Classifiers and Determiner-less Languages: The Case of Thai

by

Nattaya Piriyawiboon

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Department of Linguistics
University of Toronto

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Abstract

This thesis provides a syntactic and semantic analysis of bare arguments and classifiers in Thai as well as accounting for its nominal word order. Adopting the Nominal Mapping Parameter (Chierchia 1998), it is argued that Thai nouns are names of kinds. Kinds are of type $<s,e>$, which are allowed to appear without overt determiners in argument position. For this reason, Thai nouns cannot directly combine with a quantifier without the help of a classifier. The study shows that Thai arguments behave like English bare arguments (bare plurals and mass nouns) in that they exhibit scopelessness and can be interpreted with different meanings such as weak indefinite, generic and kind interpretations. Unlike English bare arguments, the Thai counterparts may also have a definite interpretation. This is because Thai lacks an overt definite determiner.

In addition, the thesis provides a unified analysis for the occurrence of Thai classifiers in different contexts. It is assumed that a classifier occurs in a quantified context to provide a portion of a kind (Krifka 1995, Chierchia 1998). The thesis further proposes that a classifier occurs in a non-quantified context where there is no overt numeral when the noun phrase is specific. A specific noun phrase includes those appearing with a demonstrative, the numeral ‘one’ or a modifier. As for the word order within the nominal domain, it is proposed that the noun, although merged at the bottom of the Specific Phrase underlyingly, always appears in the initial position to check an uninterpretable nominal feature in the Specific head.
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<thead>
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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>First person</td>
</tr>
<tr>
<td>2</td>
<td>Second person</td>
</tr>
<tr>
<td>3</td>
<td>Third person</td>
</tr>
<tr>
<td>A</td>
<td>Adjective</td>
</tr>
<tr>
<td>ACC</td>
<td>Accusative case</td>
</tr>
<tr>
<td>AN</td>
<td>Animate</td>
</tr>
<tr>
<td>ASP</td>
<td>Aspect marker</td>
</tr>
<tr>
<td>CL</td>
<td>Classifier</td>
</tr>
<tr>
<td>CM</td>
<td>Challengeability marker</td>
</tr>
<tr>
<td>COMP</td>
<td>Complementizer</td>
</tr>
<tr>
<td>COP</td>
<td>Copula</td>
</tr>
<tr>
<td>DEM</td>
<td>Demonstrative</td>
</tr>
<tr>
<td>EMPH</td>
<td>Emphatic marker</td>
</tr>
<tr>
<td>IN</td>
<td>Inanimate</td>
</tr>
<tr>
<td>N</td>
<td>Noun</td>
</tr>
<tr>
<td>NEG</td>
<td>Negation</td>
</tr>
<tr>
<td>NUM/Nume</td>
<td>Numeral</td>
</tr>
<tr>
<td>PART</td>
<td>Particle</td>
</tr>
<tr>
<td>PASS</td>
<td>Passive</td>
</tr>
<tr>
<td>PL</td>
<td>Plural</td>
</tr>
<tr>
<td>PROG</td>
<td>Progressive</td>
</tr>
<tr>
<td>Q</td>
<td>Question particle</td>
</tr>
<tr>
<td>RECIP</td>
<td>Reciprocal</td>
</tr>
<tr>
<td>SG</td>
<td>Singular</td>
</tr>
<tr>
<td>TOP</td>
<td>Topic marker</td>
</tr>
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Chapter 1
Introduction

This thesis is about Thai nominals and classifiers. It attempts to explain why nominals are bare (appearing without a determiner) in argument position and why classifiers are obligatory in certain contexts. In doing so, it will shed some light on determiner-less languages with obligatory classifiers in general such as Chinese, Vietnamese, Japanese. In argument position (subject and object), languages can be divided into those that require nouns to appear with an overt (in)definite article and those that allow bare nouns to appear without the help of an article. We will call the former group the \textit{determiner languages} and the latter the \textit{determiner-less languages}. The following definitions will be used throughout the thesis:

1. Determiner languages require arguments to be introduced by a determiner.
2. Determiner-less languages allow bare nouns to appear in argument position.

Examples of determiner languages are Romance languages such as French and Italian\footnote{It will be shown in Section 2 of Chapter 2 that Italian nouns in a governed position such as in object position may be bare. However, we will put aside these exceptions.}. Examples of determiner-less languages are Thai, Japanese and Korean. Languages may opt for one of these options or they can be of mixed type. Namely, certain nouns can appear without a determiner and certain others must occur with one. English is an example of the mixed type whereby mass and plural nouns can appear bare while singular nouns cannot. We will group English with the determiner group since it is not possible for all nouns to appear bare in argument position, unlike the determiner-less group.

Another area of typological variation in the nominal domain concerns the occurrence of number marking and classifiers. It is usually assumed that languages may use either of these morphological devices to individuate nouns (Borer 2005, Cowper and Hall (to appear), Chierchia 2009a,b among others). I will refer to languages with
obligatory number marking on nominals as *number marking languages* and those with obligatory classifiers as *classifier languages*. Here I give another set of definitions of language classification according to number marking.

(3) Number marking languages obligatorily have a morphological number marking where number (e.g. singular, plural) can be distinguished.

(4) Classifier languages obligatorily have classifiers with all quantified nouns.

English is an example of a number marking language and Chinese is an example of a classifier language. These two systems sometimes overlap. A classifier language may have a way to mark plurality. For example, Chinese has *-men*, a plural suffix used exclusively with nouns denoting human. Korean has *-tul*\(^2\). However, they are not called *number marking languages* since the number morphology in these languages is not obligatory. By the same token, number marking languages may use a set of classifiers with certain nouns (especially mass). They will not be considered *classifier languages* either since not all nouns are assigned a classifier. In some languages, it is argued that both classifiers and number marking systems co-exist, for example, Armenian (Borer 2005) and Niuean (Massam 2009). In some languages, it is argued that neither of these two options is available, for example, Dene (Wilhelm 2008). For the time being, I will leave the last two groups aside for future research.

When we intersect these two parameters: Determiner and Number marking vs. Classifiers, we have four groupings: determiner number marking languages, determiner-less number marking languages, determiner classifier languages and determiner-less classifier languages. Among the four available options, only three are found in the world’s language. There are no languages, as far as I know, that obligatorily use both

\(^2\)I will not discuss the nature of these morphemes and simply refer to them as plural markers while leaving out the detail of what they are exactly. See Li (1999) for discussion on Chinese *-men* and Park (2008) for Korean *-tul.*
determiners and classifiers. The classification according to the two parameters including some examples of languages is shown below.

(5) a. Determiner number marking languages: French, Italian, Spanish
   b. Determiner-less number marking languages: Russian, Hindi
   c. Determiner-less classifier languages: Japanese, Chinese, Korean, Thai
   d. *Determiner classifier languages

The absence of the determiner classifier languages prompts us to ask whether the condition that causes a language to have a classifier system is the same as the condition that allows the noun to appear bare. It has been suggested that there is a correlation between the two characteristics (being determiner-less and using classifiers). Chierchia (1998, 2009a,b) proposes that languages may set nouns to be mapped to arguments or to predicates. This theory is called the ‘Nominal Mapping Parameter’ (NMP), which assumes that nominal denotation is subject to semantic variation. When the noun is inherently an argument, it does not require a determiner, whose function is to introduce an argument (Szabolci 1994, Longobardi 1994). In a language that sets nouns to be arguments, common nouns behave like proper names in that they must appear bare. Under this approach, argumental nouns are proposed to be names of kinds. Kinds can be viewed as a species or class of some sort. This idea was originally proposed in Carlson’s (1977) seminal study of English bare plurals. In English, only plural and mass nouns can appear bare. Carlson has successfully shown that English bare plurals and proper names are similar in that they are both scope inert, meaning changing scope does not affect the meaning of the sentence. The scopelessness of proper names and bare plurals is illustrated below.

3 Classifier languages may use demonstratives and the numeral ‘one’ in the context where the (in)definite articles in English are used. These elements are not considered to be true determiners. See discussion on the demonstrative and the numeral ‘one’ in Section 2, Chapter 3.

4 I refer to proper names denoting individuals rather than families such as The Smiths, The Johns, etc.
(6) a. I want to meet John.

b. I want to meet a policeman.
   Meaning 1: There is a policeman that I want to meet.
   Meaning 2: I want to meet some policeman or other.

c. I want to meet policemen.
   Meaning: I want to meet some policemen or other.
   *There are policemen that I want to meet.

In the above examples, only the indefinite noun phrase (6b), which has an existential quantifier ranging over instances, exhibits scope ambiguity. On the one hand, the indefinite NP refers to a specific entity (de re reading): ‘There is a policeman such that I want to meet him’. On the other hand, it refers to a non-specific entity (de dicto reading). We do not find the same scope ambiguity in (6a) and (6c). The lack of scope ambiguity is argued to result from the fact that proper names and bare plurals have no quantificational behaviour.

The focus of this thesis is the class of determiner-less classifier languages. The correlation between the use of classifiers and the lack of determiners in the classifier language can be accounted for under the analysis discussed above. Following Chierchia (1998, 2009a,b), we assume that a language may set nouns to denote kinds or properties. If nouns are inherently names of kinds, they always appear bare and cannot directly combine with quantifiers without the help of a classifier. The classifier and the noun form a unit that can combine with a number. The result is the number portions of that noun (kind). This theoretical background is discussed in detail in Chapter 2.

Before we proceed, let us summarize our discussion so far. Languages can either be determiner-less or obligatorily have determiners. They can use obligatory number marking or classifiers. The two parameters and examples of languages are presented in the table below.
In this thesis, we will concentrate on the languages in the shaded column, in particular Thai. The theory adopted in this thesis, the Nominal Mapping Parameter (Chierchia 1998), assumes that nouns in the number marking languages are set to predicates and nouns in the classifier languages are set to arguments. The correlation between these settings and their consequences will be discussed in Section 4 of Chapter 2. The difference between the determiner and determiner-less number marking languages lies in the overtness of the determiner. For more discussion, see Section 4.1 of Chapter 2. Below are the assumptions made in this thesis.

(7) Classifier languages set nouns to arguments, i.e. names of kinds.
(8) Number marking languages set nouns to predicates, i.e. properties.

It is usually assumed that nouns are predicates. The meaning of a predicate is unsaturated, i.e. can be true or false, while the meaning of an argument is saturated. The idea that nouns can be inherently arguments is not as widespread. In this thesis, I assume the semantic variation of the nominal denotation and type-shifting (Partee 1987, Chierchia 1984) to solve the type-mismatch. The definition of kinds and properties and the type-shifting mechanisms will be discussed in Chapter 2. Next, I discuss the topics of investigation of the thesis.

1 Topics of investigation

Thai, a typical determiner-less classifier language, allows nouns to appear bare in argument position and uses the classifier in a quantified context, as shown below. The
bare noun *nuu* in (9a,b) may have the definite or indefinite reading in an episodic context. It also has a vague number interpretation. A quantified NP (9c) must contain a classifier.

(9) Thai

a. *nuu khaw maa nai baan*¹
   rat enter come in house
   ‘The/a rat(s) came in the house.’

b. *chan hen nuu nai baan*
   1 see rat in house
   ‘I saw the/a rat(s) in the house.’

c. *chan hen nuu saam tua nai baan*
   1 see rat three CL in house
   ‘I saw three rats in the house.’

Since Abney (1987), it has been widely accepted that noun phrases are dominated by a determiner phrase (DP). The determiner is necessary for a noun to appear in an argument position in many languages (see Szabolci 1994, Longobardi 1994, Stowell 1991 among others). Languages with bare arguments like Thai cast doubt on the claim that DP is always projected within and across languages. Two positions have been developed to account for bare arguments: one is that DP always projects even when nouns are bare. I will refer to this approach as the ‘DP-hypothesis’. Proponents of this view are Longobardi (1994), Stowell (1991), Szabolcsi (1994), Giusti (1997) and Li (1999) among others. The other position is that there is no DP in determiner-less languages since nouns can be arguments in their own right. Proponents of this view are Lyons (1999), Chierchia (1998, 2009a,b), Bošković (2005, 2008) among others. In this thesis, I adopt the non-DP approach in assuming that all bare arguments are NPs in Thai. Adopting NMP, I claim that the nouns in Thai are inherently arguments. Thus, they are names of kinds. This explains why they appear bare in argument position.

