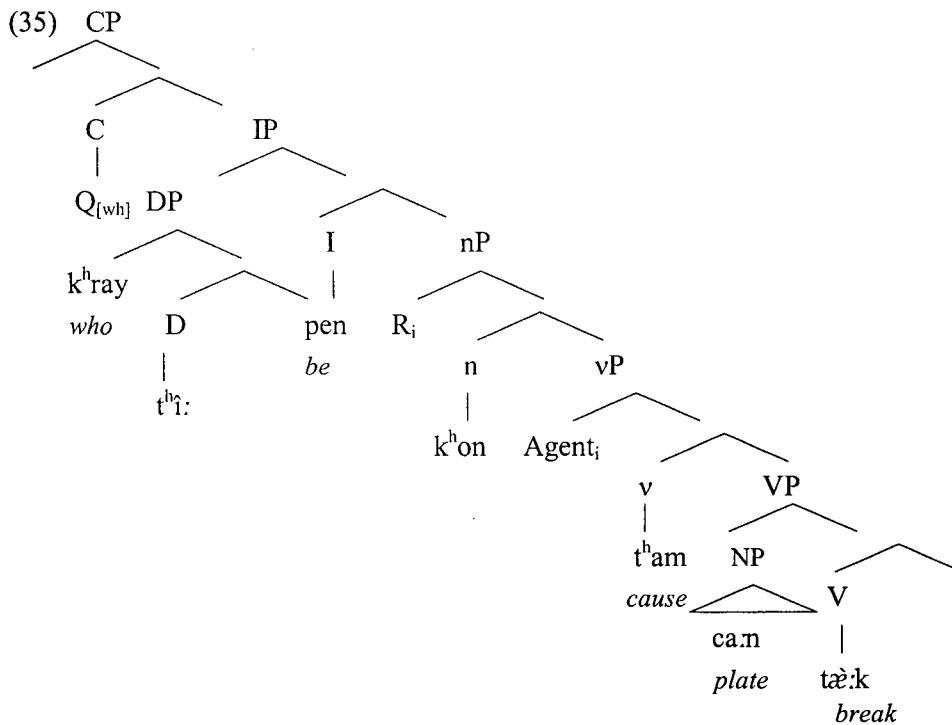
Contrastive wh-clefts have the following syntactic properties: a nominalized clause that gives rise to an existential presupposition, $t^h\hat{\imath}$: as a definite marker that gives rise to a uniqueness presupposition and a characterizational *pen* copula that gives rise to contrastive focus. Their reduced counterparts, however, lack an overt copula, and lack an overt nominalizer. Only the definite marker $t^h\hat{\imath}$: is present in reduced wh-clefts. Reduced contrastive wh-clefts have syntactic properties that parallel those of contrastive clefts:

(i)   The wh-expression as the cleftee is in the subject position of an abstract predicational copula (the covert counterpart of *pen*).

(ii)   The cleft is a nominalized clause with an abstract nominalizer (the covert counterpart of k^hon).

(iii) The nominalizer is a subject-oriented nominalizer.

The question that naturally arises is 'how are reduced wh-clefts associated with an existential presupposition and a contrastive focus reading when the nominalizer k^hon and *pen* copula are absent?' I repeat the examples below.

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CONTRASTIVE WH-CLEFTS

(36) a. [kʰray]   tʰî: pen   kʰon   tʰam caːn tæ̀ːk

      VARIABLE.+HUMAN   *def*   *be*   *nom* *cause* *plate* *break*

      Who was the one that broke a plate?


REDUCED WH-CLEFTS

b. [kʰray]   tʰî: tʰam caːn tæ̀ːk

      VARIABLE.+HUMAN   *def*   *cause* *plate* *break*

      Who was the one that broke a plate?

Even though the definite marker *tʰî:* induces a uniqueness presupposition, the uniqueness presupposition implies existential presupposition in the sense that the existence of someone must be presupposed before a unique individual is picked out. We can say that the presence of *tʰî:* in reduced wh-clefts is the source for both existential and uniqueness presupposition. For contrastive focus, I mentioned earlier that a notable property of reduced wh-clefts is that they can only allow 'bare' wh-expressions as opposed to 'D-linked' wh-expressions. We will see in chapter 5 that D-linked wh-expressions involve reduced identificational wh-clefts. This suggests that there might be a correlation between contrastive focus and 'bare' wh-expressions. The structure of the reduced wh-cleft is illustrated below.

(37)

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To summarize, I have argued that reduced wh-clefts have the same semantic and syntactic properties as contrastive wh-clefts. If they have the same structure, then the wh-expression is base-generated at the left edge of the clause where it matches in feature with the probe $Q_{[wh]}$ in C.

4.6 Consequences of the contrastive wh-cleft analysis

Considered together, the semantic and syntactic evidence reviewed above suggests that the apparent cases of wh-movement are derived from contrastive wh-clefts. I now consider three consequences of analyzing them as reduced wh-clefts:

(i)   There will be an asymmetry between the subject and the object.

(ii) Wh-objects are only promoted to wh-subjects via passivization.

(iii) Only [+human] subjects are allowed.

4.6.1 An asymmetry between wh-subjects and wh-objects

In contrastive wh-clefts, only wh-subjects can occur as a cleftee. As discussed in section 4.3.1, the nominalizer k^hon is subject oriented, as shown by the contrast between (38a) and (38b). If the apparent cases of wh-movement derive from contrastive wh-clefts, we predict the presence of a subject/object asymmetry in that only wh-subjects can occur as cleftees.

CONTRASTIVE WH-CLEFTS

(38) a.   **[kʰray]**   tʰîː   pen   kʰon   câːŋ   Britney

           VARIABLE.+HUMAN   *def*   *be*   *nom*   *employ*

           Who was the one that hired Britney?

      b. * **[kʰray]**   tʰîː   pen   kʰon   Britney câːŋ

           VARIABLE.+ HUMAN   *def*   *be*   *nom*   *employ*

           [Who was the one that Britney hired?]

The prediction is confirmed by the data in (39). As expected, there is a subject/object asymmetry in reduced wh-clefts. The reduced counterpart is grammatical in (39a) when the copula and nominalizer are absent corresponding to the full form of the contrastive wh-cleft in

(38a). In contrast to this, (39b) is ill-formed, the ungrammaticality arises due to the subject restriction on the nominalizer *kʰon*. This is consistent with the claim that apparent instances of wh-movement are derived from reduced contrastive wh-clefts.

REDUCED WH-CLEFTS

(39) a. **[kʰray** **tʰîː]** câːŋ Britney

VARIABLE.+HUMAN *def* *employ*

Who was the one that hired Britney?

b. * **[kʰray** **tʰîː]** Britney câːŋ

VARIABLE.+HUMAN *def* *employ*

[Who was the one that Britney hired?]

4.6.2 Wh-object can occur as a cleftee with the presence of passive markers

The contrastive wh-cleft analysis correctly predicts that in reduced wh-clefts, wh-objects can occur as a cleftee when the object in the cleft clause is passivized before being nominalized. We see in the data below that wh-objects can occur as the cleftee if they are promoted to subject by one of the passive makers *doːn*, *dâːy* or *tʰùːk*.

(40) a. **[kʰray]** tʰîː **doːn** tʰamtʰôːt mîːawaːnníː

VARIABLE.+HUMAN *def* *pass* *punish* *yesterday*

Who was the one that was punished yesterday?

b. **[kʰray]** tʰîː **dâːy** ráp kʰát lɨ̀ːak pay kʰæ̀ːŋkʰ̆ăn ʔoːlimpìk

VARIABLE.+HUMAN def pass *receive choose choose go contest Olympic*

Who was the one that was chosen to go to the Olympic?

c. **[kʰray]** tʰîː **tʰùːk** lɨ̀ːak hây ráp tʰun kaːn sɨksăː

VARIABLE.+HUMAN def pass *choose give receive scholarship nom study*

Who was the one that was chosen for a scholarship?

4.6.3 Only [+human] subjects are allowed

Another consequence of analyzing apparent cases of wh-movement as reduced wh-clefts is that [−human] wh-expressions are expected to not occur as cleftees in reduced wh-clefts. As we saw earlier, the nominalizer $k^h on$ is subject oriented, and more specifically is restricted to [+human] entities. Hence, wh-expressions with a [−human] feature equivalent to English 'what' are not compatible with the nominalizer $k^h on$. This explains why the full form on wh-clefts in (41a) is ungrammatical. By hypothesis, (41b) is a reduced wh-clefts of (41a), so we predict that the [+human] will hold, and it does.

CONTRASTIVE WH-CLEFTS

(41) a. * **[ʔaray]** t^hı̂:   pen   **k^hon** t^ham   bâːn t^halòm

           VARIABLE.−HUMAN   *def*   *be*   *nom*   *cause*   *house*   *collapse*

           [What was the thing that caused the house to collapse?]

REDUCED WH-CLEFTS

    b. * **[ʔaray]** t^hı̂: t^ham   bâːn t^halòm

           VARIABLE.−HUMAN   *def*   *cause*   *house*   *collapse*

           [What was the thing that caused the house to collapse?]

We have seen the following three restrictions hold of in reduced wh-clefts: only wh-subjects can occur as a cleftee (due to the inability of the nominalizer $k^h on$ to nominalize the object), wh-objects can occur as a cleftee only when passive markers are present (the object can only nominalize through passivization), only [+human] subject can occur as cleftees (due to the incompatibility of the nominalizer $k^h on$ with [−human] arguments). These restrictions fall out naturally from the contrastive wh-cleft analysis: the apparent cases of wh-movement are reduced wh-clefts and so they have the same structure as contrastive wh-clefts.

In this chapter, I argued that despite superficial appearances, apparent cases of wh-movement are best analyzed as a kind of contrastive wh-cleft. I have shown that the semantic and syntactic properties also hold of reduced wh-clefts.

Chapter 5
Wh-expressions at the left edge of the clause:
identificational wh-clefts

5.1 Introduction

There are other apparent cases of partial and long-distance wh-movement that crucially allow only discourse-linked wh-expressions (equivalent to English 'which N') to occur at the left edge. I call these *D-linked wh-expressions*. With this in mind, consider the ungrammatical example in (1a), in which the wh-expression appears to have undergone movement from its base-generated position. The ungrammaticality is attributable to the absence of the morpheme *tʰîː*, which is required to co-occur with the wh-expression. In contrast, (1b) is a grammatical example, in which *tʰîː* is present following the wh-expression in an intermediate position. A further grammatical example is given in (1c), with *tʰîː* present in a wh-expression in clause-initial position.

THAI WH IN-SITU

(1) a. * kʰun   kʰít   wâː   **[pʰûːcʰaːy kʰon năy]**   Nít   ʔæ̀ːp   cʰɔ́ːp

         you   *think* *comp* *man   cl   VARIABLE*   *hide*   *like*

         [Which man do you think Nit secretly has a crush on?]

THAI APPARENT PARTIAL WH-MOVEMENT

     b.   kʰun   kʰít   wâː   **[pʰûːcʰaːy kʰon năy] tʰîː** Nít   ʔæ̀ːp   cʰɔ́ːp

         you   *think* *comp* *man   cl VARIABLE comp*   *hide*   *like*

         Which man do you think Nit secretly has a crush on?

THAI APPARENT LONG-DISTANCE WH-MOVEMENT

     c.   **[pʰûːcʰaːy kʰon năy] tʰîː** kʰun   kʰít   wâː   Nít   ʔæ̀ːp   cʰɔ́ːp

         man   cl VARIABLE comp you   *think* *comp* *hide* *like*

         Which man do you think Nit secretly has a crush on?

