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**POLARITY SENSITIVE COPULAR VERBS IN THAI**

**By**

**Boonjeera Chiravate**

**A THESIS**

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## ABSTRACT

### POLARITY SENSITIVE COPULAR VERBS IN THAI

By

Boonjeera Chiravate

Polarity sensitive items (PSIs) are expressions which can only occur in a positive environment, in the case of positive polarity items (PPIs), or a negative environment, in the case of negative polarity items (NPIs). In English the PPIs are expressions such as *scades* (of money) and the NPIs are expressions such as (sleep) *a wink*. As there is a pair of copular verbs in Thai—one PPI and one NPI, this thesis investigates the restricted properties of these polarity sensitive copular verbs. Since these polarity sensitive copular verbs in Thai do not carry semantic meaning of the type that the PSIs in English do, earlier studies which have been done on PSIs have not resulted in an adequate explanation. This thesis suggests that the explanation for the properties of polarity sensitivity of the copular verbs in Thai might involve aspectual facts.

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## TABLE OF CONTENTS

CHAPTER 1	
INTRODUCTION	1
CHAPTER 2	
LITERATURE REVIEW	6
2.1 A Summary of Research on PSI Licensing Problem	6
2.1 Israel (1996)	18
2.2 Summary	21
CHAPTER 3	
POLARITY SENSITIVE COPULAR VERBS IN THAI	23
3.1 Polarity Sensitive Copular Verbs in Thai	23
3.2 The Problem of Polarity Sensitive Copular Verbs in Thai	25
3.3 The aspectual Distribution of Polarity Sensitive Copular Verbs in Thai	32
3.3.1 The Difference of Meaning between the Copular Verbs in Thai	32
3.3.2 Restriction on Aspect: Comparing the Copular Verb in English with the Copular Verbs in Thai	37
3.3.3 Restriction on Aspect: Comparing the Copular Verbs with other Stative verbs in Thai	47
3.3.4 Summary of the Discussion on Aspect	49
3.4 An Alternative Approach to the Copular Verbs in Thai	51
3.4 Conclusion	52
CHAPTER 4	
CONCLUSION	54
BIBLIOGRAPHY	57

# CHAPTER 1

## INTRODUCTION

The restriction on the distribution of polarity-sensitive items (PSIs) is one of the long standing problems in syntax and semantics. The expressions which can only occur in a positive environment are positive-polarity items (PPI)<sup>1</sup> and the expressions which can only occur in a negative environment are negative-polarity items (NPI). The class of PPI in English includes *some, already, pretty (ADV)*, etc., while the class of NPI includes *any, ever, yet, much*, etc. Generally PPIs are unacceptable in negative sentences, as are NPIs in positive sentences.

- (1) a. \*I am not *pretty* happy with it.  
(PPI in negative sentence)
- b. I am *pretty* happy with it.  
(PPI in positive sentence)
- (2) a. \*John has found his wallet *yet*.  
(NPI in positive sentence)
- b. John has not found his wallet *yet*.  
(NPI in negative sentence)

In this thesis, I discuss a pair of copular verbs in Thai- one PPI (*khu*) and one NPI (*chai*). The aim of this thesis is to investigate the restricted properties of these copular

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<sup>1</sup> The use of the term “positive” in this way is established in the literature but there is also an argument for the use of the term “affirmative” in contrast to “negative.”



verbs. The investigation will attempt to give an explanation for the distribution of the polarity sensitive copular verbs in Thai.

There are three copular verbs in Thai: *pen*, *khu* and *chai*.<sup>2</sup> As the data below shows, *pen* is a polarity-insensitive, but *khu* and *chai* are polarity-sensitive. In particular, *khu* is a PPI which has *chai* as a parallel NPI.

- (3) a. *John pen hmo*  
John be doctor  
“John is a doctor.”
- b. *John mai pen hmo*  
John not be doctor  
“John is not a doctor.”
- (4) a. *John khu hmo*  
John be doctor  
“John is a doctor.”
- b. *\*John mai khu hmo*  
John not be doctor  
“John is not a doctor.”
- (5) a. *\*John chai hmo*  
John be doctor  
“John is a doctor.”

- b.     *John mai chai hmo*  
John not be doctor  
“John is not a doctor.”

Earlier studies which have been done on PSIs have not resulted in an adequate explanation. Most of them cannot account for the case of the polarity sensitive copular verbs in Thai.

The theory of PSIs should be able to answer two questions: the licensing question and the sensitivity question. While the licensing question deals with what makes certain contexts license polarity sensitivity, the sensitivity question involves what makes certain forms sensitive to these contexts. Also logically the solutions for these two questions should be related.

Much of the previous research has focused on the licensing problem. And since the licensers for NPIs can be specified as environments containing negation while the licensers for PPIs can be specified only negatively, in terms of absence of a negative element, the research on PSIs has focused on NPIs, in particular the NPI licensing problem.

However, it seems that it is the sensitivity question, rather than the licensing question that presents a bigger problem in Thai. Basically the NPI in Thai is licensed by negation. However, comparing to English polarity sensitive expressions, such as *budge an inch, lift a finger, drink a drop*, etc., Thai polarity sensitive expressions are copular verbs. They do not carry semantic meaning of the type that the English PSIs do. So any

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<sup>2</sup> I am using the transcription system of Royal Institute, 1982.

explanation which relates the semantic features that the PSIs carry to the occurrence of PSIs does not work for the polarity-sensitive copular verbs in Thai.

What seems to be crucial is the fact that Thai polarity sensitive copular verbs show some restriction on aspect. For example, while the polarity-insensitive verb *pen* allows the presence of the particles expressing tense, the polarity sensitive verbs *khu* and *chai* do not.

- (6) a. *John cha pen hmo*  
John FUTURE be doctor  
“John will be a doctor.”
- b. *John khoey pen hmo*  
John PAST be doctor  
“John was a doctor.”
- c. *John cha mai pen hmo*  
John FUTURE not be doctor  
“John will not be a doctor.”
- d. *John mai khoey pen hmo*  
John not PAST be doctor  
“John was not a doctor.”
- (7) a. \**John cha khu hmo*  
John FUTURE be doctor  
“John will be a doctor.”

- b.     *\*John khoey khu hmo*  
           John PAST be doctor  
           “John was a doctor.”
- (8)    a.     *\*John cha       mai chai hmo*  
           John FUTURE not be doctor  
           “John will not be a doctor.”
- b.     *\*John mai khoey chai hmo*  
           John not PAST be doctor  
           “John was not a doctor.”

In this thesis I suggest that the explanation for the distribution of the polarity sensitive copular verbs in Thai involves these aspectual facts.

The reminder of this thesis consists of 3 chapters. Chapter 2 summarizes research related to polarity sensitivity and aspectuality. Chapter 3, examines the distribution of the copular verbs in Thai and attempts to account for the distribution of those which are polarity sensitive. Chapter 4 states the conclusions of the thesis.

## **CHAPTER 2**

### **LITERATURE REVIEW**

There do not seem to be earlier studies on the Thai language that focus on the polarity sensitivity of the copular verbs. Grammars of Thai, such as Uppakitsinlapasarn (1964) do not provide any explanation about them.

This chapter provides a review of the research relevant to polarity sensitivity. Most of the research concerns polarity sensitive items in English. Section 2.1 presents a summary of the research done by Ladusaw (1980, 1982, 1983), Van der Wouden (1994), and Linebarger (1981, 1987, 1989) which focuses on the licensing problem, in particular, what makes certain contexts license polarity sensitivity.<sup>3</sup> Section 2.2 summarizes the research done by Israel (1996) which focuses on the sensitivity problem, in particular, what makes certain forms sensitive to those contexts. Section 2.3 concludes the chapter.

#### **2.1 A Summary of Research on PSI Licensing Problem**

Since the earliest work on NPIs (Klima 1964), it has been recognized that expressions which can license NPIs can be both overt negation like *not*, *nobody* and *never* as shown in (9) and covert negation like *few* and *rarely* as shown in (10). In

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<sup>3</sup> Another research focusing on the licensing problem is the research done by Progovac (1992, 1994). Her account is based on Binding Theory and accounts for the facts concerning non-negative polarity licensing, the presence of NPIs in *wh*-questions and the NPI licensing by the determiner *only*. Since the copular verbs in Thai do not occur in these contexts, her account is not relevant to the copular verbs in Thai. So I do not provide the summary of her account here.

addition, some environments such as an antecedent of conditionals and yes/no questions allow an occurrence of NPIs as well, as shown in (11).