¹ Thai is a tonal language. However, all tones are omitted throughout for the sake of simplicity.
Under NMP, a consequence of kind denotation is that individuated nouns require a classifier when being counted. Kind-denoting expressions cannot directly be counted unless they are divided into countable portions. The examples below illustrate the use of classifiers in Thai. The classifier choice depends on the meaning of the noun. A noun such as ‘star’ selects a different classifier from an animal-denoting noun such as ‘dog’, as shown in (10).

\[(10) \quad \begin{align*}
\text{a.} & \quad \text{daaw song} & \text{duang} \\
& \quad \text{star} & \text{two} & \text{CL} \\
& \quad \text{‘two stars’} \\
\text{b.} & \quad \text{maa song} & \text{tua} \\
& \quad \text{dog} & \text{two} & \text{CL} \\
& \quad \text{‘two dogs’}
\end{align*}\]

What is not predicted under NMP is that sometimes the classifier appears without an overt numeral in the noun phrase\(^6\). (11a) is an example of an obligatory use of a classifier in a deictic NP without a numeral. It is also obligatory with the indefinite marker *nueng* ‘one’ (11b).

\[(11) \quad \begin{align*}
\text{a.} & \quad \text{phuuying *(khon) nan} \\
& \quad \text{woman} & \text{CL} & \text{that} \\
& \quad \text{‘that woman’} \\
\text{b.} & \quad \text{phuuying *(khon) nueng} \\
& \quad \text{woman} & \text{CL} & \text{one} \\
& \quad \text{‘a woman’}
\end{align*}\]

---

\(^6\) Only the numeral *nueng* ‘one’ cannot be overt. Other numerals are allowed in front of the classifier, for example *phuuying song khon nan* (woman-two-CL-that) ‘those two women’.
Why is the classifier in (11a) obligatory when it is not a typical quantified noun phrase? The indefinite NP in (11b) is arguably quantified; however, the position of the numeral is different from that in (10) suggesting that the numeral ‘one’ should be in the same position as the demonstrative. Contexts like this are at the heart of this thesis.

Another situation where a classifier appears without a numeral is in a noun phrase modified by a relative clause or an adjective, as shown in (12). The noun phrases have the singular and specific interpretation.

(12)  
a. phuuying khon thii sai waen  
woman CL COMP wear glasses  
‘the/a (specific) woman who is wearing glasses’  
b. maa tua siikhaaw  
dog CL white  
‘the/a (specific) white dog’

Without the classifier, the number as well as the specificity is vague. The noun phrase may have specific, non-specific or generic interpretations.

(13)  
a. phuuying thii sai waen  
woman COMP wear glasses  
‘a/the woman/women who is/are wearing glasses’  
b. maa siikhaaw  
dog white  
‘a/the white dog(s)’ or ‘white dogs’

The classifier can also appear without a noun if the referent is already known in the context, as shown in (14).
The examples in (11), (12) and (14) demonstrate that Thai classifiers are not limited to counting contexts as usually assumed in the literature on classifiers in general. When the numeral is absent, the noun phrase must be singular. Three questions arise from the above data:

1) Why is a classifier required in non-quantified contexts in Thai?
2) What should be the representations of (12) and (13)? Do they differ only in the presence of the classifier or do they differ structurally?
3) How should we derive the surface order of Thai noun phrases?

The first question has not been addressed in the literature of Thai classifiers. It is thus my goal to determine the function of the classifier in these contexts. I will propose that a classifier is required in non-quantified contexts due to the specificity of the noun phrase.

In the previous literature, it has been proposed that DP always projects in Thai even when there is no overt determiner (e.g. Kookiattikoon 2001, Singhapreecha 2001, Simpson 2005). However, the DP analysis cannot account for the different interpretations between the noun phrases with and without a classifier such as (12) and (13). I argue that the noun phrase without a classifier is headed by an NP while the one with a classifier is headed by a Specific Phrase (SpecP), which hosts the demonstrative, the numeral ‘one’ and a null head.
The question concerning word order is addressed in Chapter 5. Following Cowper and Hall (to appear), I assume that the numeral is in the specifier of the classifier phrase and the noun phrase is the complement of the classifier head. The structure proposed here is shown in (15). The noun phrase raises and rolls up, as detailed in Chapter 5, to satisfy an uninterpretable nominal feature in the Specific Phrase, yielding the order N > A > Nume > CL > Dem.

(15)

I assume that the demonstrative and numeral ‘one’ is inserted in the Specific head. The definition of specificity in a noun phrase will be given in Section 4 of Chapter 4.

The noun phrases in (13), repeated in (16), are by default, interpreted as kinds. They are the projection of NP with a relative clause and an adjective right-adjoined to it.

(16) a. \[\text{NP} [\text{NP} \text{phuuying}] [\text{CP} \text{thii} \text{ sai} \text{ waen}]\]

   woman COMP wear glasses

   ‘Women wearing glasses’

b. \[\text{NP} [\text{NP} \text{maa}] [\text{AP} \text{siikhaaw}]\]

   dog white

   ‘White dogs’
As discussed above, Thai NPs can also have indefinite, definite or generic interpretations depending on the context where they appear in. The NPs in (16) are proposed to derive other interpretations via the predicate of the sentence. This topic will be discussed in detail in Chapter 3. Next, the background of Thai syntax is presented.

2 Background of Thai syntax\(^7\)

Thai is the official language of Thailand, spoken natively by 20-25 million people and as a second language by 40 million people throughout Thailand (Smalley 1994). It is the language used in the media and the lingua franca in different regions of Thailand. The data used here are drawn from the dialect spoken in Bangkok. Thai belongs to the Tai language family. Other languages within this family are Kam (China), Nung (Vietnam), Sui (China), Shan (Myanmar). Thai is a rigid SVO and isolating language having neither inflection nor case marking. Thai does not have a grammatical means to express tenses, but rather uses temporal adverbs such as ‘yesterday’, ‘tomorrow’, etc. to make reference to time. However, the aspect system is quite rich (Iwasaki and Ingkaphirom 2005). Most aspect markers appear at the end of the sentence while some may appear preverbally. In this thesis, I will gloss the aspect markers ‘ASP’ without giving further details. Some examples of aspect markers are shown below.

\[ (17) \]

\begin{enumerate}
\item Perfective ‘laew’
\begin{verbatim}
  kin khaaw laew
  eat rice ASP
\end{verbatim}
‘I have already eaten.’
\item Imperfective ‘yuu’
\begin{verbatim}
  kin arai yuu
  eat what ASP
\end{verbatim}
\end{enumerate}

\(^7\) This section only discusses certain aspects of Thai syntax. For a more complete picture of Thai syntax, see Iwasaki and Ingkaphirom (2005) and Ruangjaroon (2005).
‘What are you eating?’

c. Inchoative ‘kamlang ca’

\[
\begin{align*}
\text{kamlang ca} & \quad \text{kin khaaw} \\
\text{ASP} & \quad \text{CM} \quad \text{eat rice}
\end{align*}
\]

‘I’m about to eat.’

Aside from aspect markers, Thai also uses a large number of sentence-final particles. These particles carry different types of information such as politeness, opinions, attitudes or types of sentences such as questions, declaratives, exclamatives, requests, etc. I will use the term ‘particle’ (PART) to globally refer to these elements throughout the thesis. Some examples of Thai particles are illustrated below.

(18)  

a. Statement ‘na’

\[
\begin{align*}
\text{Somchai} & \quad \text{pai} \quad \text{laew} \quad \text{na} \\
\text{Somchai} & \quad \text{leave} \quad \text{ASP} \quad \text{PART}
\end{align*}
\]

‘Somchai has already left.’

b. Evidential ‘mang’

\[
\begin{align*}
\text{Somchai} & \quad \text{pai} \quad \text{laew} \quad \text{mang} \\
\text{Somchai} & \quad \text{leave} \quad \text{ASP} \quad \text{PART}
\end{align*}
\]

‘Somchai might have already left.’

c. Emphasis ‘loey’

\[
\begin{align*}
\text{suay} & \quad \text{cang} \quad \text{loey} \\
\text{pretty} & \quad \text{EMPH} \quad \text{PART}
\end{align*}
\]

‘It is really pretty.’

Some particles are strictly informal and are only found in speech such as that in (18a) and (18c). Hence, omitting them does not affect the overall meaning of the sentence.
However, some cannot be omitted without changing the meaning of the sentence such as that in (18b). As shown in (18c), a sentence may contain more than one particle.

The following characteristics of Thai syntax will be important for the discussion in this thesis: 1) ‘radical pro-drop’ (Neeleman & Szendroi 2006), 2) wh-*in situ* (Cheng 1991) and 3) topic-prominence (Li and Thompson 1976). Thai is a pro-drop language in the sense that it allows an empty pronoun in both subject and object positions. However, the reference of the null pronoun must be known in the discourse. It is called a ‘radical pro-drop’ language since the empty pronoun is not recoverable through the subject-verb agreement as seen in canonical pro-drop languages. The omission of a pronoun is illustrated below with *e* standing for ‘empty pronoun’.

(19)  
\begin{itemize}
  \item a. \textcolor{red}{e}_1 \text{kit waa John ruucak Peter mai}
  \text{think COMP John know Peter Q}
  \text{‘Do you think that John knows Peter?’}
  
  \item b. \textcolor{red}{e}_2 \text{kit waa} \textcolor{red}{e}_3 \text{ruucak} \textcolor{red}{e}_4
  \text{think COMP know}
  \text{‘I think that he knows him.’}
\end{itemize}

In the above examples, the antecedents of the empty pronouns are recoverable from the discourse referents, the speaker and the hearer. \(e_1\) refers to the hearer. Then the hearer omits the first person pronoun \(e_2\). Because third persons are recoverable from the previous sentence, the empty pronouns \(e_3\) and \(e_4\) refer back to John and Peter respectively. This brings us to another important typology that groups languages according to the subject-topic dichotomy. Li and Thompson (1976) propose two parameters concerning the presence of a subject in a language: topic-prominence and subject-prominence. The following are characteristics of a topic-prominent language: it allows ‘double subject’ constructions, the passive construction is not found and it lacks an expletive. Thai possesses all these characteristics and therefore is considered a topic-prominent language. The double subject construction is shown below.
‘Double subject’ constructions

[mamuang ton nii] [luuk] dok dii mango CL.tree this fruit be.many PART

‘This mango tree (topic), it produces a lot of mangoes.’
(lit. ‘This mango tree, fruits are plenty.’)

The sentence in (20) is in fact a topic-comment construction, with ‘this mango tree’ as the topic and the sentence that follows as the comment. The comment presents the information about the topic. This construction is pervasive in Thai but is only used in topicalization in the subject-prominent language according to Li and Thompson (1976).

Secondly, the subject must be present in a subject-prominent language. We see the importance of a subject in an expletive construction. This is because in a subject-prominent language, a subject is significant and always required whether or not it plays a real semantic role. An example from English is shown below.

(21) English expletive

There is a cat in the garden.

The Thai counterpart of the above sentence illustrates that an expletive is not necessary in Thai. This is because Thai is not a subject-prominent language.

(22) mii maew yuu nai suan exist cat stay in garden
‘There is a cat in the garden.’

Finally, as reported in Li and Thompson, while subject-prominent languages make common use of the passive construction, topic-prominent languages either disallow it or have it carry a special meaning. Passivization has a limited use in Thai, in which case the verb is preceded by the passive markers ‘thuuk’ or ‘doon’ to show adversity and ‘dairap’ to show privilege.
The sentences (20), (22) and (23) illustrate that Thai is a topic-prominent language rather than a subject-prominent language.

The last point is related to wh-questions. According to Cheng (1991), a language may use either a question particle or wh-movement as a strategy to signal a question. Thai opts for the use of particles and therefore lacks overt wh-movement, as shown below.

(24) ruang nii kəot khun mharai (ruu)
    story this happen ASP when Q
    ‘When did this happen?’

In (24), the question word ‘when’ stays in its original position. It may also appear with a question particle.

In this section, I have briefly discussed a few important aspects of Thai syntax. In sum, Thai is an analytic language with limited morphology. It is a radical pro-drop and topic-prominent language with wh-in situ. In what follows, the scope and outline of the thesis are presented.

3 Scope and outline of the thesis

In discussing Thai classifiers, I assume that the classifier agrees with a semantic feature of the noun it selects; however, I will not provide a detailed analysis of how this is executed in the syntax. Secondly, I will only discuss previous analyses of Thai noun phrases within the transformational generative grammar such as Kookiattikoon (2001) and Simpson (2005). There are a number of studies that examine Thai noun phrases
under non-transformational frameworks such as Gething (1972), Savetamalya (1989) and Singnoi (2000). These analyses focus on the semantics of the noun phrases in a functional framework, which is not the main focus of this thesis. Therefore, they will not be discussed here.

The outline of the thesis is as follows: Chapter 2 provides the theoretical background of the thesis. I will discuss the Nominal Mapping Parameter, the definition of kinds and type-shifting. Although I am not assuming everything in NMP such as the feature [±argument] and [±predicate], I follow Chierchia’s proposal that nouns can be set as kind-referring or property-referring terms.

Chapter 3 examines the interpretations of Thai bare arguments. It is proposed that they refer to kinds and are of type <s,e>. Several pieces of evidence are discussed. In particular, bare arguments do not take scope within the sentence and have vague number and definiteness interpretations.