Despite the surface appearance of "partial" and "long-distance" wh-movement, I argue that *tʰîː* clauses with D-linked wh-expressions such as those in (1b) and (1c) are identificational wh-

clefts, and as such are the reduced counterparts of identificational *kʰɨː* clefts. Identificational *kʰɨː.* clefts have a head noun or a classifier, an overt copula (*kʰɨː.*), and an overt complementizer (*tʰîː*): the clefted element may be a nominal expression, as in (2a), or a wh-expression, as in (2b). The reduced counterparts of identificational clefts appear in (3). I adopt the same convention as in chapter 4 of referring to reduced identificational clefts such as (3a) as "reduced clefts", and reduced identificational wh-clefts such as (3b) as "reduced wh-clefts".

IDENTIFICATIONAL CLEFT

(2) a.　Ron　**kʰɨː**　**kʰon**　**tʰîː**　Nít　ʔæ̀ːp　cʰɔ̀ːp

　　　　　　be　　*cl*　　*comp*　　　*hide*　*like*

Ron is the one that Nit secretly has a crush on.

IDENTIFICATIONAL WH-CLEFT

b.　[pʰûːcʰaːy　kʰon　nǎy]　　**kʰɨː**　**kʰon**　**tʰîː**　Nít　ʔæ̀ːp　cʰɔ̀ːp

　　man　　　*cl*　*VARIABLE*　*be*　　*cl*　　*comp*　　*hide*　*like*

Which man is the one that Nit secretly has a crush on?

REDUCED (IDENTIFICATIONAL) CLEFT

(3) a.　Ron　**tʰîː**　Nít　ʔæ̀ːp　cʰɔ̀ːp

　　　　　　comp　　*hide*　*like*

Ron is the one that Nit secretly has a crush on

lit =　(It is) Ron that Nit secretly has a crush on...

REDUCED (IDENTIFICATIONAL) WH-CLEFT

b.　**[pʰûːcʰaːy　kʰon　nǎy]**　**tʰîː**　Nít　ʔæ̀ːp　cʰɔ̀ːp

　　man　　　*cl*　*VARIABLE*　*comp*　　*hide*　*like*

Which man is the one that Nit secretly has a crush on?

Note that (3a) is a relative clause: the Ron under the discussion is restricted to present in the scene. (3b) contains the discoursed-linked wh-expression, which contains a noun (*pʰûːcʰaːy*), a classifier (*kʰon*), and a variable expression (*nǎy*). This phrase is equivalent to the English 'which NP'. Discoursed-linked wh-expressions (called "D-linked") are questions that require answers restricted to the set of entities common to both the speaker and hearer (Pesetsky 1987).

That is, D-linking is a relation between a referent and a discourse. However, a which-NP expression in Thai is even more contextually restricted than its English counterpart. Thai D-linked wh-expressions require that the answer select from a deictically prominent set of entities in the context.

With the deictic interpretation of D-linked wh-expressions in mind, I argue that (2) and (3) have the same structure. On this view, the reduced counterparts of (full) identificational wh-clefts lack an overt copula, and lack an overt classifier in the cleft clause. The remainder of this chapter shows that $t^h\hat{i}$: clauses with D-linked wh-expressions are reduced wh-clefts. Section 5.2 discusses the semantics of identificational clefts with the overt copula $k^h\hat{i}$:. Section 5.3 looks at the syntax of identificational clefts and shows that the cleft clause is a relative clause. In section 5.4 and 5.5, I show that the semantics and syntax of reduced wh-clefts have the same properties as identificational wh-clefts. Recall that in the previous chapter, we saw that one of the properties that contrastive wh-clefts possess is a contrastive focus reading. I show, in this chapter, that identificational clefts do not have such a property. Identificational wh-clefts are compared to contrastive wh-clefts, and are shown to be associated with existential and uniqueness presuppositions, but not contrastive focus. The chapter ends by considering two predictions that fall out from the identificational wh-cleft analysis. Thai wh-intervention effects are in fact reduced wh-clefts. That is, wh-intervention effects derive from identificational wh-clefts. This is to satisfy the probe-goal relation which determines that variable expressions must be at the left edge of the clause in order to match with the $Q_{[wh]}$ probe, and hence are interpreted as wh-expressions. Another consequence of analyzing D-linked $t^h\hat{i}$: clauses as reduced wh-clefts is that it reflects the morphological composition of Thai wh-argument locatives. D-linked wh-locatives in Thai are not bare wh-expressions akin to 'where'; instead, they are morphologicaly complex forms equivalent to 'which place'.

5.2 The semantics of identificational clefts with the overt copula $k^h\hat{i}$:.

Like the contrastive clefts discussed in the previous chapter, identificational clefts are associated with an existential presupposition and a uniqueness presupposition. As we shall see, the existential force correlates with the presence of the identificational $k^h\hat{i}$: copula, while the uniqueness presupposition arises from the definite description in the cleft relative clause.

Consider how these properties are exemplified in (4).

(4)   [NP Ron]   **kʰɨ:**   [XP **kʰon**   **tʰî:**   Nít   ʔæ̀:p   cʰɔ́:p]

                   be   *cl*   *comp*   *hide*   *like*

        Ron is the one that Nit secretly has a crush on.

Here, the cleft clause corresponds to XP, which as we shall see below is in fact a relative clause. This cleft clause contains the definite description that gives rises to the uniqueness presupposition. In (4), the cleftee is an NP, Ron. This NP correlates with the uniqueness presupposition: in this example Ron is the unique individual that satisfies the existential presupposition introduced by the identificational *kʰɨ:* copula. As we shall see below, the identificational *kʰɨ:* copula is the source of an existential presupposition in the sense that it presupposes the existence of someone who secretly has a crush on Nit.

5.2.1 Identificational clefts have an existential presupposition

One of the semantic properties of identificational clefts in Thai is that the identificational *kʰɨ:* copula is associated with an existential presupposition. To illustrate this, the example (4) is repeated below.

(5)   [NP Ron]   **kʰɨ:**   [XP kʰon   **tʰî:**   Nít   ʔæ̀:p   cʰɔ́:p]

                   be   *cl*   *comp*   *hide*   *like*

        Ron is the one that Nit secretly has a crush on x.

→   Existential presupposition: there is x such that Nit secretly has a crush on.

I use the same test illustrated in the previous chapter to show the presence of an existential presupposition by creating a context where such a presupposition is explicitly denied. In such contexts, we expect that identificational clefts will be infelicitous. The following context is provided to exemplify the presence of an existential presupposition in Thai clefts (6b), which is clearly lacking in the non-clefted focus construction.

(6)   S1   Nít   mây   dây   ʔæ̀:p   cʰɔ́:p   kʰray

                neg   *hide*   *like*   *VARIABLE.+HUMAN*

        Since Nit did not secretly have a crush on anyone,...

a. nân   mă:ykʰwa:mwâ: [Ron mây cʰây kʰon tʰî: Nít ʔæ̂:p cʰɔ́:p]

    that   mean   neg   yes   cl   comp hide like

    …it follows that, it is not Ron that Nit secretly has a crush on.

b. # nân   mă:ykʰwa:mwâ: mây cʰây [Ron **kʰɨ:** kʰon tʰî: Nít ʔæ̂:p   cʰɔ́:p]

    that   mean   neg   yes   be   cl   comp   hide   like

    …it follows that Ron was not the one that Nit secretly has a crush on.

(6a) is felicitous because an existential presupposition is not expected in a non-cleft clause. In contrast to this, (6b) is infelicitous. This is because the identificational *kʰɨ:* copula is the source of an existential presupposition. We see that such a presupposition is denied in (6b). The contradiction between the absence of the existential presupposition and the presence of the identificational *kʰɨ:* copula results in infelicity.

5.2.2 Identificational clefts have a uniqueness presupposition

Another semantic property of identificational clefts in Thai is that a uniqueness presupposition arises from the definite description in the cleft relative clause. In a cleft focus, only the unique value of the item substituted for the focus value can be asserted. To illustrate, consider a situation containing a contextually given set of individuals, a unique individual from which has to be picked out, as in (7a).

When the speaker tries to add an additive particle such as 'also' to assert one more value, the sentence becomes ungrammatical, as in (7b). This ungrammaticality is predicted because the result contradicts with the uniqueness presupposition property contained in the cleft clause construction.

INDIVIDUALS IN DOMAIN: {Ron, James, Ian}

(7) a. CONTEXT: Nit secretly has a crush on Ron; Nit does not secretly have a crush on James; Nit does not secretly have a crush on Ian.

[NP **Ron**]   kʰɨ: [XP **kʰon**   **tʰî:**   **Nít**   **ʔæ̂:p**   **cʰɔ́:p**]

              be   *cl*   *comp*   *hide*   *like*

Ron is the one that Nit secretly has a crush on.

$\rightarrow$ Uniqueness presupposition: only x such that Nit secretly has a crush on.

b.   CONTEXT: Nit secretly has a crush on Ron and James; Nit does not secretly have a crush on Ian.

* [NP Ron]   kʰɨ: [XP kʰon   tʰî: Nít   ʔæ̀:p   cʰɔ:p]

          be   cl   comp   hide   like

James kɔ̂:   kʰɨ: [XP kʰon   tʰî: Nít   ʔæ̀:p   cʰɔ:p] mɨ̀:ankan

          also   be   cl   comp   hide   like same-each

Ron is the one that Nit secretly has a crush on and James is **also** the one that Nit secretly has a crush on.

(7b) confirms the claim that only a unique individual can be asserted to be the focus value of open proposition in identificational clefts.

5.2.3 Identificational clefts do not have a contrastive focus

(8) illustrates that identifictional clefts do not have a contrastive focus.

(8)   a.   [NP Ron]   **kʰɨ:**   [XP kʰon   tʰî: Nít   ʔæ̀:p   cʰɔ:p]

                be   cl   comp   hide   like

Ron is the one that Nit secretly has a crush on.

$\rightarrow$ Existential presupposition: there is x such that Nit secretly has a crush on.

$\rightarrow$ Uniqueness presupposition: only x such that Nit secretly has a crush on.

b. * [Ron]   **kʰɨ:**   [XP kʰon tʰî: Nít   ʔæ̀:p   cʰɔ:p] mây cʰây Bill

                be   cl   comp   hide   like   neg   yes

Ron is the one that Nit secretly has a crush on, not Bill.

In (8b), we see that there is no contrastive focus between 'Ron' and someone else. This illustrates that a cleftee may be unique without being contrastive. This is attributable to the presence of identificational *kʰɨ:* copula Recall from chapter 4 that is the characterizational *pen* copula is the source of contrastive focus. Identificational *kʰɨ:* copula is, however, associated

with an "identificational interpretation" which in turn correlates with an existential and uniqueness presupposition only. I repeat the contrastive cleft example from chapter 4 below.

(9) [$_{DP}$ Ník t^{h}î:]   **pen**   [$_{XP}$ k^{h}on   t^{h}am   ca:n   tæ̀:k]
         det   *be*   *nom*   *cause* *plate* *break*

   Nit was the one that broke a plate.

→   Existential presupposition: x broke plate

→   Uniqueness presupposition: x = only Nick

→   Contrastive focus: x = Nit and no one else

To summarize, we have seen that identificational clefts have the following two semantic properties: an existential presupposition (due to the identificational *k^{h}i:* copula), a uniqueness presupposition (due to the definite description in the cleft relative clause). However, identificational clefts lack a contrastive focus reading. Therefore, these two types of clefts must be distinguished in Thai. The table in (10) summarizes the differences between these two clefts.