- (9) a. I **didn't** *drink a drop* at the party.  
 b. **Nobody** has found a helpful book *yet*.  
 c. They **never** *contribute* a red cent.
- (10) a. **Few** students *ever* take the train to school.  
 b. Bill **rarely** *budges an inch* on such matters.
- (11) a. **If anyone** has questions, please ask me.  
 b. **Do you have** *any* cats?

Ladusaw (1980, 1982, 1983) proposed that the expressions that can license NPIs can be determined by semantic criteria. They are the class of expressions whose meanings are downward entailing.<sup>4</sup>

Ladusaw's analysis involves operators and arguments. A negation NOT is considered to be an operator which takes a sentence as its argument. By taking NOT as a sentence operator, a negated sentence like (12a) can be presented as (12b).

- (13) a. John didn't eat fruit.  
 b. not (John ate fruit)
- OPERATOR ARGUMENT

By taking NOT as a sentence operator he can explain the ambiguity of sentences of the following kind.

- (13) John didn't move because he was frightened.

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<sup>4</sup> Downward entailing is also known as monotone decreasing.

In (13), both the reading “It is because he was frightened that he didn’t move” and the reading “It is not because he was frightened that he moved” are possible. According to Ladusaw, this ambiguity arises from the fact that the negation NOT is an operator which can take scope over its arguments in two different ways, as shown below.

- (14) a. because (he was frightened) (NOT (he moved))  
b. NOT (because (he was frightened) (he moved))

Given that the *because* clause is an adjunct clause and the clause modified by the *because* clause is a matrix clause, in (14a) the negation NOT takes a narrow scope, to be more specific, it takes scope only over the matrix clause but in (14b) the negation NOT takes a wide scope, to be more specific, it takes scope both over the adjunct clause and the matrix clause. So (14a) provides the first reading “It is because he was frightened that he didn’t move” and (14b) provides the second reading “It is not because he was frightened that he moved.”

Apparently the interpretation of a sentence is the mapping between two sets, in particular, the set consisting of sentences and the sets consisting of truth values. As for each sentence we have assigned a truth value, the assignment is called a function. So an operator is considered to be a function.

As Ladusaw claims that the NPI licensors are expression whose meanings are downward entailing, the property of downward entailingness can be expressed by the following.

- (15) A functor  $f$  is downward entailing, iff if  $f(X)$ , and  $Y$  is a subset of  $X$ , then  $f(Y)$

So downward entailment is an entailment from a superset (a less restrictive term ) to a subset (a more restrictive term).

The negation NOT is regarded as a sentence operator which is downward entailing with respect to its argument. He claims that NPIs are licensed in downward entailing environments. Consider, first, the following two propositions P and Q:

- (16) a. John ate an apple. (P)  
b. John ate fruit. (Q)

P entails Q. In particular, the direction of entailment is from the subset (the possible world expressed by “John ate an apple”) to the superset (the possible world expressed by “John ate fruit”). This is not downward entailment. Consider, on the other hand, sentences with NOT as a sentence operator, in particular, the negated version of (16a) and (16b)

- (17) a. John didn’t eat fruit. (NOT Q)  
b. John didn’t eat an apple. (NOT P)

Here the direction of entailment is reversed. NOT Q entails NOT P. The entailment is from the superset (the set of possible worlds expressed by “John didn’t eat fruit”) to the subset (the set of possible worlds expressed by “John didn’t eat an apple”). So this is downward entailment. Since downward entailment environment licenses NPIs, the NPI *anything* will be licensed, as in the following.

- (18) John didn’t eat *anything*.

Therefore, if an expression licenses inferences from superset to subset, it is downward entailing. And it can license the occurrence of an NPI.

Ladusaw claims that a negation NOT is only a subclass of an operator whose meaning is downward entailing with respect to its argument. A determiner such as *no* is also viewed as an operator whose meaning is downward entailing with respect to its



argument and which can license an NPI is its argument. While the negation NOT takes a sentence as its argument, the determiner *no* takes a common noun phrase (CNP) as its argument, as shown by the following.

- (19) a. No man  
       b. No (man)
- OPERATOR ARGUMENT

According to him the truth value of *No man* is the result of the fact that the CNP *man* has to be interpreted with respect to the operator *no*. The determiner *no* is downward entailing expression, as P entails Q in the following example.

- (20) No man walks (P)  
       No father walks (Q)

So the determiner *No* can license an NPI in its argument. The NPI *ever* is licensed in the following examples.

- (21) No person who has *ever* visited New York has returned to it.

The proposal of Ladusaw (1980, 1982, 1983), however, has some problems.

Consider, for example, the following;

- (22) a. At most three students like sports. (P)  
       b. At most three students like tennis. (Q)

The quantified NP *at most three students* is viewed as an operator. In (21) as P entails Q, *at most three students* should be a downward entailing operator that can license an NPI in its argument. However, while the NPI *any* is licensed, the NPIs *yet* and *a bit* are not licensed as shown in (23).

- (23) a. At most three students have played *any* sports.  
 b. \*At most three students have played sports *yet*.  
 c. \*At most three students were *a bit* willing to play sports.

Van der Wouden (1994) accounts for this problem by categorizing the classes of NPI licensers into three classes: monotone decreasing (MD) operators, anti-additive operators and antimorphic operators. He gives the definition for each of the class as the following.

- (24) A function  $f$  is monotone decreasing (downward entailing) iff  $f(X \text{ or } Y) \rightarrow f(X)$  and  $f(Y)$

[= van der Wouden 1994, ex. 9]

- (25) A function  $f$  is anti-additive iff  $f(X \text{ or } Y) \leftrightarrow f(X) \text{ and } f(Y)$

[= van der Wouden 1994, ex. 13]

- (26) A functor  $f$  is antimorphic iff  $f(X) \text{ and } f(Y) \leftrightarrow f(X \text{ or } Y) \text{ and } f(X) \text{ or } f(Y) \leftrightarrow f(X \text{ and } Y)$

[= van der Wouden 1994, ex. 16]

*Few children* is a monotone decreasing noun phrase and *no children* is an anti-additive operator and negation *not* is an antimorphic operator, as shown by (26) and (27) and (28) respectively.

- (27) Few children sing or dance  $\rightarrow$  few children sing and few children dance.

[= van der Wouden 1994, ex. 10c]

- (28) No children sing or dance  $\leftrightarrow$  no children sing and no children dance

[= van der Wouden 1994, ex. 14a]

- (29) a. Not sing and not dance <-> not (sing or dance) and  
 b. Not sing or not dance <-> not (sing and dance)

[= van der Wouden 1994, ex. 17a -17b]

(29) can be illustrated as (30).

- (30) a. Children do not sing and do not dance <-> Children do not sing or dance  
 b. Children do not sing or do not dance <-> Children do not sing and dance

He claims that different NPIs are associated with different licensors. Some NPIs are so strong that they require only the strongest class of licensors, antimorphic operators. Some NPIs are relatively less strong, so they can be licensed by both antimorphic operators and anti-additive operators. And some NPIs are weak as they can be licensed by antimorphic operators, anti-additive operators and the weakest class, monotone-decreasing operators. Subsequently he classifies NPIs in to three types; strong NPIs, medium NPIs, and weak NPIs. To illustrate, consider the NPIs *a bit*, *yet* and *any* as the representatives of three types of NPIs in the following examples (1994: p.19)

Anti-morphic licensors:

- (31) a. Chomsky wasn't **a bit** happy about these facts  
 b. Chomsky didn't talk about these facts **yet**  
 c. Chomsky didn't talk about **any** of these facts

Anti-additive licensors:

- (32) a. \*No one was **a bit** happy about these facts  
 b. No one has talked about these facts **yet**  
 c. No one has talked about **any** of these facts

Monotone decreasing licensors:

- (33) a. \*At most three linguists were **a bit** happy about these facts  
b. \*At most three linguists have talked about these facts **yet**  
c. At most three linguists have talked about **any** of these facts

The NPI **a bit** can be licensed only by anti-morphic license. The NPI **yet** can be licensed by both anti-morphic and anti-additive licenses. The NPI **any** can be licensed by, anti-morphic licenses, anti-additive and monotone decreasing licenses. His assumption is that **a bit** is a strong NPI and **yet** is a medium NPI and **any** is a weak NPI.