Chapter 4 discusses the semantic analysis of classifiers. Previous analyses proposed by Krifka (1995) and Yang (2001) are presented. It will be shown that they cannot account for Thai classifiers in non-quantified contexts. Then I present Chierchia’s (2009a) analysis of classifiers and apply it to Thai data. I propose that the classifier phrase is of type <e,t> so it can function as a predicate or be selected by a Specific Phrase. The non-quantified context selecting a classifier must be specific. I further propose that when the classifier appears without a numeral, it has a covert numeral ‘one’ in its specifier. This chapter also discusses the semantic and syntactic differences between the count and mass classifiers and the individual and group classifiers in Thai.

In Chapter 5, previous analyses on word order in Thai noun phrases are presented. I argue that DP does not project in Thai and that bare arguments are headed by an NP while a classifier phrase is a CIP and the noun phrases with overt specific elements are headed by a Specific Phrase. Then the derivation of several surface orders is discussed. Specifically, we look at the position of the classifier in a quantified noun phrase, a noun
phrase containing overt determiners and a specific noun phrase modified by an adjective.
The chapter also concludes the thesis.
Chapter 2
Theoretical Background

This thesis provides support for the Nominal Mapping Parameter (NMP, Chierchia 1998), which conjectures that there is cross-linguistic semantic variation in the nominal denotation. Some languages map nouns to kinds. Some map them to properties and others allow nouns to be mapped to both kinds and properties. In other words, the nominal denotation is subject to parametric variation. First, the study of English bare plurals in Carlson (1977), which originates the idea that bare arguments are names of kinds, is presented in Section 1. In Section 2, the definition of kinds is given. Then the derivation of other interpretations from kinds will be discussed in Section 3. The principles of NMP as well as arguments for and against it will be discussed in Section 4.

1 English bare plurals

This thesis adopts the idea that bare arguments are names of kinds, which allows us to explain why Thai nominals are bare and require a classifier in certain contexts. In this section, I detail the idea that English bare plurals and mass nouns refer to kinds as their basic denotations. Due to Carlson’s (1977) study, English bare plurals and mass nouns have become known for their ability to occur in argument position without a determiner and to display a context-sensitive variability in quantificational force. As shown below, English bare plurals give rise to three different interpretations: a kind interpretation when co-occurring with a kind-level predicate, a generic interpretation with an individual-level predicate and an existential interpretation with a stage-level predicate.8

(1) a. Dinosaurs are extinct/ rare/ widespread. Kind
b. Dinosaurs are intelligent. Generic
c. Dinosaurs are in my backyard. Existential

---

8 See the classification of predicates (Carlson 1977) in Chapter 3, Section 3.
We can replace ‘dinosaurs’ with the noun phrase ‘this kind of animal’ and still achieve the same meaning in each sentence. ‘Dinosaurs’ is argued to be the name of a kind, which is represented by the totality of individuals. The name ‘dinosaurs’ can be used to refer to all individual dinosaurs (1a), most of them (1b) or some of them (1c). One piece of evidence comes from scopelessness of bare arguments. Comparing bare plurals to indefinites, we find that the former has no quantificational force and therefore cannot take wide scope over the sentence, as shown in (2).

(2) a. John wants to meet policemen.
    b. John wants to meet a policeman.

(2a) only has an opaque reading: *John wants to meet some policemen or other. It cannot mean *John wants to meet certain policemen. On the other hand, (2b) is ambiguous between There is a policeman that John wants to meet, which has a transparent (specific) reading, and John wants to meet any policeman, which has an opaque (non-specific) reading. The difference between (2a) and (2b) is attributed to the scope-taking ability of the NP. The indefinite NP ‘a policeman’ has an existential quantifier associated to it and can therefore take wide scope over the sentence, giving rise to a transparent reading. On the other hand, the bare plural ‘policemen’ in (2a) does not have any quantifier associated to it, since it is the name of a kind, and therefore cannot take scope over the sentence.

Scope interaction between the noun and other scope-taking elements also demonstrates that bare plurals lack scope-taking force. Bare plurals take the narrowest scope with regard to negation and an adverb while an indefinite may take wide scope over these elements. The difference in scope between bare plurals and indefinites is illustrated in the following sentences.

Another approach is proposed under the Discourse Representation Theory (DRT). It is argued that bare plurals are not kinds but are ambiguous between kinds and indefinites (Krifka 1988, Wilkinson 1991, Diesing 1992, Kratzer 1995, Farkas and de Swart 2003). This approach fails to capture the difference between bare plurals and indefinites discussed in this section. Therefore, the Ambiguity approach to bare plurals is rejected here. For more discussions on the advantages of the Kind approach over the Ambiguity approach, see Dayal (2004).
(3)  
a. I didn’t see spots on the floor.    [opaque]  
Meaning: I didn’t see any spots on the floor.  
*There are spots on the floor that I didn’t see. 

b. I didn’t see a spot on the floor.    [opaque and transparent] 
Meaning 1: There is a spot on the floor that I didn’t see. 
Meaning 2: I didn’t see any spot on the floor.

If the speaker came in the room and he did not see any spot on the floor, he could state (3a) or (3b). However, if there happens to be some spot that he fails to see in the room, then (3a) is ruled out. (3a) cannot mean there are spots on the floor such that he didn’t see them, which demonstrates that the bare plural ‘spots on the floor’ cannot take scope over negation and thus give rise to an opaque reading only. On the other hand, (3b) illustrates that the indefinite NP ‘a spot on the floor’ may take wide scope over negation, meaning ‘there is a spot on the floor such that I didn’t see it’.

By the same token, (4a) illustrates that the bare plural takes narrow scope with regard to the adverb: the killing of rabbits is repeated with different rabbits. (4b), on the other hand, shows that an indefinite takes wide scope, giving rise to an implausible reading: the killing occurs with the same rabbit repeatedly.

(4)  
a. I killed rabbits repeatedly.    [wide scope for repeatedly] 
b. I killed a rabbit repeatedly.    [narrow scope for repeatedly]

Chierchia (1998) refers to this property of bare plurals as ‘scopelessness’, meaning scope shifting does not affect the meaning of the sentence containing bare plurals. The lack of scope taking ability suggests that bare plurals have no quantifiers associated to them and hence are names of kinds.
Since we assume that bare arguments refer to kinds, it is appropriate at this point to give the definition of what a kind is. In the following section, the representation and definition of kinds are discussed.

2 The definition of kinds

We have seen that English bare plurals behave like proper names and that they are names of kinds. According to Chierchia (1998), kinds are defined as follows: “... kinds are generally seen as regularities that occur in nature. They are similar to individuals like you and me, but their spatiotemporal manifestations are typically ‘discontinuous’.” (Chierchia 1998, p.384)

Kinds can be of various types: they can be natural (e.g. mankind) or artifacts (e.g. cars) or complex things (e.g. long-haired rabbits), as long as they exhibit a sufficiently regular behaviour. According to Chierchia (1998), what constitutes a kind varies with the context and remains vague. We may define kinds as referring to a class of objects or a species of living things. Semantically, a kind is of type <s,e>\textsuperscript{10}. It takes a situation and gives the maximal entities of that situation.

English has different expressions referring to a kind. For example, the complex NP ‘this kind of X’, mass nouns (e.g. water), bare plurals (e.g. dinosaurs) and a singular noun preceded by a definite article (e.g. the dinosaur) may refer to kinds. Kinds may have several realizations, which we call individuals. Carlson proposes that kinds are realized at two levels: individual and stage, as illustrated in the diagram below.

![Diagram of kind-level, individual-level, and stage-level]

\textsuperscript{10} s = situation, e = entity
The above diagram illustrates how an individual and each stage are linked to a kind. Let us assume that in a hypothetical world, there are 3 individual raccoons belonging to the raccoon-kind: Bob, Marley and Peter. This is shown by the links from individual raccoons to the kind. Let us say that each raccoon also has different stages. For example, they run, sleep and eat (and sometimes steal food from campers!). Because these activities are linked to each individual raccoon, and each is a member of the raccoon-kind, then these activities (or stages) will also be linked to the raccoon-kind. This type of linking allows us to interpret the following sentence.

(6) Raccoons are common and sneaky and have been stealing my corn.

We can interpret (6) without any problem even though the bare plural has three possible interpretations associated to it: kind, generic and existential. The same nominal can be used to refer to the class of raccoons (they are common), to most raccoons (they are sneaky) and to some raccoons (some of them have been stealing corn). A stage of raccoons is representative of the class of raccoons and therefore one bare plural can be used to refer to various quantities of raccoons. ‘Kind’ is the basic interpretation of bare plurals.

It is important to note that not all bare noun phrases refer to kinds. Complex NPs such as the one in (7a) are modified with a prepositional phrase containing a deictic element ‘that’, which makes the noun phrase existential. Consider the following examples taken from Chierchia (1998). We observe that the noun phrase in (7a) behaves like an indefinite in that it exhibits a scope ambiguity and takes wide scope over negation.

(7) a. John didn’t see parts of that machine. [opaque and transparent]
   Meaning 1: There are parts of that machine that John didn’t see.
   Meaning 2: John didn’t see any parts of that machine.
b. John didn’t see machines. [opaque only]
Meaning: John didn’t see any machines.
*There are machines that John didn’t see.

The scenario of (7a) is that John is a mechanic fixing a machine. There could be some parts of that machine that he failed to see, in which case (7a) gives rise to a transparent reading. On the other hand, (7a) may have an opaque reading where John didn’t see any parts of that machine. The bare plural in (7b) only yields the opaque reading. If we assign the kind denotation to the noun phrase ‘parts of that machine’, the members will be undefined: *Parts of that machine are widespread. The definite inside the NP forces the extension of the noun phrase to be constant across worlds. In this case, the NP ‘parts of that machine’ refers to particular objects rather than kinds. It then gets existentially closed. Complex NPs with a deictic element are generally existential and exhibit the same ambiguity as indefinites.

In this section, I have introduced the notion of kinds according to Carlson (1977) and Chierchia (1998). If we assume that a kind is the basic interpretation of bare plurals, other interpretations must be derived. The following section discusses how this can be done.

3 Deriving the interpretations of kinds

In the previous section, we established that kinds are regularities that occur in nature. We can identify a kind with the totality of its instances. Thus, the dog-kind in our world can be identified with the totality of dogs. We can model kinds as functions from worlds into pluralities, the sum of all instances of the kind. Any natural kind has a corresponding property. For example, all individuals belonging to the dog-kind have the property of being a dog. At the same time, any property will also have a corresponding kind. The correspondence between kinds and properties suggests that there must be ways to get from one to the other. A property can be ‘nominalized’ to become a kind and a kind can
be ‘predicativized’ to become a property. Let us introduce the functions that map kinds to properties and vice versa as proposed in Chierchia (1984). If DOG is the property of being a dog, then $\cap$DOG is the corresponding kind. If d is the dog-kind, $\cup$d is the property of being a dog. In other words, $\cap$ is a nominalizer and $\cup$ is a predicativizer. The denotation of $\cup$ (up) is given below.

(8) Let d be a kind. Then for any world/situation s,
\[
\cup d = \lambda x [x \leq d_s], \text{ if } d_s \text{ is defined}
\]
\[
\lambda x [\text{FALSE}], \text{ otherwise}
\]
where $d_s$ is the plural individual that comprises all of the atomic members of the kind.

Formally, the extension of the property corresponding to the dog-kind is the ideal generated by the totality of dogs. As for the $\cap$ (down) function, a kind can be manufactured out of a property by taking the largest member of its extension. The denotation of $\cap$ is as follows:

(9) For any property P and world/situation s,
\[
\cap P = \lambda s. \iota P_s, \text{ if } \lambda s. \iota P_s \text{ is in } K
\]
otherwise undefined
where $P_s$ is the extension of P in s.

Now that we introduced a pair of type-shifting operators, let us see how they apply to bare plurals. In an episodic context, an existential reading is observed for bare plurals as shown in (10).

(10) I saw dogs.

According to Chierchia (1998), the existential interpretation is due to the resolution of a sortal mismatch between a stage-level predicate and a kind-denoting argument via a sort adjusting operator called Derived Kind Predication (DKP), as defined in (11).
(11) Derived Kind Predication (DKP) (Chierchia 1998: p, 364)
   a. If P applies to objects and k denotes a kind, then P(k) = \exists x[^\cup k(x) \land P (x)]
   b. saw (I, dogs) ⇔ (via DKP) \exists x[^\cup \text{dogs}(x) \land \text{saw} (I, x)]

The existential interpretation results from the operator \exists being introduced by the predicate to resolve the type mismatch in an episodic context.

The bare noun with an individual-level predicate has a generic interpretation, as shown below.

(12) **Dogs** are intelligent.

The generic interpretation for ‘dogs’ results from the generic quantificational force in a generic context, as shown in (13). The existential operator is assigned via DKP. Then the generic operator (Gn) is applied in the Aspect Phrase (Diesing 1992). The existential quantification can be overridden by any operator with higher scope.

(13) Gn [\exists x[^\cup \text{dogs}(x)]] \exists [\text{intelligent}(x)] = Gn x [^\cup \text{dogs} (x)] [\text{intelligent} (x)]

In the following section, I will discuss a theory that incorporates the notion of kinds into parametric variation.