(10)

Semantic properties	Contrastive clefts	Identificational clefts
(i) Existential presuppostition	√	√
(ii) Uniqueness presupposition	√	√
(iii) Contrastive focus	√	×

5.3 The syntax of identificational clefts with overt *k^{h}i:*.

I now consider the syntax of identificational clefts that contain an overt copula *k^{h}i:*. Identificational *k^{h}i:* clefts have the following syntactic properties:

(i)   The cleftee is in the subject position of the identificational *k^{h}i:* copula

(ii) The cleft clause is a relative clause with a head noun and/or a classifier followed by the complementizer *t^{h}î:*

The example in (11) illustrates an identificational cleft which involves a relative clause. The cleftee is the subject of the *k^{h}i:* copula. The cleft is a relative clause that contains a head noun and/or a classifier *k^{h}on* followed by the complementizer *t^{h}î:*.

(11) **[Ron]** kʰɨ: [_DP_ pro [_CP_ kʰon   tʰî: Nít   ʔæ̀:p   cʰɔ́:p]]

          _be_   _cl_   _comp_   _hide_   _like_

    Ron is the one that secretly has a crush on Nit.

The structure of (11) is shown in (12). The head noun can be optional when the classifier is present. Assume that _pro_ is a head noun in the cleft clause. The classifier agrees in [+human] feature with (_pro_) that is co-indexed with the cleftee (Ron). And the cleftee is linked by the identificational kʰɨ: copula. The head noun is in turn related to a null operator in Spec CP. The null operator does not involve A' movement. Cheng and Sybesma (1999) argue that classifiers have an individualizing-singularizing function similar to that of determiners in other languages, which enables them to pick out a single individual from what is described by an NP. I follow their agument and assume that the kʰon classifier in Thai is functioning like a determiner.

(12)
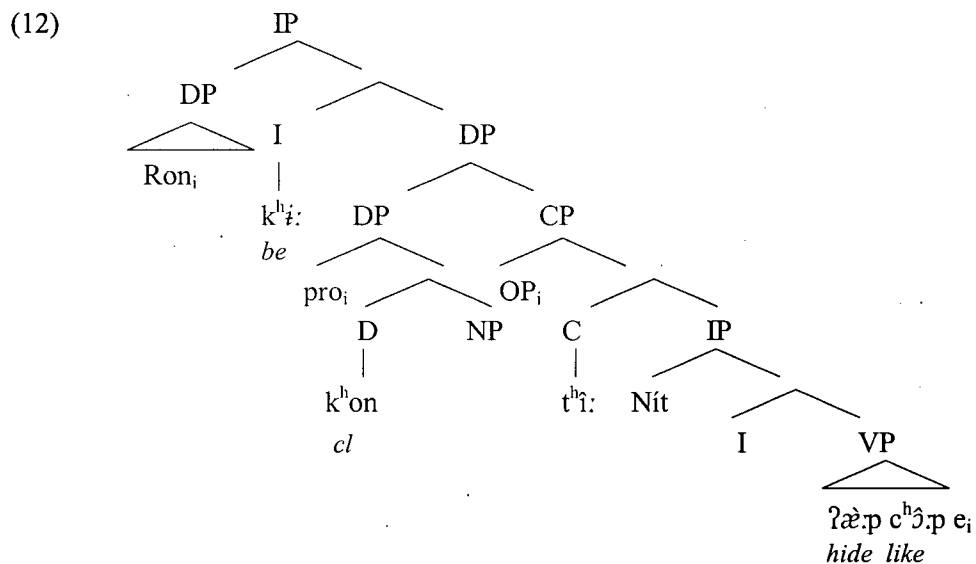
The next subsections discuss the identificational kʰɨ: copula, followed by discussion of the internal structure of the relative clauses. I show how Thai allows the head noun in relative clauses to be dropped, and also focus on the status of the classifier, and the status of tʰî: as a complementizer[30].

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[30] In contrastive clefts tʰî: is analyzed as a definite marker, but in identificational clefts tʰî: is analyzed as a complementizer.

5.3.1 Identificational $k^h\dot{i}$: copula

In addition to the characterizational *pen* copula that is used in contrastive clefts, Thai also has an identificational $k^h\dot{i}$: copula. Kuno and Wongkhomthong (1981) argue for a semantic distinction between these two copulas: while *pen* is used for characterizational sentences , $k^h\dot{i}$: is used for identificational sentences. One of the syntactic properties that the $k^h\dot{i}$: copula has is that the subject and the predicate can be switched. This is unsurprising, given that the subject and the predicate are identified as the same person, as in (13). (13a) and (13b) show no semantic distinction.

(13) a.   t^háksĭn k^h*ɨ̀:*   na:yók   k^hon   pàtcuban

                      be   *prime minister* *cl*   *present*

             Thaksin is the present Prime Minister.

     b.   na:yók   k^hon   pàtcuban   k^h*ɨ̀:*   k^hun t^háksĭn

              prime minister *cl*   *present*   *be*

             The present Prime Minister is Thaksin.

This predicts that in identificational clefts, the cleft clause should be able to precede the cleftee (due to the nature of identificational $k^h\dot{i}$: copula). This prediction is borne out, as in (14), in which *Ron* and *the person that Nit secretly has a crush on* are interpreted as one and the same person. This shows that an identificational cleft sentence makes use of identificational $k^h\dot{i}$: to assert that there is a particular entity that is identified by the definite description contained in the relative clause.

(14) a.   [Ron]   **k^h*ɨ̀:***   [_{XP} k^hon   t^hî: Nít   ʔæ̀:p c^hɔ̌:p]

                      be   *cl*   *comp*   *hide* *like*

             Ron is the one that Nit secretly has a crush on.

     b.   [_{XP} k^hon   t^hî: Nít   ʔæ̀:p c^hɔ̌:p] **k^h*ɨ̀:*** [Ron]

              cl   *comp*   *hide* *like* *be*

             The one that Nit secretly has a crush on is Ron.

5.3.2 Cleftee is a relative clause

In this section, I argue that in an identificational $k^h\dot{i}$: cleft, the cleft is a relative clause. This differs from the contrastive *pen* cleft discussed in chapter 4 where it was shown that the cleft is a nominalized clause. I show that identificational clefts are associated with the following syntactic properties:

(i)   The cleft is in the subject position of the identificational $k^h\dot{i}$: copula.

(ii) In a cleft clause, a head noun is dropped.

(iii) The morpheme $k^h on$ is a classifier and a relative operator in a relative clause.

(iv) The morpheme $t^h\dot{i}$: is a complementizer in a relative clause.

5.3.2.1 *pro* as a head noun in relative clauses

In the present analysis, the cleftee is in a relation with a relative clause which takes a *pro* head. In Thai relative clauses, the head noun and the classifier usually co-occur, as in (15a). When the head noun is overt, the classifier can be optional, as in (15b). The classifier, on the other hand, must be obligatory when the head noun is covert to allow recoverability of the head noun, as in (15c). (15d), on the other hand, is ungrammatical because both head noun and its classifier are not allowed to be dropped simultaneously in a relative clause.

```
        RELATIVE CLAUSE
(15)  [N head noun        [ classifier ] ]
      a.    N              cl
      b.    N              ∅
      c.    ∅              cl
      d. *  ∅              ∅
```

The [noun classifier] patterning in (15) is illustrated in the example (16). In (16a), the nominal 'dog' is the head noun. The classifier *tua*, when present, must agree with the head noun *mǎ:* that it occurs with. Here, the relevant feature is [–human]. In (16b), the classifier is optional when the head noun is present. In (16c), the classifier is present without the head noun. This can be generated in a discourse context in which the referent of the classifier is discourse

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familiar or is established deictically. (16d) shows that Thai does not allow a head noun and classifier to drop simultaneously in a relative clause, even though it is a pro-drop language.

(16) a. **mă:**   **tua**   tʰî: Nít   sɨ́:   ma:...

    dog   *cl*   *comp*   *buy*   *come*

    The dog that Nit bought...

b. **mă:**   ∅   tʰî: Nít   sɨ́:   ma:...

    dog   *comp*   *buy*   *come*

    The dog that Nit bought...

c. ∅   **tua**   tʰî: Nít   sɨ́:   ma: ...

         cl   *comp*   *buy*   *come*

    The dog that Nit bought...

d. * ∅   ∅   tʰî: Nít   sɨ́:   ma: ...

              comp   *buy*   *come*

    [That Nit bought...]

Classifiers must agree with the head noun. The example (17) illustrates how the classifier agrees in features with the noun that it occurs with. In (17a), *kʰon* is a classifier for nouns that are [+human], and agrees in [+human] feature on the head noun 'man'. On the other hand, *tua* in (17b) is a classifier for nouns that are [−human], and it produces a conflict in feature agreement between the classifier and the head noun 'men'. Resulting in ungrammaticality.

RELATIVE CLAUSE

(17) a. **pʰûːcʰaːy**   **kʰon**   tʰî: Nít   ʔæ̀:p   cʰɔ̂:p

    man   *cl*   *comp*   *hide*   *like*

    The man that Nit secretly has a crush on...

b. * pʰûːcʰaːy   tua   tʰîː   Nít   ʔæ̀ːp   cʰɔ́ːp

    man   *cl*   *comp*   *hide*   *like*

The man that Nit secretly has a crush on...

Examples (18-19) illustrate how different nouns that share the same feature take the same classifier. The classifier *kʰon* in (18) agrees in [+human] feature with each of the following head nouns, while the classifier *tua* in (18) agrees in [−human] feature with the head nouns.

(18)   **kʰon** [+human]

    a.   pʰûːcʰaːy$_{[+human]}$ 'a man'

    b.   kʰruː$_{[+human]}$ 'a teacher'

    c.   kʰamoːy$_{[+human]}$ 'a thief'

(19)   **tua** [−human]

    a.   mǎː$_{[-human]}$ a dog'

    b.   túkkataː$_{[-human]}$ 'a doll'

    c.   hùnyon$_{[-human]}$ 'a robot'

Recall that in the previous chapter, I analysed the morpheme *kʰon* as a nominalizer, and showed that it was subject-oriented. However, *kʰon* can also appear as a classifier, in which case it is not restricted to a subject interpretations. This means that when there is no subject restriction, we have a relative clause, which gives us an identificational cleft; however, when there is a subject restriction, we have a nominalized clause, which is used to construct contrastive clefts.

5.3.2.2 The morpheme *tʰîː* is a complementizer in a relative clause

In Thai, there is never a overt wh-operator in relative clauses; however, a head noun and/or a classifier is obligatorily followed by *tʰîː*. Cross-linguistically, relative clauses are embedded inside a nominal expression which it modifies (Alexiadou et al, 2000). Examples of English relative clauses are given below.

(20) a.   * [The man   [**who** **that**   I like]]

      b.   [The man   [**who**   ∅   I like]]

      c.   [The man   [∅   **that**   I like]]

      d.   [The man   [∅   ∅   I like]]

In (20a), the relative pronoun and complementizer are both overt, and hence the ungrammaticality of the sentence arises. This can be explained by the Doubly-Filled Comp filter (Sportiche 1992). This filter requires either the specifier or the head to be lexically filled in a given projection but not at the same time. In (20b), the relative pronoun 'who' is overt, and the complementizer is covert. In contrast to this, in (20c) the relative pronoun is covert, and the complementizer is overt. In (20d), we see that both relative pronoun and the complementizer can be absent.