So both Ladusaw (1980, 1982, 1983) and Van der Wouden (1994) capture the phenomenon of NPIs by semantics. By these approaches, the NPI licensing depends on the semantic properties of an expression and does not depend on context.

By considering the NPI licensing to be context-independent, there remains a problematic case. Consider the following sentence.

- (34) I was surprised that she contributed *a red cent*.

[ = Progovac 1994, ex. 39]

The NPI *a red cent* is licensed in this sentence. Assuming that *be surprised that* is a licenser, according to Ladusaw (1980, 1982, 1983)'s account, *be surprised that* should be downward entailing. However, it is not clear that *be surprised that* is downward entailing because it is not clear that (35a) entails (35b).

- (35) a. John was surprised that Bill sang.  
b. John was surprised that Bill sang a happy song.

Sentences like (34) are also problematic for Van der Wouden (1994)'s account. He notes that his definition of monotone decreasing does not work completely in the case of affective verbs. To illustrate, the following example has been given (1994: p.21);

- (36) a. John regrets that anyone was injured  
 b. John regrets that Mary or Susan was injured  
 c. John regrets that Mary was injured and John regrets that Susan was injured.

Although *to regret* licenses the NPI *anyone* in (36a), (36b) does not entail (36c). The same thing seems to go for *be surprised that*. Although it licenses the NPI *a red cent*, it is not clear that it is a monotone decreasing as it is not obvious that (37a) entails (37b).

- (37) a. John was surprised that Bill sings or dances.  
 b. John was surprised that Bill sings and John was surprised that Bill dances

Linebarger (1980, 1987, 1991) tries to account for the kind of sentences like (33).

She explains the distribution of the NPIs by syntax and pragmatics. She claims that an NPI licenser must be a negation expression. A negation expression is either in a negative sentence or in an implicature of a non-negative sentence. Her analysis consists of two parts; Part A and Part B.

Part A deals with the case that an NPI is licensed by an overt negation. To illustrate, consider the following sentences.

- (38) He didn't move because he was frightened.  
 (39) He didn't *budge an inch* because he was frightened.

While (38) is ambiguous, (39) is not. In particular, in (38) both the reading of "It is because he was frightened that he didn't move" and the reading of "It is not because he

was frightened that he moved” are possible. However, in (39), only the first reading is possible.

To account for the absence in an ambiguity of the sentence containing an NPI like (39), she proposed the Immediate Scope Constraint (ISC), which says that an NPI is acceptable in a sentence S if in the LF of the S the representation of NPI is in the immediate scope of the negation operator.

As (39) is a grammatical sentence, in the LF of (39), the NPI *budge an inch* must be in the immediate scope of the negation *not*. She explains that the two LF candidates for (39) will be (40a) and (40b), where S-1 is the adjunct clause (the *because* clause) and S-2 is the matrix clause (the clause modified by the *because* clause).

(40) a. NOT CAUSE (S-1, S-2)

It is not because he was frightened that he budged an inch.

b. CAUSE (S-1, NOT S-2)

It is because he was frightened that he didn't budge an inch.

In (40a) there is an intervention of the predicate CAUSE between NOT and S-2. So the NPI *budge an inch* in S-2 is not in the immediate scope of the negative operator NOT. So the reading that NOT takes scope over S-1 and at the same time licenses the NPI in S-2 is not possible. That is why (39) cannot be interpreted as "It is not because he was frightened that he budged an inch." But in (40b) the NPI *budge an inch* in S-2 is in the immediate scope of the negative operator NOT. And S-1 is not in the immediate scope of NOT at all. So that is why (39) has to be interpreted only as "It is because he was frightened that he didn't budge an inch."

Therefore, Part A of her analysis says that an NPI will be acceptable in a sentence S, if in the LF of the S the representation of an NPI is in the immediate scope of the negation operator.

Part B seems to take care what is missed by Ladusaw (1979)'s account. It covers the case of NPI in non-negative polarity contexts. The idea is that if there is some negative implicature which is part of what the speaker is attempting to convey by saying S, and in the LF of the implicated sentence the lexical representation of an NPI occurs in the immediate scope of negation, then the S can license the NPI.

The following example from Linebarger (1981) is taken to illustrate this point:

(41) a. I was surprised that she contributed *a red cent*.

[= Progovac 1994, ex. 39]

b. IMPLICATURE

I had expected her not to contribute a red cent.

[= Progovac 1994, ex. 40]

In uttering (41a), the speaker is making an allusion to (41b) in which that NPI *a red cent* is in the immediate scope of the negation *not*. So by virtue of implicating (41b), (41a) is able to license an NPI.

Linebarger emphasizes that the negative implicature must be part of what the speaker is using the sentence to convey. To illustrate the point, the following examples have been given.

(42) a. Cows fly more than he lifts a finger to help

b. If it's rare for cows to fly, then he almost never lifts a finger to help.

[= Linebarger 1980, ex.42]

- (43) a. \*The sun rises more often than he lifts a finger to help.  
b. It it's rare for the sun to rise, then he almost never lifts a finger to help.  
[=Linebarger 1980, ex 43]

In both the LF of implicatures (42b) and (43b) the NPI *lift a finger* is in the immediate scope of the negation *not*, however, while (42a) is acceptable, (43a) is not. Linebarger explains that this is because the availability of the implicatures is different. The licensing implicature (42b) is informative enough that we might expect (42a) to be used to convey it. In particular, since cows never fly, it tells us that he will never help. So the sentence will be true only if he never helps. But the licensing implicature (43b) is so uninformative that it is unlikely that (43a) would be used to convey it. Since the sun rises everyday, it tells us that he will be helping any amount that is not greater than everyday. So the sentence will be true in cases such as that he helps every week, that he helps every month, etc.

In the LF of the implicature (41b) the NPI *a red cent* is in the immediate scope of the negation *not* and the implicature (41b) is informative enough that we might expect the speaker to convey it by uttering (41a). So sentence (41a) is an acceptable sentence.

In summary, the two leading approaches to negative polarity are Ladusaw ( 1980, 1982, 1983), and Linebarger (1980, 1987, 1991). Ladusaw's account, which is based on semantic entailment, seems to have a number of problems. The account proposed by Van der Wouden (1994), which is in favor of semantic approach, seems to fix some of the problems, but still cannot account for the case of NPI in the absence of downward entailing (monotone decreasing) expression.



Linebarger (1980, 1987, 1991)'s account seems to be more problem-free. By proposing that the NPI licensing applies at the LF level and at the implicature, she can account for all the problematic cases.

However, these accounts of negative polarity, while answering the licensing question, in particular, what makes certain contexts license polarity sensitivity, do not provide an answer for the sensitivity question, in particular, what makes certain forms sensitive to these contexts. In the next section I summarize another account of polarity sensitivity which can answer both the licensing and the sensitivity question.

## 2.2 Israel (1996)

Israel (1996) proposed a lexical semantic explanation for the distribution of polarity sensitive items. Though focusing on the sensitivity question, his account answers the licensing question as well. He considered the problem of polarity sensitivity as lexical semantics. He claims that PSIs are specified for two semantic features: quantitative value and informative value. The interaction of these two features makes them sensitive to certain contexts.

His idea is that some words range in terms of strength, for example, the evaluative terms *excellent*, *good* and *o.k.* range in the degree of perfection. The word *excellent* expresses the higher degree of perfection than the word *good* and the word *good* expresses the higher degree of perfection than the word *o.k.* So on the scale of perfection the word *excellent* is encoding a higher quantitative value than either *good* or *o.k.*

Israel claims that PSIs encode quantitative value (q-value), in particular PSIs encode either a high q-value or a low q-value. For example, on the scale of the amount of sleeping *a wink* is designating a low q-value while *much* is designating a high q-value.

- (44) a. Margo didn't sleep *a wink* before her big test.

[=Israel 1996, ex. 10a]

- b. Margo didn't sleep *much* before her big test.

[=Israel 1996, ex. 10b]

On the scale of the amount of money *scads* is encoding a high q-value and *a little bit* is encoding a low q-value.

- (45) a. Belinda won *scads* of money at the Blackjack tables.

[=Israel 1996, ex. 11a]

- b. Belinda won *a little bit* of money at the Blackjack tables.