4 The Nominal Mapping Parameter

As discussed before, plural (and mass) nouns in English appear bare in argument position. We assume that they refer to kinds as their basic denotations. In some languages, nouns are always bare. This leads to a theory that correlates the existence of bare arguments with the kind denotation. This theory is called the Nominal Mapping Parameter (henceforth NMP). The essence of NMP is that noun denotations are subject to parametric variation. We will first discuss the parameter setting theory of noun
denotation. Then, a competing approach is presented: the DP-hypothesis (Longobardi 1994). It will be argued that NMP provides a better understanding for classifier languages and their correlation with the absence of obligatory determiners. Finally, some criticisms of the NMP will be discussed.

4.1 The parameter setting

Chierchia (1998) proposes that noun denotations are subject to language-specific parameter setting of the features [±argumental] and [±predicative]. Only three out of four possible combinations are attested as parameter settings in the languages of the world:

(14)  

\[\begin{align*}
  &a. [+\text{arg}, -\text{pred}] \\
  &b. [-\text{arg}, +\text{pred}] \\
  &c. [+\text{arg}, +\text{pred}] \\
  &d. *[-\text{arg}, -\text{pred}] 
\end{align*}\]

Arguments are of type e and predicates are of type \(<e,t>\). Nouns with the [+arg] feature are of type e while those with the [+pred] feature are of type \(<e,t>\). The setting [-arg, -pred] does not permit the noun to have any interpretation and is thus never attested. These settings affect the semantic, morphological and syntactic distributions of nominals within a language.

I will now discuss the three attested settings in the order presented in (14). In the setting [+arg, -pred], nouns and their phrasal projections can be mapped into arguments but cannot be mapped into predicates. In a language with this setting, nouns are of type e and denote kinds. Because nouns are arguments, they are allowed to appear bare in argument position. As for nominals in other positions, they are not able to combine with numbers since numbers are assumed to combine with an element of type \(<e,t>\) (predicate). The use of classifiers is obligatory when counting all nouns to individuate a level at which they can be counted. It is also assumed that this type of language lacks true
plural marking. Bare nouns can be used to refer to both singular and plural entities. Chinese is an example of such a language, as shown below.


a. Bare arguments
   wo  kanjian  xiong  le
   I see bear ASP
   ‘I saw (some/the) bear(s).’

b. Obligatory use of classifiers
   yi *(zhang) zhuozi
   one CL table
   ‘one table’

The characteristics of this type of language are summarized below:

(16) Characteristics of [+arg, -pred] languages

a. Arguments are bare.
b. Lack a number distinction
c. Have obligatory use of classifiers

Languages may also opt for the second setting [-arg, +pred]. This is the case of Romance languages, where nouns are mapped into predicates. Semantically, they are of type <e,t>; that is, they are property-denoting expressions. Because nouns are predicative, they cannot appear in argument position unless the type-mismatch is resolved. Determiners are generally assumed to derive an argument; projecting a nominal under a determiner phrase is a way of solving type-mismatch in argument position\(^\text{11}\). The data in (17) illustrate French nominals in argument positions.

\(^\text{11}\) Chierchia assumes that in the case where a determiner is not phonologically present, there is an empty D for this type of language. These null determiners, however, cannot appear on their own unless licensed by a lexical head (to be discussed in Section 4.2).
(17) Example of a [-arg, +pred] language: French

*(Les) etudiants vont à *(l’)ecole tous *(les) jours

the student-pl go 3pl to the school every the day

‘Students go to school every day.’

As seen in (17), French bare arguments are prohibited. French nouns are of type <e,t> and must co-occur with a determiner in argument position. Another observation is that the number distinction exists in the language. For example, French singular and plural nouns are distinguished in the choice of determiner, e.g. *le/la for singular and *les for plural. The characteristics of languages with this setting are summarized below.

(18) Characteristics of [-arg, +pred] languages

a. Arguments cannot be bare.

b. Nouns exhibit a number distinction.

The last type of nominal setting is [+arg, +pred]. In such a language, members of the category N can be mapped to either arguments or predicates. Nouns can be shifted back and forth through the available type shifting operators: the nominalizer \( \cap \) and the predicativizer \( \cup \) introduced in the previous section. English is an example of a language that has this setting. Nominalization can only apply to mass or plural nouns since a kind must be a set of more than one singleton. If nominalization applies to a singleton, it will be undefined. Plural and mass are assumed to be sets of plural entities and non-atomic entities\(^\text{12}\). Therefore, only bare plurals and mass nouns may be nominalized and appear without a determiner in argument position. Singular nouns, on the other hand, must occur with a determiner in this same context. As shown in (19), mass and plural nouns can co-occur with a kind-selecting predicate such as ‘rare’ but not bare singulars (unless preceded by THE, see Section 4.2 for the discussion on the singular kind).

\(^{12}\) For the domain of quantification of singulars, plurals and kinds, see section 4.1, Chapter 3.
(19)  
a. Water is rare in the Sahara.
   b. Raccoons are rare in Thailand.
   c. *Raccoon is rare.
   d. The raccoon is rare.

To sum up, the argumental nouns are bare and are kind expressions by default. The predicate nouns need a determiner and refer to properties. Properties can be made plural and singular but kinds cannot. The characteristics of [+arg, +pred] languages are summarized below.

(20)  Characteristics of [+arg, +pred] languages
   a. A nominalized noun appears bare.
   b. A predicativized noun has a property interpretation and is subject to a number distinction and requiring a determiner.

The nominalization applies to mass and plural nouns only. If it applies to singular entities, it will be undefined. That is why kinds must be mass or plural nouns in English. When a count noun appears bare, it can only have a mass interpretation, as shown below.

(21)  There is apple in this soup.

In (21), ‘apple’ can only have the mass interpretation because nominalization (argumentization) can only apply to plural or mass nouns. Therefore, when ‘apple’ is nominalized, one of two things must happen. It must be plural or it must be mass. That is why ‘apples’ and ‘apple’ with a mass interpretation can be bare. The count-to-mass coercion can be referred to as the ‘Universal Grinder’ (Pelletier 1991), where count nouns can be coerced into mass in the absence of a determiner.

There are languages that do not possess (in)definite determiners but have a plural/singular distinction, for example, Slavic languages such as Russian. Chierchia argues that these languages possess the [+arg, +pred] setting. Slavic languages lack overt
determiners. To account for bare arguments in these languages, it is assumed that covert
type shifting operations allow the language to freely shift nominals from predicative to
argumental. The covert operations will be discussed immediately after the examples in
(22), which show that bare nouns occur freely and have a kind, definite (contextually
salient entities) or indefinite reading depending on the context. The following examples
of Russian are taken from Chierchia (1998).

(22) a. v komnate byli malcik i devocka  Indefinite
    in room were boy and girl
    ja obratilsja k malciky  Definite
    I turned to boy
    ‘In the room, there were a boy and a girl. I turned to the boy.’

b. Dinosavry vymerli  Kind
    dinosaurs extinct
    ‘Dinosaurs are extinct.’

Bare count nouns can occur in argument position and have both indefinite and definite
interpretations (22a). (22b) shows that bare plurals are obligatory for kind reference. It is
assumed that argumentization occurs covertly in Russian. When the language lacks overt
determiners, covert operators apply to make the noun argumental at LF.

Let us compare Russian to English. In English, only plural and mass nouns can be
bare and we assume that they are argumentized by the nominalizer ∩. English plural
nouns have indefinite and kind interpretations\(^\text{13}\). We have introduced the covert operators
in (9) - (11) in Section 3, repeated below for convenience. The indefinite interpretation is
associated to the existential operator ∃. The kind interpretation results from the
nominalizer ∩. Russian nouns derive the definite interpretation from the iota operator (ι),
which picks out the unique entity. English has the overt determiner THE equivalent to the

\(^{13}\) Here I collapse the term ‘kind’ and ‘generic’ together.
iota operator and A equivalent to the existential operator $\exists$. The covert and overt elements are summarized below.

(23) Covert operators

Kind formation: $\cap$
Definite formation: $\iota$
Indefinite formation: $\exists$

(24) Overt determiners (English)

Definite: THE
Indefinite: A

The definite article THE and indefinite article A tend to not be overt in most languages (Partee 1987). In the languages where they are not overt, the functor $\exists$ will shift a predicate bare NP from type $<e,t>$ to a GQ (Generalized Quantifier) yielding an indefinite interpretation and $\iota$ will shift the bare noun from a predicate $<e,t>$ to an individual (type e) yielding a definite interpretation. The down operator can only apply to plurals since it is undefined with singulars. In order for a singular noun to have a kind interpretation, it must occur with a definite determiner (e.g. the raccoon). According to Dayal (2004), the singular kind has a slightly different meaning from the plural kind in that the singular kind refers to the class of object whereas the plural kind refers to all its members$^{14}$.

We see that both covert and overt elements are available in English: $\cap$ for kind-formation and the overt (in)definite articles. Russian, on the other hand, only has the covert ones. Chierchia also proposes the ‘Blocking Principle’ that governs the methods of type-shifting within a language. If a language possesses a lexical item whose function is equivalent to a covert operator, then the overt operator blocks the covert one. This results from the more general ideas that ‘more specific rules win over universal tendencies’

---

$^{14}$ A singular noun can have a kind interpretation if 1) it co-occurs with a kind-level predicate and 2) it co-occurs with the definite determiner.
(Elsewhere Condition, Kiparsky 1973) or ‘Don’t do covertly what you can do overtly’ (Chierchia 1998, p.360). Covert type-shifting is blocked when there is an overt type-shifter, such as a determiner. In other words, covert type-shifting operations are used as last resort\textsuperscript{15}.

(25) **Blocking Principle (‘Type Shifting as Last Resort’)**
For any type shifting operation $\tau$ and any $X: *\tau(X)$
if there is a determiner $D$ such that for any set $X$ in its domain,

$$D(X) = \tau(X)$$

To illustrate, English definite and indefinite determiners block $\iota$ and $\exists$ from applying to bare nouns; so $\cap$ is the only covert operator available that can make the noun referential (e-type formation). Hence, in Russian the operators $\iota$ and $\exists$ are active while THE blocks $\iota$ in English. The nominalizer $\cap$ cannot apply to singular nouns hence only plural and mass nouns are allowed without an overt determiner.

As for the predicate position, it seems that NMP would predict that argumental nominals must be type-shifted as well. Predicate nominals would, however, surface bare in this context because there is no type mismatch. As illustrated in (26), while in French, this indeed seems to be the case, in English, predicate singular nouns must occur with an indefinite determiner.

(26) a. French predicate nominal

Il est (*un) docteur
he is a doctor
‘He is a doctor.’

\textsuperscript{15} As pointed out by Martina Wiltschko (p.c.), the opposite principle also exists. For example, the economy conditions ban the overt movement if it is not necessary.
b. English predicate nominal
He is *(a) doctor.*\(^{16}\)

In French, our extrapolation of NMP’s prediction is borne out. The noun, pre-set as predicative, appears bare after a copula, that is, in predicate position. English predicative singular nominals, for their part, cannot surface bare in this same context and occur with an indefinite determiner. Chierchia (1998) does not address this issue. Predicate positions are not the focus of NMP, which somewhat weakens this analysis. Even if we assume that a language has the argumental nominal setting, we must still be able to account for the distribution of nouns in all positions.

The table below summarizes the parameter settings proposed in NMP.

<table>
<thead>
<tr>
<th>Features</th>
<th>Characteristics</th>
<th>Examples</th>
</tr>
</thead>
</table>
| [+arg, -pred] | - Arguments are bare.  
- Lack a number distinction  
- Have obligatory use of classifiers | Thai, Chinese, Japanese |
| [-arg, +pred] | - Arguments cannot be bare.  
- Nouns exhibit a number distinction. | French, Italian         |
| [+arg, +pred] | - A nominalized noun appears bare.  
- A predicativized noun has a property interpretation, is subject to a number distinction and requires a determiner (which can be overt or null). | English, Hindi, Russian |

Table 2: Parameter settings in NMP

Before we proceed, let me clarify what is assumed in this thesis. I adopt NMP in analyzing Thai nominals as kind-referring expressions. However, I do not claim that Thai nominals are [+arg -pred] as we do not have a full understanding of what these features predict. For example, it is not clear what the [-pred] feature denotes other than not being a predicate. Therefore, I only follow NMP for the part that certain languages set nouns to

\(^{16}\) Certain nouns may appear bare in this position, for example ‘He is president of our club’.
start out as kind terms and others set them as properties. In what follows, I will discuss a competing approach: the DP-analysis (Longobardi 1994).

4.2 A competing approach: DP-analysis (Longobardi 1994)

A theory concerning the internal structure of the noun phrase that is widely assumed is the DP hypothesis. In order to account for how nouns appear in argument positions, Abney (1987) proposes a DP layer projecting above an NP. The function of D is to map a linguistic entity (the noun) to a discourse entity (the referent). Longobardi (1994) argues that even when the noun is bare, DP still projects with a null head, which must be properly licensed to stay empty. The example in (27) illustrates this point.