The restrictions on relative operator and complementizer patterning are illustrated in (21) for Thai relative clauses. Taken together, the examples in (21a-d) show that $t^h\hat{\imath}{:}$ is an overt complementizer and it must be obligatorily present in a relative clause.

(21) a.   p^{h}û:c^{h}a:y   **k^{h}on**   **˙t^{h}î:**   Nít   c^{h}ɔ́:p

             man   *cl*   *comp*   *like*

             The man that Nit likes…

      b.   * p^{h}û:c^{h}a:y   **k^{h}on**   ∅   Nít   c^{h}ɔ́:p

             man   *cl*   *like*

             The man that Nit likes…

      c.   p^{h}û:c^{h}a:y   ∅   **t^{h}î:**   Nít   c^{h}ɔ́:p

             man   *comp*   *like*

             The man that Nit likes…

      d.   * p^{h}û:c^{h}a:y   ∅   ∅   Nít   c^{h}ɔ́:p

             man   *like*

             The man that Nit likes…

Thus, in an identificational cleft, the cleftee is the subject of an identificational $k^h \dot{t}$: copula and the cleft is formed by a relative clause.

5.4 The semantics of reduced identificational wh-clefts

This section shows that the semantics of reduced wh-clefts have the same properties as identificational wh-clefts, while wh in-situ does not. I argue that there are semantic parallels between identificational wh-clefts and $t^h \hat{\imath}$: clauses with D-linked wh-expressions. Wh in-situ constructions, however, lack these properties.

With this in mind, consider the example in (22).

IDENTIFICATIONAL WH-CLEFT

(22) [pʰûːcʰaːy   kʰon nǎy]   kʰɨ̀ː   kʰon   tʰîː   Nít   ʔæ̀ːp   cʰɔ́ːp

     man   *cl*   *VARIABLE* *be*   *cl*   *comp*   *hide* *like*

    Which man is the one that Nit secretly has a crush on?

As we have seen, the cleft clause is in fact a relative clause. It is the definite description in the cleft relative clause that gives rise to a uniqueness presupposition. The cleftee $p^h \hat{u}:c^h a:y$ $k^h on$ $n \check{a}y$ 'which man' and the cleft clause are connected by the identificational $k^h \dot{t}$: copula. The identificational $k^h \dot{t}$: copula, in turn, is the source of an existential presupposition. However, identificational wh-clefts do not have a contrastive focus reading. The cleftee is a unique individual but need not be contrasted with any other accessible discourse referent.

5.4.1 Reduced identificational wh-clefts have an existential presupposition

I argue that $t^h \hat{\imath}$: clause with D-linked wh-expressions are reduced wh-clefts that lack an overt $k^h \dot{t}$: copula. I use the same diagnostic as discussed in the previous chapter to show that $t^h \hat{\imath}$: clauses with D-linked wh-expressions are associated with an existential presupposition parallel to identificational wh-clefts. Reduced wh-clefts require the existence of someone in the answer. In contrast, an answer to wh in-situ question is not restricted to the presence of an existential presupposition.

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In identificational wh-clefts, the speaker presupposes the existence of the cleft that *Nit likes x* and asks the question to find out *who is x such that Nit has a crush on x*. When the answer is given as 'Nit has a crush on no one', the presupposition is explicitly denied. This results in an anomaly if 'no one' is given as an aswer to the identificational wh-clefts, as in (23a). The fact that the answer of 'no one' answer is infelicitious in (23b) entails that (23b) behaves parallel to the identificational wh-cleft in (23a). This follows if (23b) is a reduced form of (23a). In contrast to wh-clefts, wh in-situ is not associated with an existential presupposition (23c).

IDENTIFICATIONAL WH-CLEFT

(23) a. Q: [pʰûːcʰaːy kʰon năy] kʰɨ̀ː kʰon tʰîː Nít ʔæ̀ːp cʰɔ̀ːp

man   cl VARIABLE . be   cl   comp   hide   like

Which man is the one that Nit secretly has a crush on?

A:#mây   miː nî

Neg   have

No one

REDUCED WH-CLEFT

b. Q: [pʰûːcʰaːy kʰon năy tʰîː] Nít   ʔæ̀ːp cʰɔ̀ːp

man   cl VARIABLE comp   hide   like

Which man is the one that Nit secretly has a crush on?

A:#mây   miː nî

Neg   have

No one

WH IN-SITU

c. Q: Nít   ʔæ̀ːp cʰɔ̀ːp [pʰûːcʰaːy kʰon   năy]

hide like   man   cl   which

Which man does Nit secretly have a crush on?

A: mây   miː nî

Neg   have

No one

5.4.2 Reduced identificational wh-clefts have a uniqueness presupposition

Consider the data in (24). We found the answer to (24a) infelicitous when the two members are picked out from the answer set. One of the semantic properties that identificational clefts have is that they require an answer to be uniquely singled out. The cleftee must contain one and the only one member to satisfy a uniqueness presupposition. The peculiarity of the answer given in (24a) is due to a violation of the uniqueness requirement on the cleft-focus construction. Reduced wh-cleft behave the same way (24b). On the other hand, with wh in-situ questions, the answer is not required to be a unique individual. The question can be uttered in a situation in which the speaker does not expect Nit to like only one person, as in (24c).

IDENTIFICATIONAL WH-CLEFT

(24) a. Q: [pʰûːcʰaːy kʰon nǎy]   kʰɨ: kʰon   tʰîː   Nít   ʔæ̀ːp   cʰɔ́ːp

          man   *cl*   *which*   *be*   *cl*   *comp*   *hide*   *like*

          Which man is the one that Nit secretly has a crush on?

    A: #cʰɔ́ːp   sɔ̌ːŋ   kʰon   Sǒmpɔːŋ   lǽʔ   Sǒmcʰaːy

       like   *two*   *cl*   *and*

        She likes both: Sompong and Somchaay.

REDUCED WH-CLEFT

b. Q: [(pʰûːcʰaːy) kʰon nǎy]   tʰîː   Nít   ʔæ̀ːp   cʰɔ́ːp

       man   *cl* *VARIABLE*   *comp*   *hide*   *like*

        Which man is the one that Nit secretly has a crush on?

    A: #cʰɔ́ːp   sɔ̌ːŋ   kʰon   Sǒmpɔːŋ   lǽʔ   Sǒmcʰaːy

       like   *two*   *cl*   *and*

        She likes both: Sompong and Somchay.

WH IN-SITU

c. Q: Nít   ʔæ̀ːp   cʰɔ́ːp   [pʰûːcʰaːy   kʰon   nǎy]

            hide   *like*   *man*   *cl*   *which*

        Which man does Nit secretly have a crush on?

A: cʰɔːp   tʰáŋ   sɔ̌ːŋ   kʰon   Sǒmpɔːŋ   læ̂ʔ   Sǒmcʰaːy

like   *two*   *cl*   *and*

She likes both: Sompong and Somchay.

So far, we have seen that identificational wh-clefts have the same semantic properities as contrastive wh-clefts, as discussed in chapter 4. The next section provides the same test (a question-answer pair) to exemplify the absence of a contrastive focus in identificational wh-clefts. Although contrastive focus is absent in identificational wh-clefts, it is clearly present in contrastive wh-clefts.

5.4.3 Reduced identificational wh-clefts lack a contrastive focus

This section shows that reduced identificational wh-clefts lack contrastive focus. We find that the contrastive focus answer given to identificational wh-clefts, as in (25a-b) is infelicitious because the answer is more informative than what the question requires. The identificational wh-cleft is asking the hearer to pick out a single and unique member from the answer set, rather than asking for a person who is being contrasted with any other accessible discourse referent. Notice that the same answer is infelicitous with the wh in-situ construction as well.

IDENTIFICATIONAL WH-CLEFT

(25) a. Q: [pʰûːcʰaːy   kʰon   nǎy]   kʰɨ̀ː   kʰon   tʰîː   Nít   ʔæ̀ːp   cʰɔːp

        man   *cl*   *VARIABLE*   *be*   *cl*   *comp*   *hide*   *like*

        Which man is the one that Nit secretly has a crush on?

        A:#Sǒmpɔːŋ   mây   cʰây   Sǒmcʰaːy

                 neg   *yes*

        Sompong, not Somchaay.

REDUCED WH-CLEFT

    b. Q: [pʰûːcʰaːy   kʰon   nǎy   tʰîː]   Nít   ʔæ̀ːp   cʰɔːp

        man   *cl*   *VARIABLE*   *comp*   *hide*   *like*

        Which man is the one that Nit secretly has a crush on?

A:#Sŏmpɔːŋ mây cʰây Sŏmcʰaːy

       neg   *yes*

  Sompong, not Somchaay.

WH IN-SITU

c. Q: Nít   Ɂæːp   cʰɔːp   **pʰûːcʰaːy**   **kʰon**   **nǎy**

        hide   *like*   *man*   *cl*   *VARIABLE*

  Which man does Nit secretly have a crush on?

A: #Sŏmpɔːŋ   mây   cʰây   Sŏmcʰaːy

         neg   *yes*

  Sompong, not Somchay.

We see that the reduced wh-clefts have the same semantic properties as identificational wh-clefts: an existential presupposition (due to the infelicity of a negative answer to a wh-cleft), a uniqueness presupposition (due to the infelicity of the answer denoting more than one member in the answer to a wh-cleft), and the lack of a contrastive focus (due to the infelicity of a contrastive focus answer). Note that it is existential and uniqueness presuppositions (not a contrastive focus in this case) which distinguish wh-cleft constructions from wh in-situ. This is illustrated in a table below.

(26)

Semantic properties	Identificational wh-clefts	Reduced wh-clefts
i. Existential presuppostition	√	√
ii. Uniqueness presupposition	√	√
iii. Contrastive focus	×	×

The next section considers the syntactic properties of identificational wh-clefts and shows that the reduced wh-clefts have the same syntactic properties as wh-clefts.

5.5 The syntax of reduced identificational wh-clefts

I established above that identificational wh-clefts have the following syntactic properties:

(i)   The cleftee as a D-linked wh-expression is in the subject position of the identificational $k^h\acute{i}$: copula

(ii)   The cleft clause is a relative clause with a head noun and/or a classifier followed by the complementizer $t^h\hat{i}$:

IDENTIFICATIONAL WH-CLEFT

(27)   [pʰûːcʰaːy   kʰon   năy]   kʰíː   [pro [kʰon   tʰîː   Nít   ʔæ̀ːp   cʰɔ́ːp]]

      man   cl VARIABLE be   cl   comp   hide   like

      Which one is the one that Nit secretly has a crush on?

The structure of (27) is illustrated in (28). The cleftee is in the subject position (Spec IP) of the $k^h\acute{i}$: copula. Notice that the NP 'man' is moved to appear in the specifier position of DP preceding the classifier in D position. In the cleft clause, the head noun is covert as *pro*, while the classifier is overt. The classifier agrees in [+human] feature with the *pro* co-indexed with the cleftee (Ron), and is linked by the identificational $k^h\acute{i}$: copula. The head noun is in turn related to a null operator in Spec CP. The null operator does not involve A' movement.