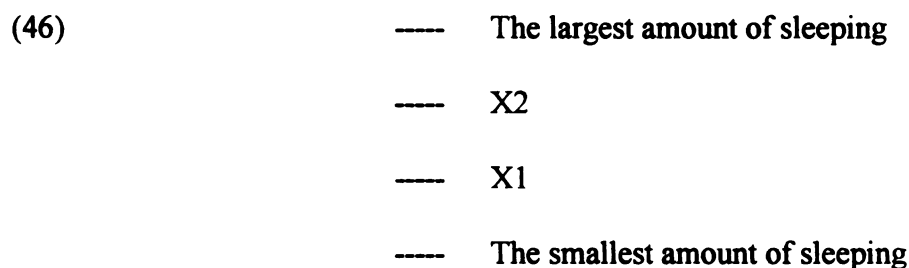
[=Israel 1996, ex. 11b]

Israel claims that a sentence containing a PSI implicitly refers to a norm. A norm can be understood as a normal expectation in context. A sentence which is more informative than a norm is an emphatic sentence and a sentence which is less informative than a norm is an understatement sentence. So a norm will be entailed by an emphatic sentence and an understatement sentence will be entailed by a norm.

When a particular word is conventionally associated with emphatic or understating contexts, the word can be stereotyped as conveying an emphatic or understating force. PSIs are the words of this kind. They are specified for informative value (i-value), in particular, they are encoding either an emphatic force or an understating force.

Israel assumes that an NPI which designates a low q-value is equipped with an emphatic force when it is negated so it will produce an emphatic sentence, such as (44a). An NPI which designates a high q-value is equipped with an understating force when it is negated so it will produce an understatement sentence such as (44b). And it is backward when polarity is reversed. A PPI which designates a high q-value is equipped with an emphatic force so it will produce an emphatic sentence such as (45a). A PPI which designates a low q-value is equipped with an understating force so it will produce an understatement sentence such as (45b).

An NPI will produce an emphatic or an understating sentence only in the environment that a lower position entails a higher position. To illustrate, consider the following figure.



Both (44a) and (44b) will entail “Margo didn’t sleep the largest amount of sleeping.” That is, NPIs will be licensed only in the environments that reverse the direction of entailment in the model. That environment is apparently a negative environment. That is why these forms are NPIs.

In contrast, a PPI will produce an emphatic or an understating sentence only in the environment that a higher position entails a lower position. To illustrate, consider the following figure.

- (47)
- The largest amount of money
  - X2
  - X1
  - The smallest amount of money

Both (45a) and (45b) will entail "Belinda won the smallest amount of money."

That is PPIs will be licensed only in the environments that preserve the direction of entailment in the model. And that environment is apparently a positive environment. That is why they are PPIs.

So by assuming that PSIs are specified for q-value and i-value which relates to the notion of emphasis and understatement, and by defining the notions of emphasis and understatement in terms of entailments, both the sensitivity and the licensing problem can be solved.

## 2.3 Summary

There seem to be two main questions that the theory of polarity sensitivity should be able to answer: the licensing question (what makes contexts license polarity sensitivity) and the sensitivity question (what makes certain forms sensitive to these contexts). Also logically the solution for these two questions should be related.

However, apparently much of the research has focused on the licensing question, in particular NPI licensing. Different approaches to NPI licensing have been proposed. The two main approaches are Ladusaw (1980, 1982, 1983) and Linebarger (1981, 1987, 1989). Ladusaw argues that the licensing of NPIs can be determined by the

semantic property of being downward entailing. According to Ladusaw, negations are only a subclass of downward entailing expressions. Linebarger, on the other hand, argues the distribution of NPIs has to be explained by the interplay between syntax and pragmatics. For her, what licenses an NPI in a sentence S is a negation which can be either in the LF of the sentence S or in the LF of the implicature of the sentence S.

Israel (1996), on the other hand, offers a neat explanation based on lexical semantics which can answer both licensing and sensitivity questions. His answer to the one is related to the other. He claims that PSIs encode two semantic features, quantitative value and informative value and the interaction of these two features causes the polarity sensitivity.

In summary, different approaches have been proposed to account for the phenomenon of polarity sensitivity. Each of the approaches has its strengths and weaknesses. What all of them share in common seems to be an attempt to make the generalization that can account for the mystery of polarity sensitivity in languages.

## CHAPTER 3

### POLARITY SENSITIVE COPULAR VERBS IN THAI

In this chapter, I investigate the restriction on the distribution of the copular verbs in Thai and attempt to give an explanation for the polarity sensitivity of these verbs.

This chapter consists of 4 sections. Section 3.1 shows that there is a pair of copular verbs in Thai—one PPI and one NPI. Section 3.2 shows how the data from the copular verbs in Thai poses problems with respect to polarity sensitivity items. Section 3.3 examines the aspectual distribution of the copular verbs and discusses the possible connection between the aspectual facts and the polarity sensitivity of the copular verbs. Section 3.4 provides an alternative approach to the copular verbs in Thai. Section 3.5 concludes the chapter.

#### 3.1 Polarity Sensitive Copular Verbs in Thai

Copular verbs are verbs that make no semantic contribution to a sentence. The verb *be* is considered a copular verb in English. Thai has three copular verbs: *pen*, *khu* and *chai*. The distribution of the copular verbs involves polarity sensitivity. While the copular verb *pen* can occur in both positive and negative environments, the copular verb *khu* can only occur in positive environments and the copular verb *chai* can only occur in negative environments.

- (48) a. *Somchay pen prathan samakhom nakrian Thai*  
 Somchay be president association student Thai  
 “Somchay is the president of Thai student association.”
- b. *Somchay mai pen prathan samakhom nakrian Thai*  
 Somchay not be president association student Thai  
 “Somchay is not the president of Thai student association.”
- (49) a. *Somchay khu prathan samakhom nakrian Thai*  
 Somchay be president association student Thai  
 “Somchay is the president of Thai student association.”
- b. *\*Somchay mai khu prathan samakhom nakrian Thai*  
 Somchay not be president association student Thai  
 “Somchay is not the president of Thai student association.”
- (50) a. *\*Somchay chai prathan samakhom nakrian Thai*  
 Somchay be president association student Thai  
 “Somchay is the president of Thai student association.”
- b. *Somchay mai chai prathan samakhom nakrian Thai*  
 Somchay not be president association student Thai  
 “Somchay is not the president of Thai student association.”

Let us summarize the above observation as follows:

- (51) *Pen* is polarity-insensitive, but *khu* and *chai* are polarity sensitive, in particular *khu* is a PPI which has *chai* as a parallel NPI.

### 3.2 The Problems of Polarity Sensitive Copular Verbs in Thai

Despite the fact that most of the research has focused on the licensing problem, in particular what makes certain contexts license polarity sensitivity, the data from the polarity sensitive copular verbs in Thai seems to pose more problems regarding sensitivity, in particular, what makes certain forms sensitive to these contexts.

To begin with, the analysis by Ladusaw (1980, 1982, 1983) involves a sentence operator and an argument. He claims that a downward entailing operator can license an NPI in its argument. A negation is a subclass of the downward entailing operators and so it can license an NPI.

Generally the NPI *chai* in Thai is licensed by the negation *mai* “not.” (52a) can be presented as (52b) and (53a) entails (53b), so *mai* “not” is a sentence operator which is downward entailing and can license the NPI *chai*.

- (52) a. *John mai chai hmo*  
John not be doctor  
“John is not a doctor.”
- b. *mai* (John *chai hmo*)  
not John be doctor  
OPERATOR ARGUMENT
- (53) a. *John mai chai hmo*  
John not be doctor  
“John is not a doctor.”



- b. *John mai chai hmo ti chaidi*

John not be doctor that nice

“John is not a nice doctor.”

So Ladusaw’s proposal seems to apply here.

In Thai there seem to be two words *siathihnai* and *siamuarai* which when put at the end of a sentence can change the polarity of the sentence, as shown by the following examples.

- (54) a. *John chai hmo siathihnai*

John be doctor NEG

“John is not a doctor.”

- b. *John chai hmo siamuarai*

John be doctor NEG

“John is not a doctor.”

- (55) a. *John mai chai hmo siathihnai*

John not be doctor NEG

“John is a doctor.”

- b. *John mai chai hmo siamuarai*

John not be doctor NEG

“John is a doctor.”

So it seems that these words when put at the end of the clause, negate the whole clause. In (54), they negate the clause *John chai hmo* “John is a doctor” and in (55) they negate the clause *John mai chai hmo* “John is not a doctor.”

In (55), as double negation produce positive meaning, the sentences mean “John is a doctor.” The sentences in (55), therefore, can be represented as the following.