(27)  Italian null determiner (taken from Chierchia 1998)

a. *Bambini sono venuti da noi
   children AUX come by us
   ‘Kids came by us.’

b. Ho preso biscotti con il mio latte
   had taken cookies with the my milk
   ‘(I) had cookies with my milk.’

Sentence (27a) demonstrates that bare nouns in subject position are not acceptable while (27b) shows that bare objects are allowed in Italian. It is commonly assumed that a category may remain empty only if it is properly licensed. Longobardi proposes that the null determiner in object position is licensed by the lexical verb whereas the bare noun in subject position would have no lexical items to license it causing it to be ungrammatical.

On the other hand, certain languages have no such restrictions on bare nominals as we see from English bare plurals, which appear freely in all positions. Thus, for this type of language, Longobardi proposes that bare nouns are raised to occupy the head of
DP so there is no null element to be licensed. The structures in (28) represent the
determiner-less noun phrases in English and Italian.

(28) Longobardi (1994)

a. English bare arguments

\[
\text{DP} \quad \text{D} \quad \text{N}
\]

cookies, \(t_i\)

b. Italian bare arguments

\[
\text{DP} \quad \text{D} \quad \text{N}
\]

\(\emptyset\) \quad \text{biscotti}

English bare arguments result from N-to-D raising while Italian bare arguments result
from a licensed null determiner.

If we assume Longobardi’s approach, there is no need to posit a semantic nominal
parameter like NMP, as nouns in all languages are uniformly predicative. However, there
are reasons not to adopt the “always-project-D” hypothesis. First, as discussed in
Chierchia (1998), there is no link made between the lack of determiners and the
obligatory use of classifiers in the DP approach. The DP hypothesis does not rule out the
possibility that a classifier language can possess overt determiners since DP always
projects in all argument positions. Under the DP hypothesis, a language like Chinese can
have an overt D. In other words, there should be a language that disallows bare
arguments but where classifiers are also obligatory. So far as we know, such a language
does not appear to exist. It seems that overt determiners and classifiers are in
complementary distribution. NMP, however, does provide an explanation for the absence
of such a language as discussed before.
Secondly, if we assume that English bare plurals are raised to D, then why doesn’t the same apply to the singulars? Unlike plural nouns, singular nouns must co-occur with an indefinite or definite determiner in all positions.

\[(29) \quad \text{a. Raccoons are common in Toronto.} \]
\[\text{b. A/The raccoon is sneaky.} \]
\[\text{c. *Raccoon is sneaky.} \]

The DP approach does not explain why (29c) is ruled out. On the other hand, a semantic approach such as NMP can account for it. Under NMP, English nominals can be mapped to either kinds or properties with the covert type-shifters. When the nominal is mapped to kinds, we assume it is nominalized by \(\cap\). Nominalization yields kind terms. It applies to *raccoons* and yields the raccoon-kind. When it applies to a singular noun *raccoon*, it yields an undefined set because a singleton cannot represent a kind. Therefore, bare singulars are not acceptable under the count interpretation\(^{17}\).

To summarize this section, I have shown that the distributional variation within the nominal domain across languages can be captured by the principles of NMP. This variation can be seen as a result of the setting of semantic parameters. Moreover, the NMP provides an explanation for the strict relationship between the interpretational domain and the syntactic domain, which is unaccounted for under the current DP-only approaches.

### 4.3 Arguments against NMP

Since the introduction of NMP, a number of works have argued both in favour and in disfavour of Chierchia’s proposal. Among those that argue for NMP are Sioupi (1999) for

\(^{17}\) As pointed out by Simona Herdan, the undefinedness of the nominalized singular noun may be used to explain why the singular noun does not raise to D. However, nominalization is not available under Longobardi’s approach, which only makes use of a syntactic node to introduce an argument, rather than a semantic operation such as nominalization. This means that nominalization never has a chance to apply under the DP hypothesis since D functions as an argumentizer in itself.

The main argument against NMP is that its predictions are too strong. Chung (2000) and Sato (2008), for example, argue that there are languages that have bare arguments, use obligatory classifiers but have plural morphology such as Indonesian. Indonesian should fall under the [+arg, -pred] category since it allows bare arguments and makes use of obligatory classifiers. However, Chung demonstrates that Indonesian does possess plural morphology expressed via reduplication, which is unpredicted by NMP. Let us see some examples from Indonesian, taken from Chung (2000). The examples below show that Indonesian allows bare arguments (30a,b), makes use of classifiers (30c,d) and possesses plural morphology via reduplication (30e).

(30)  

a. anjing suka tulang  
dog like bone  
‘Dogs like bones.’

b. saya pinjam mobil dari kantor  
I borrow car from office  
‘I borrowed a car from the office.’

c. maka di-tembak-lah dua-belas puchok meriam di-bukit  
then Pass-fire-Emp twelve CL gun from-hill  
‘[A salute of] twelve guns was fired from the hill.’

d. kemudian di-ambil-nya se-helai serbet kertas yang baru  
later Pass-take-by.her one-CL napkin paper which new  
‘Then she got a new napkin.’
Chung concludes that Indonesian presents a counterexample for the [+arg, -pred] type of language. As well, she shows that Indonesian cannot be [+arg, +pred] either since Indonesian uses classifiers with both count and mass nouns.

According to Chung, the reduplication in Indonesian is equivalent to English plural inflection in that when it applies to mass nouns, it results in the kind reading (i.e. ‘type of X’). For example, *buku-buku* ‘books’ can refer to more than one book or different kinds of books while *minyak-minyak* ‘oils’ can only refer to different kinds of oils.

However, one cannot immediately assume that Indonesian presents a counterexample for NMP’s predictions. I argue that even though pluralization does exist, it does not behave like true plural marking since it is not obligatory. Indonesian bare nouns may be interpreted with generic or existential readings in the same manner as English bare plurals, as shown below.

\[(31) \quad \text{a. } \textit{anjing} \text{ suka } \textit{tulang} \quad \text{generic} \]
\[\text{dog like bone} \]
\[\text{‘Dogs like bones.’} \]

\[\text{b. } \textit{apa ada } \textit{cerita} \text{ pendek Umar Kayam} \quad \text{existential} \]
\[\text{Q exist story short Umar Kayam} \]
\[\text{‘Do you have any copies of Umar Kayam’s short stories?’} \]

We from (31b) that *cerita* ‘story’ has a plural reading even without the reduplication. The difference between English and Indonesian would be that the plural inflection in Indonesian is optional. Chung claims that a semantically plural noun typically undergoes
reduplication when the context would not reveal that it is plural. This means that reduplication does not have the same contribution as true plural marking like the one English, which must always be present.

The same phenomenon is observed in Thai. Thai behaves like [+arg, -pred] languages in that it allows bare arguments, lacks morphological plural marking and possesses an obligatory use of classifiers. Like Indonesian, certain Thai nouns (human-denoting only) can be pluralized by means of reduplication. However, bare nouns may also be interpreted as plural.

(32)  a.  **dek** kamlang len kan yuu  
      child ASP    play RECIP ASP  
      ‘Children are playing with one another.’

   b.  **dek-dek** kamlang len kan yuu  
      child.child ASP    play RECIP ASP  
      ‘Children are playing with one another.’

Hence, reduplication cannot be considered true plural marking since its absence does not imply singularity. Therefore, the fact that these languages use reduplication does not falsify the prediction made in NMP. Thai and Indonesian do exhibit the characteristics of a [+arg, -pred] language in that they allow bare arguments, make use of classifiers and lack true plural marking.

The second argument against NMP concerns the claim that [+arg, -pred] nouns are mass-like, hence in need of classifiers for counting. Chierchia uses Chinese as an example. Cheng and Sybesma (1999), argue that Chinese nouns do have a mass/count distinction. They show that count nouns select ‘(count) classifiers’ and mass nouns select ‘massifiers’, both of which have different syntactic distributions. For example, massifiers can co-occur with the particle DE while classifiers cannot, as shown in (33).
In (33), the nouns ‘cow’ and ‘meat’ differ in the syntactic constraint on classifiers. However, Cheng and Sybesma (1999) did not address why it should be so. I argue that the facts discussed above do not undermine NMP since the system does not preclude the existence of a mass/count distinction in [+arg, -pred] languages.

In this section, it has been shown that despite criticisms, NMP offers a better understanding of languages that lack overt determiners and have obligatory use of classifiers. The adopted framework assumes that the nouns in the languages with obligatory classifiers are kinds. Kinds are arguments and do not need a determiner in argument position. This fact is not captured in the approach that uniformly takes nouns to be properties. Hence, I will follow NMP in assuming that languages differ in what nouns can denote. The semantics of nouns is subject to parametric variation the same way there is syntactic or phonological variation cross-linguistically. Nouns can be set to denote kinds or properties or can be mapped to both denotations. In the following chapter, I present an analysis of Thai bare arguments under the NMP approach.
Chapter 3
The Semantics of Thai Nominals

Thai is categorized as an isolating language since the lexical items are not marked with any morphological distinctions. For example, number and noun class distinctions are not morphologically marked but rather are realized as independent words, i.e., pronouns and classifiers\(^{18}\). Definite and indefinite articles do not exist and nouns appear bare in subject and object positions. Nominal interpretations depend greatly on the context. Consider the following example.

\[
\text{(1) \hspace{1em} miit khom}
\]

knife sharp

‘A/the knife/knives is/are sharp.’

We see that the noun for ‘knife’ is bare. Nothing indicates its number and definiteness. The interpretation of the number and definiteness of the noun ‘knife’ will depend on the discourse. To help the reader, all examples of Thai arguments and their interpretations discussed in the present and later chapters are compiled in Appendix A.

The semantics of Thai nominals has not been explored in much detail in the literature. Previous accounts of Thai classifiers such as Haas (1942) and Hundius and Kölver (1984) have proposed that Thai nouns refer to concepts of things rather than objects. According to Hundius and Kölver (1984), the word \textit{miit} ‘knife’ would refer to the concept of ‘knife’ instead of the object ‘knife’. They argue that concepts cannot be counted so the classifier is used to refer to the object denoted by the noun when it is quantified. However, they did not account for different interpretations a bare noun can have as illustrated in (1). Under the concept analysis, we need an extra mechanism to

\(^{18}\) By number, I mean there is a distinction between an individual and a group rather than singular and plural entities. See Chapter 4 on how classifiers are distinguished for group vs. individual. See Section 4 of this chapter for the pronouns.
explain how bare nouns refer to different entities since concepts do not denote individuals.

Under our analysis, Thai nominals are proposed to be names of *kinds*. As discussed in the previous chapter, a kind is represented by the totality of all its instances. The Kind approach (Carlson 1977 and Chierchia 1998) offers us ways to derive other meanings from kinds, unlike the concept approach.

This chapter is organized as follows. First, I will show that in subject and object positions, Thai nominals can have kind, generic, definite and indefinite interpretations. Comparing Thai arguments to English bare arguments, we find that English bare arguments lack the definite interpretation while Thai arguments can show all four interpretations. This is because Thai lacks overt (in)definite determiners. Then, I will discuss how each interpretation is assigned to a nominal. It will be shown that the predicate of a sentence triggers the adjustment of the type of the arguments. Kind-level predicates, individual-level predicates and episodic predicates yield kind, generic and existential or definite readings of the arguments, respectively. Finally, I argue that Thai nominals have much more limited morphology than their English counterparts due to their kind-denoting nature.

1 Interpreting of Thai bare arguments

This section presents the semantics of Thai bare arguments. The following are the possible interpretations of Thai nominal arguments: kind, generic, indefinite and definite. The examples in (2) illustrate each interpretation of Thai subject NPs.

(2) a. 
   nuu klai suunpan
   mouse almost extinct
   ‘Mice are almost extinct.’
b. *nuu* aasai taam thonaam  
*mouse* live in *sewer*  
‘Mice live in the sewer.’

\[\text{Generic}\]

\[\text{Indefinite}\]

\[\text{Definite}\]

c. *muawaan* *nuu* khaw maa nai khrua  
yesterday mouse enter come in *kitchen*  
\[\text{Indefinite}\]

\[\text{Definite}\]

\[\text{ASP}\]

‘Yesterday, a mouse/mice came in the kitchen. Today, the mouse/mice disappear.’

The interpretation of the subject NP depends on the predicate it appears with. In (2a), the predicate is kind-level, so the subject refers to the class of mice. In (2b), the predicate states the general habitat of mice, so the subject refers to mice in general. (In 2c), the first NP has an indefinite interpretation in an episodic sentence and the same bare noun can be used to refer to the aforementioned individual. The number interpretation is also vague.