(28)

```
                          CP
                   _____/_____
                  /                 \
                 C                   IP
                 |            _____/_____
                 |           /               \
              Q[wh]  DPᵢ     I               DP
              _____/\       |        _____/_____
             /       \       |       /               \
       pʰûːcʰaːyᵢ    /\      kʰɨː DP              CP
        man      D    φP      _____/\_____      ____/\____
                 |    ___/\___  proᵢ       \   Opᵢ        \
              kʰon   /        \     ____/\____   ___/\___
               cl   φ     NP   D   C       IP
                    |    /\    |   |    ___/\___
                   năy  tᵢ  kʰonᵢ  tʰîː Nít        \
                           cl              I      VP
                                                 /\
                                            ʔæːp cʰɔːp eᵢ
                                             hide  like
```
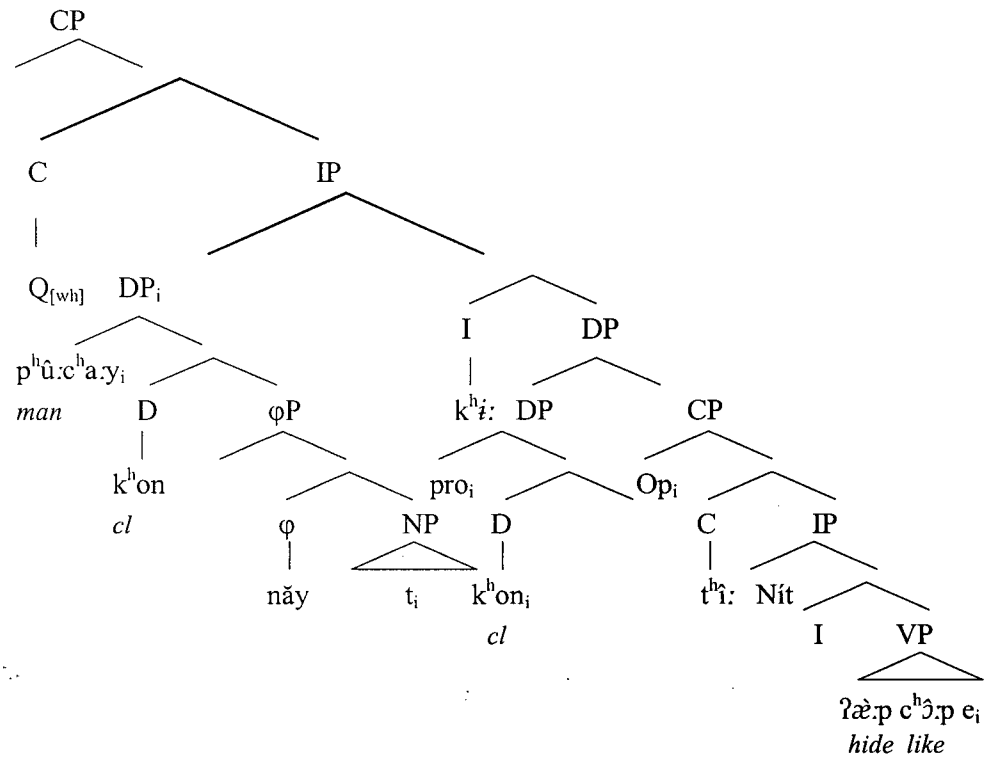
We see that the D-linked expression gets a wh-construal. As an underspecified goal, the [wh] feature on the qualified probe Q is copied onto it, yielding a wh-construal.

The question that arises with respect to the cleft clause of (28) is 'why is it possible in reduced wh-clefts to drop both the *pro* subject and the classifier at the same time?' As discussed in the previous sections, identificational wh-clefts have the following properties: an existential force correlates with the presence of the identificational *kʰɨː* copula, while a uniqueness presupposition arises from the definite description in the cleft relative clause. In their reduced counterparts, we see that only the complementizer *tʰîː* is overt, as illustrated in (29).

(29)

```
                    CP
                   /  \
                  /    \
                 C      IP
                 |     /  \
            Q[wh]   DP_i    \
                  /    \     I   DP
         pʰûːcʰaːy_i        |  /  \
           man   D    φP    ∅ DP   CP
                 |   /  \     /  \   / \
               kʰon φ   NP  pro_i  Op_i  \
                cl  |  /\   D       C    IP
                   nǎy t_i  ∅      |    / \
                                  tʰîː Nít  \
                                         I   VP
                                            /\
                                     ʔæ̀ːp cʰɔ́ːp e_i
                                       hide like
```
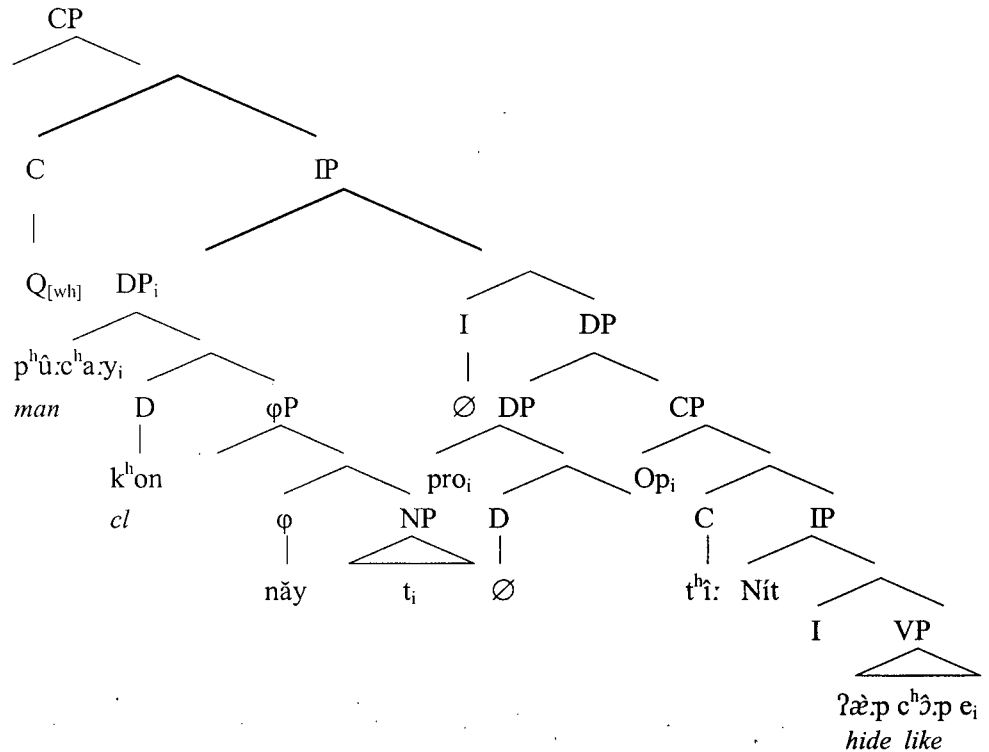
As discussed in section 5.3.2.2, a head noun and its classifier cannot be dropped in a normal relative clause. The structure in (29), however, indicates that the head noun and its classifier in the cleft relative clause are both dropped. What is happening is that they do spell out but in the cleftee via the D-linked wh-expression. And hence, there is no need to spell out twice.

Recall that one of the syntactic properties that identificational wh-clefts have is that the cleft and the cleftee can be reversed. In reduced wh-clefts, the cleft clause 'that Nit secretly has a crush on' is not allowed to be in the subject position. The D-linked wh-expression must occur at the left edge. Why is this so? Note that this language allows a long-distance probe-goal relation. The goal, in a reversed position, can still match with the probe in C position because there is no other closer probe. The reason why the D-linked wh-expression has to be at the left edge may be because the left edge position is a structurally dedicated focus position in this language.

5.5.1 Evidence for a non-movement analysis : identificational wh-clefts/relative clause parallel

This section provides more evidence that $t^hî$ clauses with D-linked wh-expressions are in fact reduced wh-clefts. Hoonchamlong (1991) and Wannapaiboon (2001) argue that Thai relative clauses do not involve A' movement (due to an absence of island effects). That is, the head nouns are base-generated outside the relative clause. In the relative clause, an empty operator is an A' binder, binding the null resumptive pronoun via A' binding. If the apparent cases of wh-movement with D-linked wh-expressions were to derive from identificational wh-clefts, we predict that they should show no island effects.

(30a) is an example of a relative clause where the subject DP inside a complex NP island is being relativized. The head noun 'woman' and the optional resumptive pronoun inside the island are linked. If there were movement, an empty operator from the island would be moved out of the island. Since such movement is not allowed, we expect (30a) to be ungrammatical. However, (30a) is a well-formed sentence. Therefore, we can deduce that no movement of the empty operator occurs. A D-linked wh-expression parallel to (30a) is illustrated in (30b). We find no island effect in reduced wh-clefts, as expected. If there were movement of the D-linked wh-expression in (30b), we would expect ungrammaticality because no movement can occur across the island. However, (30b) is grammatical. Hence, there is no wh-movement.

COMPLEX NP ISLAND

(30) a. kʰáw cʰɔ́ːp pʰûːyǐŋ kʰon tʰîː kʰáw dâyyin kʰàːwlɨ̀ː maː wâː (tʰəː) kamlaŋ càʔ tæ̀ːŋaːn

he like woman cl comp he hear rumor come comp(she) prog will marry

He likes the woman that he heard the rumor that (she) is going to get married.

COMPLEX NP ISLAND

b. **pʰûːyǐŋ kʰon nǎy** tʰîː kʰáw dâyyin kʰàːwlɨ̀ː maː wâː **(tʰəː)** kamlaŋ càʔ tæ̀ːŋaːn

woman cl which comp he hear rumor come comp (she) prog will marry

lit = Which woman is the one that he heard the rumor that (she) is going to get married?

Consider now instances with adjunct islands. If the D-linked wh-expression were to extract from the adjunct island in (31), we would expect the sentences to be ungrammatical. However,

since (31b) is well-formed, we deduce that no wh-movement occurs.

ADJUNCT ISLAND

(31) a. kʰáw kamlaŋ nɯ́ktʰɤ́ɯ̆ŋ pʰûːyɯ̆ŋ kʰon tʰîː tʰamhây kʰáw rúːcàk Nít pʰrɔ́ʔ tʰəː cʰûːay nǽʔnam

he   prog   think of   woman cl comp cause he   know   because she help introduce

He is thinking of the woman who made him know Nit

because she introduced (him to Nit).

ADJUNCT ISLAND

b. **pʰûːyɯ̆ŋ kʰon nǎy**   tʰîː   tʰamhây kʰáw rúːcàk Nít pʰrɔ́ʔ   tʰəː cʰûːay nǽʔnam

woman   cl   which   comp cause   he   know   because she help   introduce

Which woman is the one that made him know Nit

because she introduced him to Nit?

To conclude, *tʰîː* clauses with D-linked wh-expressions are reduced identificational wh-clefts. They do not involve wh-movement; rather D-linked wh-expressions are base-generated in the subject position agreeing in [wh] feature with the $Q_{[wh]}$ probe.

5.6 Consequences of the identificational wh-cleft analysis

This section considers two major consequences of analyzing *tʰîː* clauses with D-linked wh-expressions as reduced wh-clefts. First, there should be no asymmetry between wh-subjects and wh-objects. They are both predicted to occur in a cleftee position. Second, there should be no featural restrictions on D-linked wh-expressions. In particular, both [+human] and [−human] are predicted to occur in a cleftee position.

5.6.1 The lack of asymmetry between wh-subjects and wh-objects

We see that in identificational wh-clefts, the cleft clause is formed by a relative clause. In the relative clause, the head nouns in subject or complement position can be relativized. Analyzing D-linked wh-expressions as reduced wh-clefts, we expect the D-linked wh-expressions in the cleftee position can be associated with a gap in either the subject or the object position of a relative clause.