- (56) a.     *siathihnai*     (*mai*             (*John chai hmo*) )  
               NEG             not             John be doctor  
               OPERATOR    OPERATOR    ARGUMENT
- b.     *siamaurai*     (*mai*             (*John chai hmo*) )  
               NEG             not             John be doctor  
               OPERATOR    OPERATOR    ARGUMENT

So despite of the positive meaning of the sentences like (55), the account proposes by Ladusaw still applies. The NPI *chai* is licensed by the downward entailing sentence operator which is, in the case of the sentences in (55), the negation *mai* “not,” and the other round of negation which turns the sentences into positive sentences does not effect the NPI licensing.

Van der Wouden (1994) proposes that NPIs can be classified into 3 classes; weak NPIs, meduim NPIs, and strong NPIs, according to their licensing requirement. The NPI *chai* requires the strongest class of licensors, in particular the anti-morphic licenser, such as (57). Neither an anti-additive licenser, such as (58) nor a monotone decreasing licenser, such as (59) is sufficient to license it.

(57)   *John mai chai hmo*

John not be doctor

“John is not a doctor.”

(58) \**Mai mi khrai chai hmo*

Not have who be doctor

“No one is a doctor.”

(59) \**Yang mak hmo sam khon chai khon Thai*

At most doctor three people be people Thai

“At most three doctors are Thai people.”

So the NPI *chai* should be classified as a strong NPI.

So far the accounts in favor of a semantic approach, in particular Ladusaw (1980, 1982, 1983) and Van der Wouden (1994), therefore, seems to be working for the NPI licensing in Thai. The account based on syntactic configuration proposed by Linebarger (1980, 1987, 1981) also seems to apply.

According to Linebarger (1980, 1987, 1981), the NPI licenser must be a negation. In particular she claims in the Part A of her analysis that for an NPI to be acceptable in a sentence S, it has to be in the immediate scope of the negation in the LF of the sentence S. This seems to apply for the case of the NPI copular verb in Thai. Consider the following sentences.

(60) *John mai dai pen hmo phro tuk phomae bangkhap (tae phro khao*

John not become be doctor because PASSIVE parents force (but because he

*yak pen eng)*

want be self)

“John was not a doctor because he was forced by his parents (but because he himself wanted to be a doctor.)”

(61) \**John mai dai **chai** hmo phro tuk phomae bangkhap (tae phro khao*  
*John not become be doctor because PASSIVE parents force (but because he*  
*yak pen eng)*

*want be self)*

“John was not a doctor because he was forced by his parents (but because he himself wanted to be a doctor.)”

The LF representation of both (60) and (61) can be represented as (62), where S-1 is the adjunct clause (the *because* clause) and S-2 is the matrix clause (the clause modified by the *because* clause).

(62) NOT CAUSE (S-1, S-2)

The forms *pen* and *chai* in bold face in (60) and (61) are located in S-2 of (62) so they are not in the immediate scope of the negation. As the form *pen* is not an NPI so the sentence is still acceptable but the form *chai* is an NPI so the sentence is not acceptable.

According to Linebarger, for the form *chai* to be acceptable, it has to be, at the LF, in the immediate scope of the negation, such as the following representation.

(63) CAUSE (S-1, NOT S-2)

A sentence corresponding to this LF representation will be the sentence such as the following.

(64) *John mai **chai** hmo phro khao rian ek compiwtoe*

*John not be doctor because he study major computer*

“John is not a doctor because he was majoring in computer science.”

In (64) the form *chai* which is in S-2 is in the immediate scope of the negation *mai* “not”, so, as predicted by Linebarger’s account, the sentence is acceptable.

In conclusion, the NPI *chai* in Thai is generally licensed by overt negation. Since licensing by overt negation is the simplest case of NPI licensing, any accounts on NPI licensing seem to apply.<sup>5</sup>

Rather than for licensing, Thai polarity sensitive copular verbs pose problems for sensitivity. Israel (1996) offers an account focusing on the sensitivity problem, in particular, what makes certain forms sensitive to those contexts. His account eventually can answer both licensing and sensitivity problems. He claims that PSIs are specified for two semantic features: quantitative value and informative value. The interaction of these two features makes them sensitive to certain contexts. His explanation, however, does not apply for the case of the polarity sensitive copular verbs in Thai.

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<sup>5</sup> There is, however, a case of NPI licensing in Thai, which seems to call for more explanation, as shown by the following.

- (i) *chai wa John chop Mary*  
be that John likes Mary  
“It is not that John likes Mary.”
- (ii) *Mai chai wa John chop Mary*  
Not be that John likes Mary  
“It is not that John likes Mary.”

As (i) means the same thing as (ii), the word *chai* “is” means *mai chai* “is not.” The explanation for this is beyond the scope of this paper.

Copular verbs do not carry semantic meaning of the type that the English PSIs do. Obviously they cannot be specified for q-value. For the i-value, Israel has shown that if an item is specified for i-value, it will be limited to certain contexts, in particular, the context that supports its i-value. As the distribution of the copular verbs in Thai shows that they can only occur in certain contexts, it seems that the i-value must be involved.

However, Israel has shown that if an item can only occur in negative context, it is its low q-value that will push it to produce emphatic sentence and it is its high q-value that will push it to produce an understatement sentence. This is not what happened in the case of PSIs in Thai. The item that can only occur in a negative context is not equipped with any q-value, so it does not produce either emphatic or understatement sentences. The same goes for an item that can only occur in a positive context. He has shown that if an item can only occur in a positive context, it is its low q-value that will push it to produce understatement sentence, and it is its high q-value that will push it to produce an emphatic sentence. In the case of the PSI in Thai, the item can only occur in a positive context but it is not equipped with any q-value so it produces neither an understatement nor an emphatic sentence.

Related to the explanation concerning the features that PSIs are specified for, Israel answers the licensing question. He explains that the environments that allow items like *a wink* and *much* to encode their features are actually the environments that a lower position entails a higher position, which is a negative environment. The environments that allow items like *scads* and *a little bit* to encode their features are actually environments where a higher position entails a lower position, which is a positive environment.

However, this is not what happened in the case of polarity sensitive copular verbs in Thai. Since they are not equipped with those features. They do not locate on a scale. So the environments that license them has nothing to do with the position and the entailment.

In summary, the data from the polarity sensitive copular verbs in Thai does not present a problem for licensing. The accounts on NPI licensing that have been proposed apply for the case of NPI licensing in Thai. The data from the polarity sensitive copular verbs in Thai, however, presents a big problem to the sensitivity. The previous account of sensitivity fails to account for the case of polarity sensitive copular verbs in this language.

### **3.3 The Aspectual Distribution of Polarity Sensitive Copular Verbs in Thai**

In this section I show that the distribution of copular verbs in Thai involves aspectual restrictions. This section consists of 4 parts. In 3.3.1 I summarize the research done by Kuno and Wongkhomthong (1981) concerning the difference in meaning between the copular verbs in Thai. Sections 3.3.2 and 3.3.3 examine the restrictions on aspect of the copular verbs. Section 3.3.4 summarizes the discussion on aspect.

#### **3.3.1 The difference of meaning between the copular verbs in Thai**

It is helpful to begin an aspectual discussion of the copular verbs with a discussion of the difference of meaning between them. Kuno and Wongkhomthong

(1981) discuss the difference of meaning between *pen* and *khu*. Their assumption is that the *pen* pattern is used for characterization and the *khu* pattern is used for identification.

To illustrate, consider the following sentences;

- (65) a. *ruang thi chan cha bok khun pen/\*khu ruang samkhan mak*  
thing that I will tell you is thing important very  
“What I want to tell you is very important thing.”  
[= Kuno and Wongkhomthong 1981, ex. 4a]
- b. *ruang thi chan cha bok khun ko \*pen/khu chan kam lang cha taeng ngan*  
thing that I will tell you is I about to will marry  
“What I want to tell you is that I am going to marry.”  
[= Kuno and Wongkhomthong 1981, ex. 4b]
- (66) a. *Ruang thi dichan bok khun John muwanni pen/\*khu khwamching*  
thing that I tell Mr. John yesterday is fact  
“What I told John yesterday is a fact.”  
[= Kuno and Wongkhomthong 1981, ex. 5a]
- b. *Rung thi dichan bok khun John muwanni \*pen/khu khwamching thi phom*  
thing that I tell Mr. John yesterday is fact that I  
*kamlung cha lao hai khun fang*  
about to will tell give you listen  
“What I told John yesterday is the fact that I am going to tell you.”  
[= Kuno and Wongkhomthong 1981, ex. 5b]

(65a) and (66a) present one of the characteristics that their subject possesses. For example, (65a) presents as a characteristic of what the speaker wants to tell the addressee



the fact that it is very important. (66a) characterizes what the speaker told John the day before as factual. So they are characterizational sentences and the copular verb *pen* is used. On the other hand, (65b) and (66b) are not characterizational sentences, but they are identificational sentences. For example, (65b) identifies what the speaker want to tell the addressee as the fact that he is getting married. (66b) identifies what the speaker told John the day before with the fact that he is going to tell the addressee. So *khu* is used as a copular verb.