Thai lacks overt determiners so definiteness must be retrieved from the context. This means that the definiteness of the subject of an episodic predicate will be vague, as shown below. Compare English bare plurals to the Thai bare nouns. (3a) has only an indefinite interpretation while the definiteness of ‘dog’ in (3b) is vague.

\[\text{(3)}\]

\[\text{Indefinite}\]

\[\text{Vague}\]

\[\text{ASP}\]

‘The dog(s) is/are barking.’

ii. Dogs are barking/ A dog is barking.

Vagueness is also found in object position. Depending on the context, the object can be interpreted as either definite or indefinite.
Thai does not make a distinction between a definite and indefinite NP, i.e. both are bare. It is the context that determines which interpretation a bare noun should have. A noun stated for the first time in the discourse will receive an indefinite reading, while a previously known entity, understood by both the speaker and the hearer, will receive a definite reading.

In object position, nouns can be generic, indefinite or definite, as shown below.

(5) a. chan chop maa
    I like dog
    ‘I like dogs.’ (answering ‘What kind of pet do you like?’)

b. chan dai maa
    I get dog
    i. ‘I got a dog/dogs.’ (answering ‘What did you get as a gift?’)
    ii. ‘I got the dog’ (answering ‘What did you get, the cat or the dog?’)

The above examples show that Thai bare arguments pattern with English bare plurals, discussed in Section 1 of Chapter 2, in that they can have kind, generic or indefinite interpretations. The difference is that Thai has an extra definite interpretation, which is hypothesized to result from the lack of overt definite determiners in Thai.

Considering the similarities between the bare arguments of the two languages, I propose that Thai nominals should be analyzed as kinds. As discussed in the previous
chapter, English bare plurals can only take narrow scope in a sentence since they are not associated with a quantifier and are names of kinds. In the following examples, the bare plural in (6a) lacks the scope ambiguity that the indefinite NP in (6b) has.

(6)  
a. I didn’t see spots on the floor.
b. I didn’t see a spot on the floor.
Meaning 1: There is a spot on the floor that I didn’t see.
Meaning 2: I didn’t see any spots on the floor.

The ambiguity in (6b) results from scope interaction between the existential quantifier and negation. In Meaning 1, the indefinite NP takes wide scope over negation while taking narrow scope in Meaning 2. This kind of scope shifting does not affect the bare plural in (6a) and the sentence can only mean ‘I didn’t see any spots on the floor’.

If it is the case that Thai nouns are names of kinds, they should exhibit ‘scopelessness’ as do English bare plurals. It is shown below that Thai NPs do pattern with English bare plurals, rather than indefinites. The bare noun maew ‘cat’ in (7a) cannot take scope over negation while the indefinite NP maew tua nueng ‘one cat’ in (7b) must take wide scope.

(7)  
a. chan mai hen maew nai hong
I NEG see cat in room
‘I didn’t see any cat in the room.’
(*There is a cat such that I didn’t see it in the room.)

b. chan mai hen maew tua nueng nai hong
I NEG see cat CL one in room
‘I didn’t see a cat in the room.’  (There is one cat such that I didn’t see it.)

---

19 It can also mean ‘I didn’t see the cat in the room.’ The definite interpretation is only retrieved when ‘cat’ is an established entity in the context. Under this interpretation, the bare noun has the same status as a proper name, e.g. ‘I didn’t see John in the room.’ This example shows that Thai bare nouns behave like a definite NP ‘John’ or an English bare plural ‘cats’ but never like an indefinite NP ‘a cat’ in English.
Unlike English indefinites, Thai indefinite NPs such as (7b) do not exhibit the ambiguity between the opaque and transparent readings. They can only have a transparent reading. This is because ‘one’ is not equivalent to the English indefinite determiner A (See Section 2 for more details). The above examples show that the ambiguity due to scope shifting does not affect Thai indefinites, which only take the narrowest scope when combined with another scope bearing element, such as negation.

Bare nouns lack scope-taking ability so they can never have a specific reading. A specific NP is usually taken to refer to an individual that the speaker has in mind as its referent. An indefinite NP in English is ambiguous between specific and non-specific readings.

(8) John wants to marry a doctor.

In the above sentence, the indefinite expression ‘a doctor’ can refer to a specific doctor or any doctor. The specific interpretation is achieved when the NP takes wider scope than other quantifiers (Fodor and Sag 1982). In (8), the specific reading has the interpretation ‘there is a doctor such that John wants to marry her’, as shown in the definition below.

(9) $\exists x \ [\text{doctor}(x) \text{ and John wants to marry } x].$

In Thai, the specific reading is achieved when there is an overt numeral ‘one’ following a classifier. An example of specific indefinite noun phrases in Thai is shown below.

(10) a. chan chop maa tua nueng

I like dog CL one

‘I like a (specific) dog.’
From the above examples, we observe that the specific noun phrase in Thai must have an overt marker. This specific marker is the numeral ‘one’ and it requires the presence of a classifier. The obligatory presence of a classifier in this context will be the topic of Chapter 4. The important point to make is that Thai bare nominals can have many interpretations except the specific interpretation, as summarized in the table below.

<table>
<thead>
<tr>
<th>Thai bare nouns</th>
<th>English bare plurals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific indefinite</td>
<td>x</td>
</tr>
<tr>
<td>Non-specific indefinite</td>
<td>✓</td>
</tr>
<tr>
<td>Definite</td>
<td>✓</td>
</tr>
<tr>
<td>Generic</td>
<td>✓</td>
</tr>
<tr>
<td>Kind</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 3: Comparison between Thai and English bare arguments

We have seen from Chapter 2 that English bare plurals derive their interpretation from a covert operator available at LF: ∃ for indefinite, Gn for generic and ∩ for kinds. The missing definite interpretation of English bare plurals is due to the existence of the definite article THE, which blocks the τ operator from applying, as discussed in Section 4 of Chapter 2. The interpretations of Thai bare nominals will be discussed in detail in Section 3. The missing specific interpretation of Thai bare nouns can be attributed to the kind-referring nature of the nouns. Nouns are names of kinds in Thai. As discussed earlier, specificity is derived from scope interaction: a specific NP must take wide scope. Moreover, only quantified expressions can take scope. Bare nouns lack the ability to take scope since they are not associated to any quantifier and therefore cannot have a specific indefinite reading. Overt elements such as demonstratives and the numeral ‘one’ are required to show specificity, to be discussed in Chapter 4.
We have seen that English the overt determiner THE blocks \(\exists\) from applying to a noun to yield a definite reading. If Thai had overt determiners, they should have the same blocking effect. It has been claimed so far that Thai has no (in)definite determiners. However, elements such as demonstratives and the numeral ‘one’ can be used in the contexts where the (in)definite articles are used in English. The following section discusses reasons why we should not analyze demonstratives and the numeral ‘one’ as determiners.

2 On the demonstratives and the numeral ‘one’

It is common among languages that lack overt determiners to use a demonstrative with a definite noun phrase and the numeral ‘one’ with an indefinite noun phrase (see Dayal 2004 for Hindi). Thai is an example of these languages. The examples of NPs introduced by a demonstrative and the numeral ‘one’ are shown below. Notice that the classifier is obligatory in both cases.

(11) a. maa tua nan khong khrai 
\quad dog CL that belong to who 
\quad ‘Who does that dog belong to?’

b. maa tua nueng long maa 
\quad dog CL one be lost ASP 
\quad ‘A dog has strayed.’

This has led some scholars to analyze the demonstrative and the numeral ‘one’ as determiners in Thai (e.g. Simpson 2005). According to Simpson, the demonstrative ‘nan’ is the definite determiner and ‘nueng’ is the indefinite determiner. His argument comes from the fact that the indefinite ‘one’ appears in a different position from the numeral ‘one’: the indefinite ‘one’ follows the classifier while the numeral ‘one’ precedes the classifier. The contrast is shown in (12).
(12)  a. chan hen maa tua nueng \(\text{Indefinite}\)
I see dog CL one
‘I saw a dog.’

b. chan hen maa nueng tua \(\text{Enumerated}\)
I see dog one CL
‘I saw one dog.’

The pronunciation of ‘nueng’ in the two NPs is also different: the numeral ‘nueng’ has a low tone and is stressed while the indefinite ‘nueng’ is unstressed.

Following Löbner (1985), discussed in Dayal (2004), I will show that the demonstrative and the numeral ‘one’ are not determiners in Thai. First, to be a true definite determiner, it must exhibit consistency. Noun phrases with the in English yield only a contradictory reading when a predicate and its negation are applied to it. We do not find such a contradiction in NPs with the demonstrative in Thai.

(13)  a. #The boy is sleeping and the boy is not sleeping.
b. dek khon nan non yuu tae dek khon nan mai.dai non yuu
cild CL that sleep ASP but child CL that NEG sleep ASP
‘That child is sleeping but that child is not sleeping’

The lack of contradiction in (13b) suggests that the demonstrative in Thai does not have the same meaning as the English definite article. Therefore, it cannot be considered a true definite determiner of the type found in English. For indefinites, the genericity test discussed in Kratzer (1995) and Chierchia (1998) sets English a apart from the unstressed numeral one in Thai.

(14)  a. A dog barks. \(\text{Generic reading}\)
b. maa tua nueng haw \(\text{*Generic reading}\)
dog CL one bark
‘A dog is barking.’

As shown above, an indefinite determiner yields a generic reading with an individual-level predicate (to be discussed in the following section), meaning ‘Generally, a dog barks.’ In contrast, the numeral ‘one’ is restricted to an existential reading, meaning ‘Some dog is barking.’ The generic reading in Thai is only available with bare nouns, e.g. maa haw mai kat (dog-bark-not-bite) ‘Generally, dogs that bark do not bite.’

Furthermore, the unstressed ‘one’ cannot be used to yield normal narrow scope interpretations. The following sentence cannot be an answer for the question ‘Is there a mouse in the room?’.

(15) mai mii nuu tua nueng yuu nai hong
    NEG exist mouse CL one stay in room
    ‘There is not a mouse in the room.’

The numeral does not have a neutral narrow scope interpretation with respect to negation. The narrow scope interpretation can only be achieved with bare nouns:

(16) mai mii nuu yuu nai hong
    NEG exist mouse stay in room
    ‘There are no mice in the room.’

I have just shown that the demonstratives and numeral ‘one’ cannot be considered to be overt determiners in Thai since they fail two tests: consistency and genericity. Therefore, they cannot block the covert operations, which will be discussed next.

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20 In contrast, the indefinite determiner co-occurring with an episodic predicate as in ‘A dog is barking.’ yields an existential reading. This seems to suggest that a purely existential indefinite determiner is missing from UG.
3 Derivation of other meanings from kinds

We have just seen that Thai bare arguments may be interpreted as kind, generic, indefinite or definite. In this section, I will show how each interpretation is derived. I assume the mechanisms proposed in Partee (1987) and Chierchia (1998) for type-shifting and in Carlson (1977) for the classification of predicates. Carlson (1977) proposes three levels of predicates: stage-level, individual-level (or object-level) and kind-level. Stage-level predicates are true of a temporal stage of its subject. They can be modified by temporal adverbs. The examples (17) – (19) are taken from Longobardi (1994).

(17) Stage-level Predicate
White-coloured elephants raised a lot of curiosity in the past.

‘Raised a lot of curiosity’ is the predicate of ‘white-coloured elephants’. In this case, the bare plural ‘white-coloured elephants’ has an existential reading.

Second, individual-level predicates are true throughout the existence of an individual. An example is provided below:

(18) Individual-level Predicate
Watchdogs of large size are more efficient.

‘Be more efficient’ is the predicate that is true of ‘watchdogs of large size’ regardless of temporal period. In this case, the bare plural ‘watchdogs of large size’ has a generic reading.

The last type of predicate is kind-level predicates, which are true of a kind and cannot be applied to individual members of the kind. Bare plurals in this case must have a kind reading.
According to Carlson, the kind is the default reading of bare plurals. I claim that Thai nominals are inherently kinds. Let us see how the classification of predicates proposed in Carlson (1977) can be applied to Thai bare nominals and how other interpretations can be derived from kinds.

3.1 Episodic context

In an episodic context, the subject occurs with a stage-level predicate such as ‘sleep’, ‘run’, ‘look for’, ‘kiss’, etc. The verb occurs with the progressive aspect marker $yuu$. Below is an example of an episodic context:

(20) \texttt{maa non yuu nai baan} \\
\texttt{dog sleep ASP in house} \\
\texttt{‘The/A dog is sleeping inside the house.’}

With an episodic predicate like $non\ yuu$ ‘be sleeping’, Thai arguments can be interpreted with the indefinite or definite interpretation depending on the context. According to the type-shifting operations introduced in the previous chapter, the operators are $\exists$ for indefinite and $\iota$ for definite interpretations. However, these operators must combine with a property. Chierchia (1998) proposes a mechanism that combines kinds with an existential quantifier called Derived Kind Predication (DKP), defined below.