With this in mind, consider (32a), where the D-linked wh-expression is construed as a wh-subject in a cleftee position, while in (32b), the D-linked wh-expression is construed as a wh-object. The cleftees are co-indexed with the relativized head nouns in both positions. The relativized head nouns, in turn, are co-indexed with the (optional) resumptive pronoun in subject and object position inside the relative clause, as in (33a-b). The reduced identificational wh-clefts with D-linked wh-expressions show the lack of a subject-object asymmetry. In (34a), the reduced D-linked wh-expression is construed as a wh-subject, and in (34b) it is construed as a wh-object.

IDENTIFICATIONAL WH-CLEFT: WH-SUBJECT

(32) a. **[pʰûːcʰaːy kʰon năy]**   kʰ*ɨ*ː   kʰon   tʰîː   ʔæ̀ːp   cʰɔ́ːp   Nít

man   cl   VARIABLE   be   cl   comp   hide   like

Which man is the one that secretly has a crush on Nit?

IDENTIFICATIONAL WH-CLEFT: WH-OBJECT

b. **[pʰûːcʰaːy kʰon năy]**   kʰ*ɨ*ː   kʰon   tʰîː   Nít   ʔæ̀ːp   cʰɔ́ːp

man   cl   VARIABLE   be   cl   comp   hide   like

Which man is the one that Nit secretly has a crush on?

RELATIVE CLAUSE: RELATIVIZED SUBJECT

(33) a. [pʰûːcʰaːy   kʰon   tʰîː   ʔæ̀ːp   cʰɔ́ːp   Nít]…

man   cl   comp   hide   like

The man that secretly has a crush on Nit…

RELATIVE CLAUSE: RELATIVEZED OBJECT

b. pʰûːcʰaːy   kʰon   tʰîː   Nít   ʔæ̀ːp   cʰɔ́ːp]…

man   cl   comp   hide   like

The man that Nit secretly has a crush on…

REDUCED WH-CLEFT: WH-SUBJECT

(34) a. **[pʰûːcʰaːy   kʰon   năy]**   tʰîː   ʔæ̀ːp   cʰɔ́ːp   Nít

man   cl   VARIABLE.±HUMAN   comp   hide   like

Which man is the one that secretly has a crush on Nit?

REDUCED WH-CLEFT: WH-OBJECT

b.   [pʰûːcʰaːy   kʰon   năy]   tʰîː   Nít   ʔæːp cʰɔːp

          man   *cl*   *VARIABLE±HUMAN*   *comp*   *hide like*

          Which man is the one that Nit secretly has a crush on?

These above examples in (31-33) suggest that reduced D-linked wh-expressions are indeed derived from identificational wh-clefts because wh-subject and wh-object are able to occur in a cleftee position, as expected if relativization is involved.

5.6.2 Both [+human] and [−human] are allowed in a cleftee position

In reduced wh-clefts with D-linked wh-expressions, we see a [+human] feature 'which man' in a cleftee position. We expect that the cleftee should not be restricted to only [+human]. The cleft clause is formed by a relative clause, in which case any [±human] head noun featured can be relativized. Reduced wh-clefts are given a parallel analysis to identificational wh-clefts. Hence, we should expect to see [−human] occur in a cleftee position. This prediction is in fact borne out, as shown in (35).

REDUCED WH-CLEFT: [−HUMAN] WH-SUBJECT

(35)   a.   **măː**   **tua**   **năy**   tʰîː   kàt   Nít

           dog   *cl*   *VARIABLE*   *comp*   *bite*

           Which dog was the one that bit Nit?

REDUCED WH-CLEFT: [−HUMAN] WH-OBJECT

b.   **măː**   **tua**   **năy**   tʰîː   Nít   síː   maː

           dog   *cl*   *VARIABLE*   *comp*   *buy*   *come*

           Which dog was the one that Nit bought?

The next section ends the chapter by discussing the two predictions that fall out from the identificational wh-cleft analysis.

5.7 Predictions of the identificational wh-cleft analysis

. This section discusses the two predictions of treating $t^h\hat{\imath}$: clauses with D-linked wh-expressions as identificational wh-clefts. These predictions help shed some light on the nature of wh-intervention effects and wh-argument locatives in Thai. Both wh-intervention effects and wh-argument locatives derive from reduced (identificational) wh-clefts.

5.7.1 Identificational wh-clefts rather than wh-intervention effects

Beck (1996) and Beck & Kim (1997) investigate wh-intervention effects cross-linguistically and argue that wh-expressions cannot move across certain interveners (i.e. negation quantifiers, focus phrases) to take scope over the clauses at LF. However, these interveners do not block overt wh-movement.

The following data from Korean and Mandarin illustrates their generalization[31] (Beck & Kim 1997, Kim 2000). In (36a), 'anyone' is an intervener when the wh-expression 'who' covertly moves across the intervener at LF. This intervention effect results in ungrammaticality of the sentence. In contrast, in (36b), we see that it is grammatical when the wh-expression overtly moves across the intervener 'anyone'.

WH-INTERVENTION EFFECTS: KOREAN

(36) a. * **amuto**   **nuku-lûl**   po-chi   anh-ass-ni

       anyone   *who-acc*   *see-chi*   *not do-past-Q*

       Whom did no one see?

b.   **nuku-lûl**$_i$ **amuto** t_i po-chi   anh-ass-ni

       who-acc   *anyone*   *see-chi*   *not do-past-Q*

       Whom did no one see?

In (37a), 'anyone' is an intervener and it blocks the LF movement of the D-linked wh-expression 'which book'. Hence, ungrammaticality of the sentence arises. In (37b), the

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[31] Beck and Kim (1997) provide an array of data illustrating intervention effects for wh-licensing and NPI licensing. Interveners include negation, quantifiers and focus phrases (i.e. 'only', 'even' and 'also').

intervener 'anyone' does not block the overt wh-movement of the D-linked wh-expression, resulting in grammaticality of the sentence.

WH-INTERVENTION EFFECTS: CHINESE

(37) a. * [shei ye] kan bu dong [na-ben shu]

who also (=anyone) read not understand which-cl book

Which book could no one understand?

b. [na-ben shu] [shei ye] kan bu dong

which-cl book who also (=anyone) read not understand

Which book could no one understand?

At first glance, it seems that there are wh-intervention effects in Thai. This is illustrated in the examples below. The goal (as a variable expression) does not have a wh-construal when the intervener *mâym:ik^hray* 'no one' appears between the in-situ variable and the clause over which the variable takes scope. The goal can only have an NPI-construal, as in (38a). However, in (38b) when the goal is at the left edge, it only gets a wh-construal.

* WH-CONSTRUAL

√ NPI-CONSTRUAL

(38) a. **mâymi:k^hray** c^hɔ:p [k^hray]

no-have-VARIABLE.+HUMAN *like* *VARIABLE.+HUMAN*

≠ (i) Who does nobody like?

= (ii) Nobody likes anyone.

√ WH-CONSTRUAL

* NPI-CONSTRUAL

b. [k^hray] t^hî: mâymi:k^hray c^hɔ:p

VARIABLE.+HUMAN *comp* *no-have-VARIABLE.+HUMAN* *like*

= (i) Who is the one that no one likes?

≠ (ii) Nobody likes anyone.

In (39a), the D-linked wh-expression does not have an NPI construal, in contrast to the previous example given in (38a). The example (39a) is instead ungrammatical. But when the D-linked wh-expression is at the left edge, the sentence becomes grammatical. It can have a wh-construal.

* WH-CONSTRUAL

* NPI-CONSTRUAL

(39) a. * **mâymiːkʰray** kʰâwcay **[năŋsɨ̌ː lêm năy]**

no-have-VARIABLE.+HUMAN *understand* *book* *cl* *VARIABLE.–HUMAN*

Which book did no one understand?

√ WH-CONSTRUAL

* NPI-CONSTRUAL

b. **[năŋsɨ̌ː lêm năy]** tʰîː **mâymiːkʰray** kʰâwcay

book cl VARIABLE.±HUMAN comp no-have-VARIABLE.+HUMAN **understand**

Which book was the one that no one understood?

Despite the surface parallels between the Thai example in (38b-39b), and the corresponding examples of wh-intervention effects in Korean and Chinese in the (36b-37b), I will argue that (38b-39b) are a kind of reduced (identificational) wh-clefts. Let us first consider the example (38a), where the goal (as a variable expression) receives only an NPI construal. This can be straightforwardly accounted for by the probe-goal analysis, as schematically illustrated in (40a). The feature of the closest probe is the one that is copied and filled in for the underspecified goal. Here it is a [Neg] feature. Hence, Match is satisfied. However, we would expect the D-linked wh-expression in (39a) to be construed as an NPI, rather the ungrammaticality of the sentence. We saw earlier in chapter 3 that the interpretation assigned to a D-linked wh-expression is predictably determined by the probe-goal relation that holds between the operator (as probe) and the D-linked wh-expression (as goal), the same way as bare wh-expressions do. This raises an interesting question regarding why the negative quantifer blocks wh-construal for the D-linked wh-expression in (39a), but does not license NPI construal either, rather it forces the overt movement? Intuitively, what is happening is that the NPI reading is ruled out for pragmatic reasons. The D-linked wh-expression is only chosen to have a wh-construal in this context. This results in ungrammaticality, as in (40c). In the probe-goal analysis, the goal looks for the

closest probe to match in feature. The goal cannot look past the closest c-commanded probe (due to a locality condition).

(40) a. [CP Q[+wh] [IP Subject [NP Neg[+neg] [VP Verb φ μ]]]]

   b. [CP Q[+wh] [IP Subject [NP Neg[+neg] [VP Verb φ [+neg]]]]]

   c. * [CP Q[+wh] [IP Subject [NP Neg[+neg] [VP Verb φ [+wh]]]]]

In order for a wh-construal to be available for (37a-38a), the wh-expressions must be at the left edge to match with the [wh] feature on the Q[wh] probe via a reduced wh-cleft construction, as argued in this chapter. The structure of reduced identificational wh-clefts is illustrated in (41). Notice that in reduced wh-clefts, the Q[wh] probe is now the closest c-commanding probe, satisfying the probe-goal relation as in (41b). The negative quantifier is generated lower than the wh-expression, and hence is not qualified to be the probe for the wh-expression.

(41) a. [CP Q[+wh] [IP [DP φ μ] [I ∅ [DP ∅ [CP pro [C $t^h i$: [IP NPI-Subject [+neg] Verb]]]]]]

   b. [CP Q[+wh] [IP [DP φ [+wh]]] [I ∅ [DP ∅ [CP pro [C $t^h i$: [IP NPI-Subject [+neg] Verb]]]

The examples (38b) and (39b) are repeated in (42). Rather than treating (42) as a wh-intervention effect, I argue that the examples in (42) are reduced wh-clefts. I will show that the semantics and syntax of (42) have the same properties as identificational wh-clefts. Recall that there are two notable properties about the clefted element in reduced identificational wh-clefts. First, the clefted element may only be a D-linked wh-expresssion. Secondly, it may have a wh-object construal that is linked to the gap inside the relative clause. We see that (42a) contradicts the first property. It is the bare wh-expression that occupies the clefted element position. However, this bare wh-expression is equivalent to the D-linked wh-expression 'which N'. This question requires an answer restricted to the set of individuals common to both the speaker and hearer. Crucially, there is a presupposed set of individuals from which the answer is selected. We see that the wh-expression 'who' in (42a) has a wh-object construal linked to the gap inside the relative clause 'who/which one$_i$ is the one$_i$ that nobody likes e$_i$?' Recall that the wh-object construal in the clefted element is not possible for a reduced (contrastive) wh-cleft (due to the internal structure of a nominalized clause). Despite its appearance, I argue that (42a) is a kind of reduced wh-cleft. In addition to their syntactic parallels to wh-clefts, the examples in (42) have the same semantic properties as identificational wh-clefts.