For cases in which *pen* and *khu* can be used interchangeably, the explanation has to do with the speaker's intention. Consider, for example, the following sentences:

(67) a. *John pen/khu khon thi chan rak*

John is person that I love

"John is the person that I love."

[=Kuno and Wongkhomthong 1981, ex. 9b]

b. *katoe pen/khu prathanathibadi khong saharatamerika*

Carter is president of US

"Carter is the President of the United States of America."

[=Kuno and Wongkhomthong 1981, ex. 10b]

(67a), for example, if the speaker's intention is to present one of the characteristics that John has, *pen* is used. On the other hand, if the speaker's intention is to state that John and the person that the speaker loves are one and the same person, *khu* is used.

Similarly, (67b) can be interpreted either as a sentence that presents one of Carter's characteristics, or a sentence which equates Carter and the President of the United States

of America. The characterizational copular *pen* is used for the former and the identificational copular *khu* is used for the latter interpretation.

Note that for the sentences in (65a) and (66a) in which only the verb *pen* is acceptable, when negated, their negation has to be *mai (dai) pen*<sup>6</sup> and for the sentences (65b) and (66b) in which only the verb *khu* is acceptable, when negated, their negation has to be *mai chai*. This can be shown by the following.

- (68) a. *ruang thi chan cha bok khun mai dai pen/\*mai chai ruang samkhan*  
 thing that I will tell you not become be / not be thing important  
*mak*  
 very

“What I want to tell you is not very important thing.”

- b. *ruang thi chan cha bok khun \*mai dai pen/mai chai chan kam lang*  
 thing that I will tell you not become be / not be I about to  
*cha taeng ngan*  
 will marry

“What I want to tell you is not that I am going to marry.”

- (69) a. *Ruang thi dichan bok khun John muwanni mai dai pen/\*mai chai*  
 thing that I tell Mr. John yesterday not become be / not be  
*khwamching*  
 fact

“What I told John yesterday is not a fact.”

- b. *Rung thi dichan bok khun John muwanni \*mai dai pen/mai chai*  
 thing that I tell Mr. John yesterday not become be / not be  
*khwamching thi phom kamlung cha lao hai khun fang*  
 fact that I about to will tell give you listen

“What I told John yesterday is not the fact that I am going to tell you.”

As expected, in the case of (67a) if the speaker’s attention is to present one of the characteristics that John does not have, the negation will be *mai (dai) pen*, as shown in (70a). On the other hand, if the speaker’s attention is to present that John and the person that the speaker loves are not one and the same person, the negation will be *mai chai*, as shown in (70b). Similarly, in (67b) if the speaker’s attention involves characterization, *mai (dai) pen* is used for negation as shown in (71a) and if the speaker’s attention involves identification, *mai chai* is used for negation, as shown in (71b).

- (70) a. *John mai dai pen khon thi chan rak*  
 John not become be person that I love  
 “John is not the person that I love.”
- b. *John mai chai khon thi chan rak*  
 John not be person that I love  
 “John is not the person that I love.”
- (71) a. *katoe mai dai pen prathanathibadi khong saharatamerika*  
 Carter not become be president of US  
 “Carter is not the President of the United States of America.”

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<sup>6</sup> The word *dai* can be interpreted in many ways. Here the closest interpretation is “become.” The discussion concerning the insertion of the word *dai* is beyond the scope

b. *katoe mai chai prathanathibadi khong saharatamerika*

Carter not be president of US

“Carter is not the President of the United States of America

So there is a clear difference between *pen* on the one hand, and *khu* and *chai* on the other.

### **3.3.2 Restriction on Aspect: Comparing the Copular Verb in English with the Copular verbs in Thai**

Studies on aspect refer to studies on kinds of action, also known by the German term Aktionsarten. Basically these studies involve a distinction between states and other kinds of eventualities.

States are kinds of circumstances which do not have internal structure. At any points of time, a state either holds or does not hold. The predicates expressing states have the property of [+stativity], for example, *like* and *know*.

Events, on the other hand, are kinds of circumstances which have internal structure and which culminates at a certain point of time. The predicates expressing events are therefore, [-stativity] predicates such as *read* and *go*.

The distinction between states and events involve subject control. Generally states are not under the control of the subject. For example, *to know* or *not to know* is not under one's control. Events, on the other hand, are under the control of subject. For example, *to go* or *not to go* is under one's control.

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of this paper.

Usually copular verbs are considered to be [+stativity] verbs. The copular verb in English and the copular verbs in Thai, though both are considered [+stativity], show different restrictions on aspect, for example, the restriction on adverbial modification and modal verbs.

### 3.3.2.1 Restriction on Adverbial Modification

#### Restriction on adverbial phrases indicating termination

Adverb phrases such as *in X years* are considered as indicating termination, while adverb phrases such as *for X years* do not indicate termination. To illustrate, consider the following examples.

- (72) a. John built a house in 2 years  
b. \*John walked in 2 years.
- (73) a. \*John built a house for 2 years.  
b. John walked for 2 years.

The predicate *built a house* suggests termination, but the predicate *walked* does not. So the predicate *built a house* can occur with the adverb *in 2 years* but cannot occur with the adverb *for 2 years*. On the contrary, the predicate *walked* cannot occur with the adverb *in 2 years* and can occur with the adverb *for 2 years*.

Both the verbs *build* and *walk* are [-stativity] verbs. Generally these adverb phrases are associated with [-stativity] verbs. Copular verbs are considered to be

[+stativity] verbs. However, the verb *be* in English can occur with these adverb phrases, as shown by the following.

- (74) a. John will be a doctor in 2 years.  
b. John has been a doctor for 2 years.

However, the adverb phrase *in 2 years* in (74a) does not seem to express termination but beginning. In particular, what described by (74a) is that in the next two years, John will start performing a doctor. The adverb phrase *for 2 years* in (74b) seems to be allowed because the verb phrase *be a doctor* expresses a kind of event. In particular, to become or not to become a doctor seems to be under one's control. So it has some property of events.

The copular verbs in Thai show some restrictions. Only the copular verb *pen* can occur with the adverb phrase *in X years* and *for X years*. The copular verbs *khu* and *chai* cannot.

- (75) a. *John cha pen hmo nai wela ik song pi*  
John FUTURE be doctor in time more two year  
“John will be a doctor in two years.”

- b. *John pen hmo ma pen wela song pi*  
John be doctor PERFECT time two years  
“John has been a doctor for two years.”

- (76) a. *\*John cha khu hmo nai wela ik song pi*  
John FUTURE be doctor in time more two year  
“John will be a doctor in two years.”

b. \**John khu hmo ma pen wela song pi*

John be doctor PERFECT time two years

“John has been a doctor for two years.”

(77) a. \**John cha mai chai hmo nai wela ik song pi*

John FUTURE not be doctor in time more two year

“John will not be a doctor in two years.”

b. \**John mai chai hmo ma pen wela song pi*

John not be doctor PERFECT time two years

“John has not been a doctor for two years.”

So it seems that the copular verbs that allow adverbial modifications like *in X time* and *for X time*, carry an eventive interpretation. In particular, they carry the sense of performing. The verb *be* when combined with a predicate nominal like *a doctor*, and the verb *pen*, therefore, carries this sense while the verbs *khu* and *chai* do not.

#### Restriction on adverbial phrase indicating a particular point of time

An adverb phrase such as “when I was 27 years old” indicates a particular point of time. In English this can modify the copular verb *be*, as shown by (78).

(78) John was a doctor when he was 27 years old.

In Thai, the adverb phrase *ton ayu 27 pi* “when he was 27 years old” can modify only the verb *pen*, not the verbs *khu* and *chai*, shown by the following.

(79) *John pen hmo ton ayu 27 pi*  
 John be doctor at the time age 27 year  
 “John was a doctor when he was 27 years old.”