(21) Derived Kind Predication (DKP) 
If $P$ applies to objects and $k$ denotes a kind, then 
$P(k) = \exists x [\exists^k(x) \land P(x)]$
\texttt{maa non yuu} \\
\texttt{dog sleep ASP} \\
\exists x [\exists^k (\textit{dog}) \land \textit{sleep} (\textit{dog})] \\
\texttt{‘Some dog is sleeping.’}
Recall that $\cup$ is the covert operation turning a kind into a predicate (predicativization). The existential operator combines with the predicativized noun ‘dog’ via the predicate ‘sleep’ to yield an existential interpretation.

As for the definite interpretation, the nominal denotes a contextually salient entity. The iota operator, whose function is to pick the largest member of the set, cannot combine with the kind-denoting noun. Hence, the definite interpretation in Thai is different from what is formally proposed for other languages. In Thai, the definite reading is obtained by applying the kind to the situation variable, as defined below.

\[(22) \quad [N(s)] = \text{the maximal individual which is } N \text{ in } s\]

The definite interpretation of (18) is derived by applying the noun to the situation, as shown below.

\[(23) \quad [N(s)] = [\text{maa (s) } \land \text{ s (sleep)}]\
\quad [\text{dog (sleep)}]\
\quad \text{‘The dog is sleeping.’}\]

By picking a situation smaller than worlds, we get the largest member of the noun in that situation. Hence, \textit{maa non yuu} will be interpreted as ‘the dog(s) is/are sleeping’ only when the noun is applied to a situation where the reference has been established.

### 3.2 Generic context

Individual-level predicates yield generic readings on the arguments. An individual-level predicate describes a property of the noun such as ‘be sneaky’, ‘like Prada bags’ as in ‘Raccoons are sneaky’ and ‘Students from Italy like Prada bags’. In this case, the NPs ‘raccoons’ and ‘students from Italy’ receive generic interpretations. It is equivalent to saying ‘In general, x does y’. The generic operator is located in the Aspect Phrase (Diesing 1992). Diesing assumes that the generic reading associated with a nominal expression is due to the presence of an abstract generic operator at the sentential level.
This sentential operator is represented as ‘Gn’. Genericity is also a function of the aspectual distinctions on the verb. Generic noun phrases are compatible with habitual verbs or timeless aspect, for example ‘A dog barks.’ talks about dogs in general, rather than a certain dog. The present tense has a habitual reading and is compatible with a generic reading of the indefinite ‘a dog’.

Since we assume that the generic operator is in the Aspect Phrase, the generic argument of an individual-level predicate must be quantifier-raised at LF to be interpreted with the Gn operator, as shown below.

(24)  
\[
\text{John chop maew Persia} \quad \text{Generic} \\
\text{John like cat Persian} \\
\text{‘John likes Persian cats’ = Generally, John likes Persian cats.}
\]

(25)  
\[
[\text{AspP Gn[maew Persia]}, [\text{vp John [vp chop ti]}]] \quad \text{LF}
\]

At LF, the object is raised out of VP and adjoined to the Aspect Phrase via quantifier raising (QR) to receive a generic interpretation. For more detail, see Diesing (1992) and Chierchia (1998).

As for the kind interpretation, nouns do not need type-shifting since they are names of kinds. Hence, they are ready to combine with a kind-level predicate such as ‘rare’, ‘common’, ‘be a mammal’. In this case, no type-shifting takes place. The subject has a species reading as in ‘Raccoons are rare in Thailand’ or ‘Dogs are mammals.’ in (26) and (27).

(26)  
\[
\text{rækkhuun pen sat haa yaak nai pratheet thai} \\
\text{raccoon COP animal find difficult in country Thailand} \\
\text{‘Raccoons are rare in Thailand.’}
\]
(27) maa pen sat liang luuk duay nom
dog cop animal raise kid with milk
‘Dogs are mammals.’

To summarize, the kind reading is the default reading of the bare noun. The
generic reading results from the generic operator Gn having scope over the sentence. The
existential reading results from the existential operator \( \exists \) contained in the predicate and
the definite reading comes from applying the noun to the situation.

4 The effects of kind reference

In this section, I will show that analyzing Thai nouns as kind-referring expressions
explains the following facts about their morphology: number vagueness, lack of a
mass/count distinction and the inability to be verbalized.

4.1 Number vagueness

Bare nouns are vague in number. We can test the vagueness by applying the ‘do so’ test
(Kempson 1977) to a sentence containing bare nouns, as shown in (28).

(28) khaw sʉʉ wua maa, chan kɔ mʉ an kan
3 buy cow ASP, 1 PART same together
‘He bought a cow/cows and so did I.’

The ‘do so’ phrase replaces the verb phrase ‘buy cow’ of the previous sentence. If the
number of cows is vague in the first sentence, it will be so in the ‘do so’ phrase too. In
(28), the number of cows he bought could be one or more and the number of cows I
bought does not have to be the same as the one he bought. The information about the
number of cows he and I bought is missing. Hence, we conclude that the number is vague
for Thai nouns, unless overtly specified, as in (29).
(29) khaw stt̂ wua maa tua nueng, chan kɔ muan kan
3 buy cow ASP CL one, 1 PART same together
‘He bought a cow and so did I.’

(29) shows that the number of cows in the ‘do so’ phrase is specified just like in the verb phrase ‘buy a cow’.

The examples below illustrate that the number interpretation of the noun is apparent from the pronoun that follows.

(30) a. maa khaw maa nai baan, man kin khaaw raw mot
dog enter come in house 3SG eat rice 1PL completely
‘A dog came in the house. It ate up our food.’

b. maa khaw maa nai baan, puakman kin khaaw raw mot
dog enter come in house 3PL eat rice 1PL completely
‘Dogs came in the house. They ate up our food.’

The bare noun maa ‘dog’ can be an antecedent of both singular and plural pronouns. This can be explained if we assume that nouns are kind-referring expressions in Thai. It is proposed that a kind has both singular and plural entities in its domain of representation (Chierchia 1998) so the number distinction is not relevant with kinds. The representation of the noun maa consists of both individual dogs and groups of dogs, as shown in the diagram below.

\[
\begin{align*}
\{a, b, c\} \\
\{a, b\} \quad \{a, c\} \quad \{a,b\} \\
\quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad 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the bottom of the semilattice as well as the plural individuals. On the other hand, in a language where there is a number distinction, plural only applies to the plural sets and singular only applies to the individuals at the bottom of the representation (Link 1983), as shown below.

\[
(32) \left\{ \begin{array}{l}
\{a, b, c\} \\
\{a, b\} \quad \{a, c\} \quad \{a,b\}
\end{array} \right\} \quad \text{Plural: dogs}
\]

\[
\begin{array}{ccc}
a & b & c \\
\text{Singular: dog}
\end{array}
\]

In languages where bare nouns can be used for both singular and plural entities, we assume that the noun is a kind. The number of a bare noun is vague because it can have both singular and plural members in its domain as shown in (31).

Next, another consequence of kind denotation is the lack of a mass/count distinction in the predicate selection.

4.2 Lack of a mass/count distinction in predicates

If we assume that nouns denote kinds, a mass/count distinction should be irrelevant to bare nouns since a kind can refer to both mass and count nouns. Thai nouns behave like mass nouns in that they cannot be pluralized and require a classifier when counting. If all nouns behave like mass nouns, then there should not be any differences in the semantics and syntax of lexical mass and count nouns.

Nouns that are intuitively mass or count in English differ in many ways. Mass nouns cannot be pluralized without reinterpretation (e.g. three wines), can be bare and select different quantity-related predicates from count nouns (e.g. how much water vs. how many people). In Thai, such a distinction is not found. Both can be bare and select the same quantity-related predicates, as shown in (33)-(35).
Even if English mass nouns have different morphological constraints from count nouns, it does not mean that the mass/count distinction holds for the noun itself. The distinction is however, made in the predicate. Even then, some quantifiers are neutral with regard to the mass/count distinction and can combine with both mass and count nouns such as more, all, most and some. In many languages, mass nouns can be coerced into count if pluralized as in Ojibwa (Mathieu 2007). The point being made here is that the mass/count distinction in Thai does not affect the selection of predicate, unlike English where the mass/count distinction applies at the predicate.

4.3 Inability to become a verb

English nominals can participate in various word-forming operations. For example, a noun may be turned into a verb or be incorporated into a verb.

(36) a. I smoked/ went smoking/ for a smoke.
    b. I drove/ went driving/ for a drive.
According to Halle and Marantz (1993), a root such as ‘drive’ may be a noun or a verb depending on the structure it appears in. The root ‘drive’ is a noun if projected under a DP or a verb if it is under a vP. However, such syntactic operations are not available in Thai as Thai nouns can never be turned into verbs. The optionally intransitive verbs *fish, hunt, smoke* and *drive* in English are obligatorily transitive in Thai. They have the pattern of V + generic object.

(37)  Intransitive verbs \(\rightarrow\) transitive

a. chan tok plaa thuk wan  (*chan tok)
   1  catch  fish  every day
   ‘I fish every day.’

b. chan laa sat thuk wan  (*chan laa)
   1  hunt  animal  every day
   ‘I hunt every day.’

c. chan suup burii thuk wan  (*chan suup)
   1  smoke  cigarette  every day
   ‘I smoke every day.’

d. chan khap rot thuk wan  (*chan khap)
   1  drive  car  every day
   ‘I drive every day.’

The difference between Thai and English nouns comes down to the ability to become a verb. Thai nouns cannot turn into verbs while English nouns can. We have two options to explain this difference. One is to posit different syntactic settings on the root: Thai requires that something of a nominal type must be nominal only. The other is to posit different semantic settings on the noun: Thai nouns are argumental while English nouns can be both argumental and predicate. The first option, although as effective as the second one, can only account for a subset of behaviours of the nominals. On the other
hand, it has been shown throughout the chapter that the semantic setting of Thai nominals accounts for other properties such as why they appear bare in a sentence and why they lack plural marking. These are not immediately captured under the syntactic variation approach. Therefore, I opt for the second option. Thai nominals cannot change the category from nominal to verbal because they are preset to kinds. Kind-denoting nouns cannot become a verb while property-denoting nouns can. English noun roots are not preset to denote kinds; thus, it is possible to change their category.²¹

In this section, I have shown that analyzing Thai nominals as inherently kind-referring allows us to explain why 1) their number is vague 2) no mass/count distinction is found and 3) they cannot be verbalized. In the following chapter, a semantic analysis of Thai classifiers will be proposed.

²¹ As suggested by Diane Massam (p.c.), kinds could be type-shifted by the predicativizer, given the system adopted here. So nouns that are predicativized should be able to appear in the head of vP unless we assume that the predicativized noun that undergoes a semantic operation is no longer a root.
Chapter 4
The Semantics of Thai Classifiers

It is argued in the previous chapter that Thai nominals are kind-referring expressions. In this chapter, we will see how this has an impact on the existence of classifiers. I assume that kinds have no internal divisions between singular and plural entities and thus require a classifier (or measure phrases) to individuate a level for counting. The purpose of this chapter is to propose a unified analysis for classifiers in different contexts.

First, I consider classifiers in the context of quantified noun phrases. The position of the classifier is after the numeral.

(1) raw hen maa song tua nai baan
    1 see dog two CL in house
    ‘I saw two dogs in the house.’

The quantified context is not the only environment requiring a classifier in Thai; non-quantified contexts such as the demonstrative and specific modified NPs require it as well. In these cases, the numeral ‘one’ must not be present. (2a) illustrates the obligatory use of a classifier with a demonstrative. (2b) shows its use in a specific noun phrase modified by an adjective.

(2) a. raw chop maa tua nan
    1 like dog CL that
    ‘I like that dog.’

    b. raw chop maa tua siikhaaw
    1 like dog CL white
    ‘I like a particular white dog.’ (among a pool of dogs in sight)
First, I adopt previous accounts in assuming that a classifier provides individuation (Krifka 1995 and Chierchia 1998, 2009a,b). I follow Chierchia (2009a) in assuming that the classifier is a function that takes a kind as its complement and a number as its specifier to yield a measured individual of that kind. In other words, a classifier is of type \(<k, <n, <e, t>>\)^{22} and the classifier phrase is of type \(<e, t>\). The proposed structure of a classifier phrase is shown in (3).

(3) A classifier phrase
\[
\begin{array}{c}
\text{CIP} <e, t> \\
\text{Nume}_a \\
\text{Cl'} \\
\text{Cl}_{k, <n, <e, t>>} \\
\text{N}_k
\end{array}
\]

The structure in (3) accounts for the classifier in the quantified context, such as (1). As for the non-quantified contexts such as (2), where numerals are absent, I propose that the classifier is obligatory in a specific noun phrase. I also propose that when the number in the specifier of CIP is not phonetically realized, it is defaulted to the numeral ‘one’ and the noun phrase receives an individual or group reading depending on the lexical item inserted in the classifier head (see Section 5).

The proposed structure for a specific noun phrase in Thai is shown in (4). SpecP refers to ‘Specific Phrase’, which hosts specific elements such as a demonstrative, the numeral ‘one’ and a null head. The adjective phrase (AP), relative clause (RC) and prepositional phrase (PP) are assumed to right-adjoin at the level of the Noun Phrase.