√ WH-CONSTRUAL

* NPI-CONSTRUAL

(42) a.   **[kʰray]**   **tʰîː**   **mâymiːkʰray**   **cʰɔ̀ːp**

          VARIABLE.+HUMAN comp   *no-have-VARIABLE.+HUMAN*   *like*

     = (i) Who is the one that no one likes? (lit = which one is the one that no one likes?)

     ≠ (ii) Nobody likes anyone.

√ WH-CONSTRUAL

* NPI-CONSTRUAL

b.   **[năŋsɨ̆ː lêm năy]**   **tʰîː**   **mâymiːkʰray**   **kʰâwcay**

          book cl VARIABLE.–HUMAN comp no-have-VARIABLE.+HUMAN **understand**

          Which book was the one that no one understood?

One of the clearest ways of showing that (42) has the same semantic properties as identificational wh-clefts is to create a question-answer pair where a presupposition is explicitly denied in the answer. In such an answer to the wh-cleft question, we expect that the answer will be infelicitous. As predicted, the answer (i) to the question (43) repeated from (43) is pragmatically odd. This supports the argument that wh-clefts have an existential presupposition. Another semantic property discussed in this chapter is that wh-clefts have a uniqueness presupposition. Only a single and unique individual can be identified in order to satisfy the uniqueness presupposition. The answer (ii) to the (43) question turns out to be infelicitous, just as predicted there should be when there are two individuals identified in the answer.

These semantic and syntactic effects are attributable to a cleft structure[32]. That is, wh-intervention effects derive from the identificational wh-cleft analysis.

REDUCED WH-CLEFT

(43) Q: **[kʰray** **tʰîː]** **mâymiːkʰray** **cʰɔ̀ːp**

VARIABLE.+HUMAN comp *no-have- VARIABLE.+HUMAN* *like*

Who/which one is the one that no one likes?

Ai: # mây mi: nî

neg *have*

no one

Aii: # Paris, Nicole

5.7.2 Wh-argument locatives as D-linked wh-expressions

This section discusses *tʰîː* clauses with wh-argument locatives. I first argue that *tʰîː* clauses with wh-argument locatives are instances of reduced wh-clefts. Then, I consider the consequence of analyzing *tʰîː* clauses with wh-argument locatives as reduced identificational wh-clefts. It is possible that *tʰîː* clauses with wh-argument locatives in Thai are a D-linked wh-expression equivalent to English 'which place', rather than a bare wh-expression 'where'.

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[32] I provide another example in (i) where a bare wh-expression 'what' is clefted. As argued, 'what' has the status of being a D-linked wh-expression, and it is a reduced 'identificational' wh-cleft.
Context: In a class, a teacher is giving a lecture and she sees a student frowning.
(i) Q: **[ʔaray** tʰîː:] **kʰun** **mây** **kʰâwcay**
  varaiable. –human *comp* *you* *neg* *understand*
  What/which part was the part that you did not understand?
  A: troŋ tʰî: ʔacaːn bɔ̀ːk wâː ...
  part *comp* *teacher* *say* *comp*
  The part that you said that...
  A':#mây mi: kʰâʔ kʰâwcay tʰúkyàːŋ
  neg *have* *a female polite marker* *understand* *everything*
  Nothing
  A":#mi: sɔ̌ːŋ cùt troŋ tʰî:... lɛ́ʔ kɔ̂: troŋ tʰî:...
  have *two* *point* *part* *that...* *and* *also* *part* *that*
  I have two points that I did not understand, the part that...and also the part that...

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I argue that the examples in (44-45) are instances of reduced wh-clefts. Consider the wh-question in (44), where the wh-argument locative occurs with a t^hî: clause. As a clefted element, it is linked to the gap in the relative clause in the subject position. The wh-argument locative, in (45) is related to the gap in object position. The t^hî: clauses with wh-argument locatives[33] appear to have the same properties as identificational wh-clefts.

REDUCED WH-CLEFT: LOCATIVE SUBJECT

(44) Q: [t^{h}î: nǎy]   t^{h}î: t^{h}amhây   k^{h}un   prat^{h}ápcay

         place VARIABLE   comp   make   you   impress

         Which place impressed you?

     A: Vancouver

REDUCED WH-CLEFT: LOCATIVE OBJECT

(45) Q: [t^{h}î: nǎy]   t^{h}î: Nít   c^{h}ɔ:p   pay   nâŋ

         place VARIABLE   comp   like   go   sit

         Which place does Nit hang out?

     A: rá:n   klâ18y   ʔempo:rî:am

         store   near   Emporium

         The club near Emporium.

Recall that one of the notable properties of identificational wh-clefts is that the clefted element may only be a D-linked wh-expression. By this claim, there is a possibility that Thai wh-argument locatives may have the status of D-linked wh-expressions, rather than bare wh-expressions. There is also independent evidence to treat wh-argument locatives as D-linked wh-expressions. The evidence comes from how wh-argument locatives are morphologically

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[33] However, wh-adjunct locatives do not have such properties. They are ungrammatical with the t^hî: clause, as shown in the examples in (i) and (ii)

(i) *[t^{h}î: nǎy   t^{h}î:]   Nít   sɨ́:   mámû:aŋ
    place   variable comp   buy   mango
    Where did Nit buy mango?

(ii) *[t^{h}î: nǎy   t^{h}î:]   Nít   tὲ:ŋa:n
     place   variable comp   marry
     Where did Nit get married?

This probably suggests that such properties are only restricted to wh-arguments.

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composed, as in (46b). Compare the examples of Thai D-linked wh-expressions in (46a) and (46b). In (46a), the NP 'man' is optional and is accompanied by its counterpart classifier. Notice that in (46b), the noun and its classifier are homophonous. This is not accidental because some nouns can serve as a classifier on their own; in this case 'place' serves as its own classifier[34].

D-LINKED WH-EXPRESSION

(46) a.   (pʰûːcʰaːy)   kʰon   **năy**

              man   *cl*   *VARIABLE*

              which man?

      b.   (tʰîː)   tʰîː   **năy**

              place   *cl*   *VARIABLE*

              which place?

The examples below illustrate that locative *tʰîː* is in fact functioning as both a noun 'place' and its counterpart classifier. In the Thai 'how many' question construction, 'how many' only takes classifiers as its noun. In (47a), it is ungrammatical when 'how many' is followed by the noun 'book'. But when it is followed by its classifier *(lêm)*', as in (47b), the sentence becomes grammatical. In order to show that *tʰîː* has a dual function 'place' and a classifier for 'place', we expect *tʰîː* to be grammatical when we introduce it in 'how many' type question. The example in (47c) turns out just as predicted.

HOW MANY QUESTION

(47) a. * kʰun   sɨ́ː   maː   kìː   **năŋsɨ̌ː**

            you   *go*   *come*   *how many* *book*

            How many books did you buy?

      b.   kʰun   sɨ́ː   maː   kìː   **lêm**

            you   *go*   *come*   *how many* *cl*

            How many books did you buy?

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[34] *tʰîː* 'place', on the other hand, is accidently homophonous with the complementizer *tʰîː*.

c.	kʰun	pay	duː	maː	kìː	tʰîː
	you	*go*	*look*	*come*	*how many*	*cl*

How many places did you take a look?

The fact that *tʰîː* can function as a classifier on its own suggests that *tʰîː năy* '(place) cl which' is a D-linked wh-expression. This concludes my discussion that treating a wh-argument locative as a reduced wh-cleft reveals its internal structure as a D-linked wh-expression.

To summarize, I have argued, in this chapter, that *tʰîː* clauses with D-linked wh-expressions in Thai take the form of an identificational wh-cleft type structure[35]. I have provided several arguments to show that these *tʰîː* clauses with D-linked wh-expressions have the same predictably semantic and syntactic properties as identificational wh-clefts. Reduced identificational wh-clefts have two semantic properties: an existential presupposition and a uniqueness presupposition. I have argued that the existential presupposition correlates with the presence of the identificational *kʰɨː* copula, while the uniqueness presupposition arises from the definite description in the cleft relative clause. In reduced identificational wh-clefts, the clefted element may be associated with the gap in subject and object position in the relative clause. As such, the cleft element may have a wh-object construal. This is not possible in reduced contrastive wh-clefts.

I finished this chapter by discussing the two major consequences of analyzing *tʰîː* clauses with D-linked wh-expressions as reduced wh-clefts. First, there are no wh-intervention effects in Thai, despite appearances. They are in fact reduced wh-clefts. I showed that they have the same semantics and syntax as identificational wh-clefts. Second, analyzing *tʰîː* clauses with wh-argument locatives as reduced wh-clefts leads to the conclusion that Thai wh-argument locatives are in fact D-linked wh-expressions.

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[35] I reject a focus phrase analysis because it cannot account for the full range of facts associated with the semantic and syntactic properties of the *tʰîː* clause in Thai.

Chapter 6

Conclusions

6.1 Summary of major findings

This dissertation has presented an in-depth examination of Thai wh-expression as variables. I have claimed that wh-expressions are variables with no inherent interrogative force. As variables, they acquire an interpretation by virtue of being in the scope of an operator. I propose that the syntactic relation between the operator and the variable is best analyzed in terms of a probe-goal relation. The probe-goal relation requires that the features of probe and goal Match. The analysis of Thai wh-expressions that I propose claims that Match can be satisfied via feature copying. In particular, I argue that, in Thai, the operator-variable relation, as a probe-goal relation, satisfies Match through feature copying. Thai wh-expressions are variables; as such they are underspecified goals whose featural content needs to be filled in.

Chapter 2 argued that the probe is a covert $Q_{[wh]}$, and the goal, on the other hand, is underspecified for a feature, copying the [wh] feature of the probe onto the goal. I claimed that the probe-goal relation in Thai is established via Match without Move. Much of the chapter was spent discussing the two major consequences of my claim that the covert $Q_{[wh]}$ probe is base-generated in C position from where it assigns wh-scope. First, the proposed analysis correctly predicts the distribution of Thai wh in-situ. More specifically, it derives the absence of an asymmetry between wh-subjects and wh-objects, as well as the absence of an asymmetry between wh in-situ arguments and wh-adjuncts with respect to island effects. Second, the probe-goal analysis accounts for restrictions on interpretation. In particular, it derives the absence of pair-list readings in multiple wh-questions, as well as the absence of list-answer readings in wh-constructions that contain a quantifier.

Chapter 3 explores the role of negation as a probe, and asserts that negation and yes-no question markers are allomorphs. In the context of negation, the goal (as a variable expression) matches with the [Neg] feature on the Neg probe, hence yielding a Negative Polarity Item (NPI). In a yes-no construction, the goal matches with the [+polarity] feature on the $Q_{[polarity]}$ probe, yielding an Existential Polarity Item (EPI). I further argued that the interpretation assigned to a goal is predictably determined by the c-command relation that holds between the probe and the goal. For matrix clauses, the proposed analysis correctly predicts the presence of a subject/object

asymmetry, and the presence of a complement/adjunct asymmetry. Moreover, the analysis captures the fact that both subject/object asymmetries and complement/adjunct asymmetries with respect to NPI- and EPI-construals only hold in matrix clauses. Thus, while NPI- and EPI-construals are unavailable with subjects and adjuncts in matrix clauses, they are available in embedded clauses. This is because a matrix negative probe or matrix yes-no question probe is available for the embedded goal. The availability of NPI- and EPI-construals in embedded clauses is a side-effect of a locality condition which requires that the closest c-commanding probe is the one that enters into the probe-goal relation.