(80) *\*John khu hmo ton ayu 27 pi*  
 John be doctor at the time age 27 year  
 “John was a doctor when he was 27 years old.”

(81) *\*John mai chai hmo ton ayu 27 pi*  
 John not be doctor at the time age 27 year  
 “John was not a doctor when he was 27 years old.”

Adverb phrases like *in the past* do not seem to indicate a particular point in time. This kind of adverbs can occur with the copular verb *be* in English and all the copular verbs in Thai as shown below.

(82) *Mua kon John pen hmo*  
 When before John be doctor  
 “In the past John was a doctor.”

(83) *Mua kon John khu hmo*  
 When before John be doctor  
 “In the past John was a doctor.”

(84) *Mua kon John mai chai hmo*  
 When before John not be doctor  
 “In the past John was not a doctor.”

The adverb phrase indicating a particular point of time seems to involve the idea of transition. As the verb phrase (*John*) *was a doctor* is modified by the adverb phrase



*when he was 27 years old*, it involves the idea that before John was 27 years old, he was not a doctor, but after he turned to 27 years old he became a doctor.

An adverb phrase that does not indicate a particular point of time, such as *in the past*, on the other hand, does not involve any idea of transition.

So it seems that the verbs that allow the adverbial modification indicating a particular point of time are associated with the interpretation of transition. The verb *be* and *pen* can be, therefore, associated with the idea of transition while the verb *khu* and *chai* are not.

### 3.3.2.2 Restriction on Modal Verbs

#### Restriction on the modal verb expressing ability and permission

This modal verb seems to be of particular interest. The modal verb *can* is used to express ability, and permission. In some cases it can occur with the verb *be*, as shown by the following.

- (85) a. John can be a doctor  
b. \*John can be tall

Can can occur in (85a) but not in (85b). This can be accounted for by the fact that the predicate *be tall* is carrying a higher degree of stativity than the predicate *be a doctor*; in particular, being tall is permanent and not under the control of the subject but being a doctor is not permanent and it is under the control of the subject. Therefore while the

predicate *be tall* cannot occur with the modal verb expressing ability and/or permission, the predicate *be a doctor* can.

In Thai the modal verb *dai* “can” can occur with the copular verb *pen* but it cannot occur with either the copular verbs *khu* or *chai*, as shown below.

(86) *John pen prathan dai*  
John be president can  
“John can be a president.”

(87) \**John khu prathan dai*  
John be president can  
“John can be a president.”

(88) \**John chai prathan mai dai*  
John be president not can  
“John cannot be a president.”

So it seems that the verbs *khu* and *chai* carry a higher degree of stativity than the verb *pen*.

#### Restriction on particles expressing progressive form

In English, the verb to *be* cannot occur in the progressive form, as shown by the following.

(89) \*John is being a doctor

In Thai the progressive form is expressed by the word *yu*. The verb *pen* can occur in the progressive form but the verbs *khu* and *chai* cannot, as shown by the following.

(90) *John pen hmo yu*

John be doctor PROGRESSIVE

“John is being a doctor.”

(91) \**John khu hmo yu*

John be doctor PROGRESSIVE

“John is being a doctor.”

(92) \**John mai chai hmo yu*

John not be doctor PROGRESSIVE

“John is not being a doctor.”

Generally the progressive form can only occur with [-stativity] verbs. However, it can occur with the verb *pen*. So it seems that the verb *pen*, compared with *khu* and *chai* and with English *be*, is the most likely to behave like a [-stativity] verb.

### Restriction on particles expressing tenses

Languages have different ways to express tenses. English has tense-inflections. Thai, on the other hand, express tenses by particles such as *cha* (future tense) and *khu* (past tense). Without the particles, the tense of the verb is understood as present tense.

The copular verb *be* in English can occur in any tense, in particular, present, future and past tenses.

- (93) a. John is a doctor.  
 b. John will be a doctor.  
 c. John was a doctor.

The copular verbs in Thai can occur in present tense. However, only the verb *pen* can occur with the particles expressing future and past tenses. The verb *khu* and *chai* cannot.

- (94) a. *John pen hmo*  
 John be doctor  
 “John is a doctor.”  
 b. *John cha pen hmo*  
 John FUTURE be doctor  
 “John will be a doctor.”  
 c. *John khoey pen hmo*  
 John PAST be doctor  
 “John used to be a doctor.”

- (95) a. *John khu hmo*  
 John be doctor  
 “John is a doctor.”  
 b. *\*John cha khu hmo*  
 John FUTURE be doctor  
 “John will be a doctor.”

- c.     *\*John khoey khu hmo*  
           John PAST be doctor  
           “John was a doctor.”
- (96) a.     *John mai chai hmo*  
           John not is doctor  
           “John is not a doctor.”
- b.     *\*John cha       mai chai hmo*  
           John FUTURE not be doctor  
           “John will not be a doctor.”
- c.     *\*John mai khoey chai hmo*  
           John not PAST be doctor  
           “John was not a doctor.”

It is worth noting here the fact that generally [-stativity] verbs cannot occur in the simple present tense. They have to be either in the future or in the past tense.

- (97) a.     *\*John builds a house*  
        b.     John will build a house  
        c.     John built a house

To express the present tense, [-stativity] verbs have to be in the present progressive.

- (98)       John is building a house.

The copular verbs *khu* and *chai* in Thai behave totally differently. They have to be in the present tense and as shown in the previous section, they cannot be in progressive form.

So it seems that comparing to the verbs *be* and *pen*, the verbs *khu* and *chai* have a higher degree of [+stativity].

In summary all of the copular verbs, in particular *be pen khu* and *chai* express states but only *be* and *pen* allow eventive interpretation which is the sense of performing and transition and only *pen* allows eventive form which is progressive form.

So the copular verb in English and the copular verbs in Thai are all different in their aspectuality. While English has only one copular verb (*be*) which has a medium degree of stativity, Thai has three copular verbs-two (*khu* and *chai*) expressing a high degree of stativity and one (*pen*) expressing a low degree of stativity.

### **3.3.3 Restriction on Aspect: Comparing the Copular Verbs with Other Stative Verbs in Thai**

While the polarity sensitive copular verbs in Thai show many restrictions on aspect, in particular restrictions on adverbial modification and modal verbs, other [+stativity] verbs do not. Consider, as representatives, the [+stativity] verbs *ru* “know” and *chop* “like” in the following examples.

#### **3.3.3.1 Restriction on Adverb Phrases Indicating a Particular Point of Time**

While the polarity sensitive copular verbs cannot occur with an adverb phrase indicating a particular point of time, stative verbs such as *ru* “know” and *chop* “like” can.

(99) *John ru phasathai ton ayu 27 pi*  
 John know language Thai at the time age 27 year

“John knew Thai when he was 27 years old.”

(100) *John chop Mary ton ayu 27 pi*  
 John like Mary at the time age 27 year

“John liked Mary when he was 27 pi

As the adverb phrase like *ton ayu 27 pi* “when he was 27 years old” involves the idea of transition, it seems that only the polarity sensitive copular verbs do not allow this idea while the other [+stativity] verbs do.

### 3.3.3.2 Restriction on Particles Expressing Tenses

While the polarity sensitive copular verbs cannot occur with the particles expressing future and past tenses, the [+stativity] verbs *ru* “know” and *chop* “like,” can, as shown by the following.

- (101) a. *John cha ru phasathai hlangchak chop karn oprom ni*  
 John FUTURE know Thai after finish training this  
 “John will know French after finishing this training.”
- b. *John khoey ru phasathai tae tonni khao lum laew*  
 John PAST know Thai but now he forget PERFECT  
 “John knew Thai but now he forgot it.”

(102) a.     *John cha        chop Mary hlangchak khao dai hen thoe*

John FUTURE like Mary after        he get see her

“John will like Mary after he sees her.”

b.     *John khoey chop Mary tae ton ni khao chop Susan*

John PAST like Mary but now he like Susan

“John liked Mary but now he likes Susan.”

So it seems that only the polarity sensitive copular verbs are limited to the present tense form. The other [+stativity] do not show this limitation.

It is worth noting here that the verbs *ru* and *chop* in Thai behave in the same way as the verbs *know* and *like* in English. In particular, they can occur with the adverb phrase indicating a particular point of time and they can be in present tense, future tense, and past tense.

So it seems the polarity sensitive copular verbs have peculiar aspectual facts. The other verbs of the same kind do not show the aspectual restrictions that the polarity sensitive copular verbs do.

### 3.3.4 Summary of the Discussion on Aspect

So far it seems that the polarity sensitive copular verbs in Thai possess a kind of peculiarity. The aspectual distribution of the copular verbs in Thai differs from the copular verb *be* in English and other [+stativity] verbs.

In section 3.3.2, I compared the copular verbs in Thai with the copular verb in English. It seems that the verb *pen* has a lesser degree of [+stativity] than the verb *be* in



English and the verbs *khu* and *chai* have a greater degree of [+stativity] than the verb *be* in English, as shown by the following.

#### **The verb *pen* in Thai**

- expressing states
- eventive interpretation (performing and transition)
- progressive form

#### **The verb *be* in English**

- expressing states
- eventive interpretation (performing and transition)
- \*progressive form

#### **The verb *khu* and verb *chai* in Thai**

- expressing states
- \*eventive interpretation (performing and transition)
- \*progressive form

This assumption seems to be compatible with what was discussed by Kuno and Wongkhomthong (1981). Since the copular verb *pen* is more eventive than *khu*, *pen* is used for characterization, which can be changed over time and the copular verbs *khu* and *chai* are used for identification, which can hardly be changed over time.

I show in Section 3.3.3 that other [+stativity] verbs do not show the restrictions on aspect that the polarity sensitive copular verbs do.

So the aspectual distribution of the polarity sensitive copular verbs differs from both that of the copular verb *be* in English and other [+stativity] verbs in Thai. Crucially the copular verb *be* in English and the other [+stativity] verbs in Thai are not polarity

sensitive. So it seems possible that the aspectual fact might be related to the polarity sensitivity facts.

Moreover, both aspect and polarity sensitivity are the restrictions on a sentence level. In particular, both of them have to be interpreted with respect to a verb phrase in a sentence. So it seems possible that there might be a connection between the aspectual properties of Thai copular verbs and their property of polarity sensitivity.

### **3.4 An Alternative Approach to the Copular Verbs in Thai**

While the present paper states that Thai has 3 copular verbs: *pen*, *khu* and *chai*, Prof. Lockwood, offers another approach to the copular verbs in Thai. He suggests that the copular verbs in Thai might be divided into 2 morphemes. One is *pen* and another is a morpheme which consists of 2 allomorphs, in particular *khu* and *chai*.

Supporting this, *khu* and *chai* share the same meaning and are in complementary distribution, in particular, one is for positive contexts and one is for negative contexts, as discussed in section 3.3.1.

As *khu* and *chai* have no etymological relation, they are considered to be suppletive allomorphs. By treating the verbs *khu* and *chai* as allomorphs of the same morpheme will correspond to English verbs, such as *go* and *went* which are allomorphs of the same morpheme. The two allomorphs *khu* and *chai* would share the same meaning but one is PPI and one is NPI. The two allomorphs *go* and *went* would share the same meaning but one is for present tense and one is for past tense.

However, this approach does not bring about explanation for the polarity sensitivity, in particular why one has to be PPI and one has to be NPI. While it is common in English that every verb has a present tense form and past tense form, it is uncommon for a verb to have one form for positive contexts and one form of negative contexts.

This approach does not either explain the aspectual facts, in particular, why this single morpheme (the morpheme that consists of 2 allomorphs *khu* and *chai*) has the aspectual restriction that the other morphemes do not.

Therefore, it is another approach to the copular verbs in Thai. However, the fundamental problems concerning the polarity sensitivity and aspectuality still remain.

### **3.5 Conclusion**

In this chapter I have shown that the polarity sensitive copular verbs in Thai pose problems to the theory of polarity sensitivity. However, rather than relating to the licensing issue, the data from the polarity sensitive copular verbs in Thai presents a big problem for the sensitivity issue.

Accounts focusing on the licensing problem, in particular Ladusaw (1980,1982,1983) and Linebarger (1981,1987,1989), are able to account for NPI licensing in Thai.

Israel's (1996) account which is focusing on the sensitivity problem cannot account for the polarity sensitive copular verbs in Thai. His explanation relates the semantic features that the polarity sensitive items carry to the occurrences of the polarity

sensitivity items. As copular verbs carry no semantic meaning, his explanation does not apply to the polarity sensitive copular verbs in Thai.

Crucially the polarity sensitive copular verbs in Thai show restrictions on aspect. By comparing with other verbs of the same kind, the polarity sensitive copular verbs do not share any common aspectual distributions with the other verbs. So it might be possible that the property of polarity sensitivity that the copular verbs possess is related to their aspectual restrictions.

## **CHAPTER 4**

### **CONCLUSION**

This thesis has investigated the restriction on the distribution on the polarity sensitive copular verbs in Thai. Earlier studies on polarity sensitivity cannot account for the case of polarity sensitive copular verbs in Thai.

There seem to be two main questions for the studies on polarity sensitivity: the licensing question and the sensitivity question. While the licensing question deals with makes certain contexts license polarity sensitivity the sensitivity question involves what makes certain forms sensitive to these contexts.

Much of the previous research has focused on the licensing question. However, it is the sensitivity question, rather than the licensing question, that presents a big problem in Thai.

Since generally the NPI in Thai is generally licensed by the negation which is the simplest case of NPI licensing, any accounts on NPI licensing, in particular, Ladusaw (1980,1982,1983) and Linebarger (1981,1987,1989) seem to apply.

The sensitivity seems to be a big problem in Thai. The previous research focusing on the sensitivity, in particular Israel (1996) fail to account for the polarity sensitive copular verbs in Thai.

Israel (1996) claims that PSIs are specified for two semantic features: quantitative value (q-value) and informative value (i-value), and the interaction of these two features makes them sensitive to certain contexts. Obviously, his explanation relates the semantic features that the PSIs carry to the distribution of PSIs. As the copular verbs carry no

semantic meaning, their distribution cannot be explained by the semantic features. His account, therefore, is not working for the case of polarity sensitive copular verbs in Thai.

I have shown that the polarity sensitive copular verbs in Thai possess a kind of peculiarity in terms of aspect. The other verbs of the same type, in particular, the verb *pen* in Thai, the verb *be* in English and the other [+stativity] verbs, such as *ru* “know” and *chop* “like,” do not show the aspectual restrictions that the copular verbs *khu* (PPI) and *chai* (NPI) do and at the same time they are not polarity sensitive. As aspect and polarity sensitivity are both restrictions over a verb phrase, in particular, they have to be interpreted with respect to a verb phrase in a sentence, it seems possible that there might be connection between the aspect and the polarity sensitivity. So the aspectual facts might be related to the polarity sensitivity of the copular verbs.

The problem remaining is to find a relationship between the polarity sensitivity of *khu* and *chai* and their aspectual constraints. There seem to be three possible areas in which this relationship could be found. The relation between aspect and polarity sensitivity might involve three possible kinds of facts: semantic facts, syntactic facts and pragmatic facts.

Semantic facts need to be considered because the copular verbs in Thai carry some semantic features. Generally copular verbs carry no semantic meaning. However, as Kuno and Wongkhomthong (1981) showed, one of the copular verbs is used for characterization and one is used for identification. This means that logically the copular verbs must carry some semantic features. To explain the aspect and polarity sensitivity, this fact cannot be ruled out.

The syntactic facts I have in mind have to do with hierarchical structure. In a tree structure the nodes TP (tense phrase) and NEGP (negation phrase) are higher than the node VP (verb phrase). There might be some reasons that a VP containing *khu* or *chai* cannot be in a position under the TP and in some ways the VP *khu* prevents the NEGP but the VP *chai* requires the NEGP. It seems possible that the structural explanation for the aspect and polarity sensitivity is on this track.

A pragmatic fact that might be relevant is the fact that the word *chai* is ambiguous. In particular, the word *chai* is a copular verb, similar to “be” in English and also a word used to show that a statement is correct or that the speaker agrees, similar to “Yes” in English. This ambiguity might affect the use of aspect and specify the polarity of the word. This fact, therefore, should be in consideration as well.

So although the explanation of how the aspect and polarity sensitivity are related has not been offered, the possible directions in which they might be related have been pointed out.

The polarity sensitivity is considered one of the mysteries in linguistic theory. The data from the polarity sensitivity copular verbs in Thai has shown another way that the polarity sensitive items might vary. The earlier theory of polarity sensitivity has not resulted in an adequate explanation for these polarity sensitivity items. It is hoped that this thesis can be at least motivation for the future research on polarity sensitivity.

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