Chapter 4 is mainly concerned with reduced contrastive wh-clefts. Crucially, I argued that the probe-goal relation in Thai does not induce Move, contrary to superficial appearances. In fact, cases of apparent wh-movement of bare wh-expressions are instances of reduced contrastive wh-clefts. Specifically, this chapter deals with the semantic and syntactic properties of contrastive wh-clefts with the overt copula *pen*. I show that the semantics and syntax of reduced contrastive wh-clefts have the same properties as contrastive wh-clefts. I close the chapter by considering the three major consequences of analyzing apparent cases of wh-movement as reduced wh-clefts. First, only wh-subjects can occur as a cleftee (due to the inability of the nominalizer k^h*on* to nominalize the object). Second, wh-objects can occur as a cleftee only when passive markers are present (the object can only nominalize through passivization). Last, only 'who' can occur as a cleftee (due to [+human] restriction imposed by the nominalizer k^h*on*). These restrictions fall out naturally from the contrastive wh-cleft analysis.

Chapter 5 is devoted to another type of cleft, reduced identificational wh-clefts. In particular, they involve clefting of D-linked wh-expressions. I discuss the semantics and syntax of identificational wh-clefts with the overt identificational k^h*ɨ:* copula. I show that the semantics and syntax of reduced identificational clefts have the same properties as identificational wh-clefts. The chapter ends by considering two predictions that fall out from the identificational wh-cleft analysis. Thai wh-intervention effects are in fact reduced wh-clefts. This satisfies the probe-goal relation that goals must be at the left edge of the clause in order to match with [wh] feature of the Q probe, yielding a wh-construal. Another consequence of analyzing t^h*ɨ:* clauses with D-linked wh-expressions as reduced wh-clefts is that it reveals the internal structure of wh-argument locatives as D-linked wh-expressions.

6.2 A note on wh-adjuncts and Move

In this dissertation, I claim in chapter 4 and 5 that wh-argument focus is attributable to a cleft clause structure. A question that needs to be addressed for future research is 'how do Thai wh-adjuncts mark focus?' I showed, in chapter 3, that adjuncts can have NPI- and EPI- construals when they are in an embedded clause (by matching with a matrix negative probe). This suggests that adjuncts have the same status of variable expressions as wh-arguments. However, I observe that Thai wh-adjuncts—in particular, wh-temporal and wh-rationale undergo A' movement with respect to focus. This is because a [+foc] feature of the probe is copied onto the underspecified goal. The [+foc] feature of a head has an EPP feature, and it triggers the goal to move to the probe and form a specifier of the probe. Notice that the goal and the probe do not form a constituent due to an intervening subject. This particular issue is beyond the scope of this thesis. I leave this open for future research.

WH-TEMPORAL

(1) a. **[mɨ̂ːarày]**　　Lék　**cà?**　riːancòp

　　　　VARIABLE　　　　　*fut*　　*graduate*

　　　　When is it exactly that Lek will graduate?

WH-RATIONALE

　　b. **[tʰammay]**　　Nít　**tʰɨ̌ŋ**　yàː

　　　　VARIABLE　　　　*even*　　*divorce*

　　　　Why was it exactly that Nit divorced?

I have shown that wh-arguments are at the left edge in a cleft focus structure, satisfying the probe-goal relation. I will now address some final thoughts about wh-adjuncts, tying in with the proposed analysis. Consider the wh-question in (2a), in which the wh-temporal appears in-situ, and on the other hand, in (3a), in which the wh-temporal has undergone movement.

WH IN-SITU

(2) a. 　Lék　**cà?**　riːancòp　**[mɨ̂ːarày]**

　　　　　　fut　*graduate*　*VARIABLE*

　　　　When will Lek graduate?

WH-MOVEMENT

b.   **[mɨ̂:arày]**   Lék   **càʔ**   ri:ancòp

         VARIABLE   *fut*   *graduate*

         When is it exactly that Lek will graduate?

(2a) and (2b) involve a contextual presupposition that Lek has been studying for her Ph.D in Canada for more than six years. The speaker wants to know when Lek will graduate, as in (2a). On the other hand, (2b) is emphatic in that the speaker expects a specific answer as to a particular time of Lek's graduation.

In (3a), we see that wh-rationale appears in-situ. Without the movement, the sentence becomes ungrammatical. The wh-rationale in (3b), on the other hand, moves to a clause-initial position, and grammaticality of the sentence obtains. Notice that in (3b), there is a presence of a focus morpheme *tʰɨ̌ŋ* in a preverbal position. It is this morpheme that forces the wh-expression to undergo A' movement. This explains why (3a) is ungrammatical.

     WH IN-SITU

(3)   a.   * Nít   **tʰɨ̌ŋ**   yà: **[tʰammay]**

                 even divorce   *VARIABLE*

           Why was it exactly that Nit divorced?

     WH-MOVEMENT

       b.   **[tʰammay]**   Nít   **tʰɨ̌ŋ**   yà:

           VARIABLE   *even*   *divorce*

          Why was it exactly that Nit divorced?

The examples in (4) show that the movement is unbounded, similar to that of wh-movement. The wh-expressions undergo movement cyclically from their base-generated position, to an intermediate position, and then to a clause-initial position.

(4)   a.   **mɨ̂:arày**   kʰun   kʰít   wâ: Nít   càʔ   ri:ancòp

           VARIABLE   *you*   *think*   *comp*   *fut*   *graduate*

          When do you think that Nit will graduate?

       b.   **tʰammay**   kʰun   kʰít   wâ: Rɔːn   rúːcàk   Nít

VARIABLE   you   think   comp   know

Why do you think that Ron knew Nit?

Wh-focus obeys the same island conditions. In (5a), when the wh-rationale 'why' is inside the relative clause island, it is ungrammatical, unlike in-situ wh-arguments discussed in chapter 2. The wh-rationale cannot occur freely in the island, as in (5a) nor can it be extracted out of the island. This indicates that overt wh-focus shows the usual island properties associated with wh-movement. When the wh-expression is moved out of the island, as in (5b), an island violation is found. Notice that the wh-expression in (5c) can only be interpreted as questioning the matrix clause. The wh-expression cannot be construed as questioning the embedded clause. This shows that the wh-expression is not able to associated with the embedded verb across the relative clause island.

RELATIVE CLAUSE ISLAND

(5)   a.   * kʰun   cʰɔːp   [NP năŋsɨ: [CP tʰîː Nít   kʰiaːn   tʰammay]]

           you   like   book   comp   write   VARIABLE

           [Why did you like the book that Nit wrote?]

       b.   * kʰun   cʰɔːp   tʰammayᵢ   [NP năŋsɨ: [CP tʰîː Nít   kʰiaːn   tᵢ]]

           you   like   VARIABLE   book   comp   write

           [Why did you like the book that Nit wrote?]

       c.   tʰammayᵢ   kʰun   cʰɔːp   tᵢ [NP năŋsɨ: [CP tʰîː   Nít   kʰiaːn   tᵢ]]

           VARIABLE   you   like   book   comp   write

       = (i)   What was the reason that you like the book?

       ≠ (ii)   Why did you like the book that Nit wrote?

With respect to the sensitivity of island effects, the above examples confirm that wh-focus undergoes A' movement to the left edge position (Spec CP). The wh-expression matches with [wh] feature with $Q_{[wh]}$ probe via Move.

6.2.1 Wh-focus adjuncts as topicalization?

This section considers alternative analyses of topicalization and wh-clefts. I will argue that wh-focus is a kind of A' movement rather than either of these alternatives. When wh-adjuncts (i.e. temporal and rationale) are moved to a sentence-initial position, they do not involve the presence of the complementizer $t^h\hat{\imath}$:. At first glance, this can be viewd as evidence for a topicalization analysis. However, Thai topicalized arguments are not subject to island constraints (Hoonchamlong 1991). This is illustrated in (6b). The topic element (Ben) is co-indexed with the optional resumptive pronoun (he) in the complex NP island. If there were movement, (6b) should be ungrammatical. However, no island violation is found.

(6) a.　　c^{h}án　dâyyin　k^{h}à:w　wâ:　Ben　tæ̀:ŋŋan

　　　　　I　　hear　　news　comp　　　marry

　　　　I heard the rumor that Ben married.

　　b.　　**Ben**$_i$　c^{h}án　dâyyin　k^{h}à:w　wâ:　(k^{h}áw$_i$)　tæ̀:ŋŋan

　　　　　　　　I　　hear　　news　comp　he　　marry

　　　　Ben$_i$, I heard the rumor that he$_i$ married.

Temporal adjuncts in (7b), on the other hand, are constrained by the island. In (7a), the adjunct is inside the complex NP island, and it has an embedded scope interpretation. But when it is moved out of the island, the embedded scope interpretation is no longer available, as in (7b). The temporal adjunct can only modify the matrix verb. This shows that the movement is subject to island effects. If no movement takes place, it should be able to associated with the gap in the island.

(7) a.　　c^{h}án　dâyyin　k^{h}à:w　wâ:　Su:mi　tæ̀:ŋŋan　**ʔa:t^{h}ìtt^{h}î:lǽ:w**

　　　　　I　　hear　　news　comp　　　marry　　week-last

　　　　I heard the news that Soomii married last week.

　　b.　　**ʔa:t^{h}ìtt^{h}î:lǽ:w**$_i$　c^{h}án　dâyyin　k^{h}à:w　wâ:　Su:mi　tæ̀:ŋŋan　　t$_i$

　　　　　week-last　　I　　hear　　news　comp　　　marry

　　　　Last week, I heard the news that Soomii married.

As mentioned earlier, the fact that wh-focus adjuncts are sensitive to island constraints suggests that they cannot be topicalization. Hence, topicalization is not an appropriate analysis for wh-adjunct movement.

6.2.2 Wh-focus adjuncts as a wh-cleft?

Can Thai wh-focus adjuncts be analyzed as wh-clefts? We see that, in reduced wh-clefts, it is obligatory that the morpheme $t^h\hat{\imath}$: is present immediately following the wh-arguments. Wh-focus adjuncts, on the other hand, do not require the presence of the morpheme $t^h\hat{\imath}$:. I have discussed that the morpheme $t^h\hat{\imath}$: must be present because presuppositions found in clefts arise from the morpheme $t^h\hat{\imath}$:. This is clearly lacking in the non-cleft focus construction. The example in (8) illustrates that when temporal and rationale adjuncts are clefted, they require the presence of the complementizer $t^h\hat{\imath}$:. Hence, the absence of complementizer $t^h\hat{\imath}$: of wh-focus adjuncts does not follow from a cleft analysis.

(8) a. wanp^{h}út k^h$\dot{\imath}$: wan *(t^{h}î:) Ník pay talà:t

         day-Wed be day comp go market

         Wednesday is the day that Nick goes to the market.

    b. k^{h}wa:mb$\dot{\imath}$: k^h$\dot{\imath}$: să:hè:t *(t^{h}î:) t^{h}am hây k^{h}à:w lâ:k ri:an

         nom- bore be cause comp make give him quit study

         Boredom was a cause that made him quit his study.

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