\(^{22}\text{A kind is of type }<s, e>,\text{ a function from situations into the maximal individual. I follow Chierchia in writing a kind as type }k.\)
The kind-denoting noun is merged with the classifier phrase to yield a property-denoting expression and contribute number interpretation. The classifier phrase is then merged with the Specific Phrase, which hosts a demonstrative, the unstressed ‘one’ or a null head. The noun phrase can be modified by an adjective, a relative clause or a prepositional phrase. See Chapter 5 for justification of this structure.

This chapter is divided into 5 sections. In section 1, previous analyses as proposed in Yang (2001) and Krifka (1995) are discussed. I argue that they cannot account for Thai classifiers. Section 2 discusses the analysis proposed in Chierchia (2009), which is adopted in the thesis. Then, the contexts where classifiers are obligatory in Thai are presented in Section 3. In section 4, I detail the analysis proposed in this thesis. Finally, I discuss the individual vs. group classifier as well as classifiers for count nouns vs. mass nouns in Section 5.

1 Previous Analyses

Previous analyses of the semantics of classifiers (e.g. Krifka 1995, Chierchia 1998, Yang 2001) assume that nouns in classifier languages have mass noun extensions and hence are unable to combine with quantifiers. The quantifiers must therefore combine with a classifier, which provides a unit to be counted. I will discuss two analyses: Krifka (1995) and Yang (2001), both of which examine Chinese classifiers. I will show that these
analyses cannot account for Thai facts and will instead adopt the analysis proposed in Chierchia (2009a).

According to Krifka, a classifier is a function that takes a number individual and yields a function that applies to the kind-denoting nominal and yields a measure function that measures the number of instantiations of that kind. The denotation of classifiers is given below:

\[ \text{⟦classifier⟧} = \lambda n \lambda y \lambda x \ [R \ (x, y) \ & \ OU \ (y) \ (x) = n] \]

\( R \ (x, y) \) is a relation between a kind and its instantiations and \( OU \) (object unit) is a function that applies to a kind and yields a measure function that measures the number of instantiations of that kind, which is represented by \( n \).

Yang (2001) replaces the function \( R \) with Chierchia’s predicativizer operator \( (∪) \), which essentially turns kinds into properties. Below is Yang’s version of the semantic representation of a classifier.

(6) Yang (2001)
\[ \text{⟦classifier⟧} = \lambda n \lambda y^k \lambda x^i \ [\cup y (x) \ & \ CL(x) = n] \]

Yang also adopts Chierchia’s approach in assuming that bare nouns in Chinese are kind-referring expressions. The superscript ‘\( k \)’ refers to kinds and the superscript ‘\( i \)’ refers to individuals. Her analysis is that the classifier is morphologically dependent on the numeral head, as shown in (7). Note that \( D' \) is proposed by Chierchia (1998) to be the variant of \( D \) that takes as its argument a kind rather than a property.
According to Yang, a classifier is suffixed to the numeral and together they form a syntactic unit that can never be separated. Her arguments for suffixation of the classifier are the following: first, nothing can intervene between the numeral and the classifier. Second, the classifier must cliticize onto a lexical element when the numeral is not overtly present and third, the classifier receives no stress, which is an indication of a grammatical element rather than a lexical item. When the numeral is not overt, there is a covert numeral ‘one’ that yields a singular interpretation of the noun phrase. To illustrate these points, consider the following example from Mandarin.

\[(8) \quad \text{nei (yi)-ben (shu) hen gui} \]

\[\text{that one-CL book very expensive} \]

\[\text{‘That book is expensive.’} \]

The numeral ‘one’ and the noun ‘book’ can be omitted. In this case, the classifier is argued to cliticize on the demonstrative \textit{nei}.

Yang’s analysis is not adopted here for the following reasons. First, one may wonder why the noun and the numeral can be omitted but not the classifier. According to the structure in (7), the classifier is merely a clitic attached onto the numeral head on D. If the numeral is the head of D, it should be the classifier that is optional.

Second, there is evidence that classifiers may appear as free morphemes in other languages. For example, in Cantonese, a dialect of Chinese, a classifier may appear alone
with a noun in the subject position to show definiteness (Cheng and Sybesma 2005), as shown below.

(9)  
zek gaw soenggwo maalou  
CL dog  want cross  road  
‘The dog wants to cross the road.’

(9) shows that the classifier does not have to be cliticized on any elements to appear in an ungoverned position such as subject. The occurrence of classifiers in the subject position in Cantonese casts serious doubt on the clitic/suffix analysis proposed by Yang for Mandarin.

Another problem with Krifka’s and Yang’s analyses is that it is hard to see how the mass/count distinction would make a difference in the selection of a classifier. Recall that there is a distinction between classifiers for mass and count nouns in Mandarin (cf. Chapter 2, examples (33)). Mass nouns select a measurer or container while count nouns select a designated grammatical item that has no lexical meaning contribution. If the classifier is dependent on a numeral / quantifier rather than the noun, then it should not matter whether the noun is mass or count. In other words, a language could just easily designate a word to be a unit provider for both lexical count and mass nouns.

Having shown that Krifka’s and Yang’s analyses are problematic, I will therefore turn to a recent analysis on classifiers (Chierchia 2009a). It will be shown that this analysis offers a better account for classifiers in general.

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23 In a recent work, Wu and Bodomo (2009) argue that the classifier in this position is raised to D and gets the definite feature from D. This too is unexpected if a classifier is merely a suffix in Chinese.

24 As suggested by Susana Bejar, this dependency could result from an agreement relation between the head and the complement. However, this alternative was not addressed in their analysis.
According to Chierchia, the classifier is a function that takes two arguments: first a noun and then a number, yielding a measure function of that kind. The denotation of a classifier is provided below.

\begin{equation}
\lambda k \lambda n \lambda x \left[ k(x) \land CL(x) = n \right]
\end{equation}

According to the denotation in (10), a classifier is a function that applies to a kind and yields a function that applies to a number and returns a measure function that measures the number of individuals, which is represented by \( n \). The type of a classifier is therefore \(<k, <n, <e,t>>\). Although the denotation is adopted from Chierchia, the structure of a classifier phrase is modified from the original one. Under our analysis, the numeral is in the Spec of the classifier phrase while it is the specifier of the Atom Phrase (AtP) in Chierchia’s structure. The proposed structure is shown below.

\begin{equation}
\text{A classifier phrase}
\end{equation}

Let us apply the above denotation to a classifier. The example below illustrates the meaning of \( \text{lem} \) (a classifier for books).

\begin{equation}
\text{nangsue saam \( \text{lem} \) ‘three books’}
\end{equation}

\begin{itemize}
  \item \( \text{lem}_{k,n,e,t} = \lambda k \lambda n \lambda x \left[ k(x) \land CL(x) = n \right] \)
  \item \( \text{lem nangsue}_{n,e,t} = \lambda n \lambda x \left[ \text{nangsue}(x) \land CL(x) = n \right] \)
\end{itemize}

\[^{25}k = \text{kind}, n = \text{number}, \cup = \text{predicativizer}. \text{I replace Chierchia’s } \mu(x) \text{ with } CL(x) \text{ where } \mu \text{ is restricted to relevant measures. This modification is strictly for illustrative purposes.}\]
lem (CL), classifier for book-like objects, first combines with nangsue ‘book’, then the CL + N combines with the number. The meaning is ‘three book-like objects of the book-kind’. The classifier relates the kind to its instantiation. The word order resulting from the proposed structure is Nume > CL > N, which is the word order found in Chinese. However, the noun always appears in the initial position on the surface in a Thai classifier phrase: N > Nume > CL. In Chinese, the noun initial word order is also available but only under certain circumstances (See section 4 of this chapter). It will be argued that the difference between Thai and Chinese is that there is an uninterpretable nominal feature in the Spec of Specific Phrase in Thai causing the noun’s movement to the initial position. See more details in Chapter 5.

The difference between Chierchia’s (2009a) analysis and that of Krifka (1995) and Yang (2001) discussed in the previous section is that the classifier combines first with the noun in the former but with the numeral first in the latter. Chierchia’s analysis is favoured because, although the classifier is never separated from the numeral, it has a semantic co-dependency with the noun in that it must agree with the noun’s semantic features if it is a count noun. The classifier and the noun are in mutual dependent relation since the noun needs the classifier for portioning and the classifier needs a noun to give a semantic content. Since the numeral/quantifier is in the specifier of the ClP, they cannot be separated, assuming that nothing can come between the specifier and the head. This structure accounts for both the selectional requirement between the noun and the classifier and the inseparability between the noun and the numeral. Let us now analyze classifiers in different contexts in Thai under the proposed analysis.

3 The contexts for classifiers in Thai

There are three situations where classifiers are obligatory: 1) in an NP with an overt specific marker (occurring with the numeral ‘one’ and a demonstrative), 2) in a quantified
NP and 3) in an NP modified by an adjective. I will start with the overt marking of specificity.

(13) a. chan yaak dai maa *(tua) nueng \textit{specific indef.}
   I want get dog CL one
   ‘I want a dog.’ (There is a dog such that I want it.)

b. chan yaak dai maa *(tua) nan \textit{deictic}
   I want get dog CL that
   ‘I want that dog.’

We have seen from Chapter 3, section 1, that English indefinite NPs are sometimes ambiguous between a specific \textit{(de re)} and non-specific \textit{(de dicto)} interpretation.

(14) John wants to marry a doctor.
   De re: There is a doctor such that John wants to marry her.
   De dicto: John wants to marry any doctor.

Compare English indefinites to Thai overt indefinites such as (13a). The latter is not ambiguous and always receives a specific interpretation.

The second type of NP containing an obligatory classifier is the quantified NPs\textsuperscript{26}. The classifier must be present when the noun is combined with a numeral or the following quantifiers:

(15) Quantifiers co-occurring with a classifier in Thai
   a. N + \textbf{mai.kii} + CL ‘a few’ (literally: not that many)
   b. N + \textbf{baang} + CL ‘some’

\textsuperscript{26} In certain contexts, such as in a restaurant order or in news headlines, the classifier is omitted.
c. **mai mii + N + CL nai** ‘no X’\(^{27}\) (literally: not exist N which)

d. **N + thuk + CL** ‘every’

e. **N + taela + CL** ‘each’

f. **N + laay + CL** ‘several’

(16) **Examples**

a. phuuying **mai.kii/ baang/ thuk/ taela/ laay/saam** *(khon)* wai phom yaaw
   *woman* a few/ some/ every/ each/ several/three *CL* grow hair long
   ‘Few/ some/ every/ each/ several/ three women/woman have/has long hair.’

b. **mai mii phuuying *(khon)* nai wai phom yaaw**
   **NEG exist woman CL which grow hair long**
   ‘No women have long hair.’

Interestingly, the position of the classifier in a quantificational NP is different from when it appears with overt (in)definite markers. The (in)definite markers follow the classifier while the quantifiers precede the classifier.

(17) a. **chan hen** **maa tua nueng** *Indefinite NP*
   *I see dog CL one*
   ‘I saw a dog’

b. **chan hen** **maa saam tua** *Quantified NP*
   *I see dog three CL*
   ‘I saw three dogs’

It will be shown in the following section that the different surface positions of classifiers result from the numeral ‘one’ being the head of the Specific Phrase (SpecP).

---
\(^{27}\) This is a relative clause rather than a quantifier in Thai. For other expressions: **mai mii khrai** (not-exist-who) ‘no one’ and **mai mii arai** (not-exist-what) ‘nothing’.
A classifier is also obligatory in the indeterminate pronoun *khrai + sak + khon* ‘someone/anyone’.

(18) a. chan mai hen [khrai sak *(khon) nueng]*

I NEG see who even/just CL one

‘I didn’t see anyone.’

b. chan tongkaan [khrai sak *(khon) nueng]*

I want who even/just CL one

‘I want someone.’

One last place where a classifier may appear in Thai NPs is before a modifier, which includes an adjective and a relative clause. The classifier is required when an NP is specific and singular. It is important to note that when a classifier appears with an adjective or a relative clause, it is usually a reply to the question ‘which one’. For example, if you are considering adopting a dog among a set of available dogs in front of you, then it is appropriate to say (19). But it is not possible to state (19) out of the blue.

(19) chan yaak dai maa tua siikhaaw

I want get dog CL white

‘I want the white dog.’

Since (19) refers to a dog in a given context, it is possible to omit the noun and simply use CL + Adjective instead, as shown in (20b).

---

28 arai sak yang nueng ‘something/anything’
what even/just CL-type one

29 It is proposed that the classifier is required in a specific NP. As for the indeterminate pronouns, the classifier is required to combine with the numeral ‘one’. The structure of the NP in (18) is such that *khrai* ‘who’ is the subject of the predicate *khon nueng* (CL one), meaning whoever that is one in number. I propose that *sak* ‘just/even’ is an adverb separating the subject and the predicate. The requirement of a non-specific NP to be discontinuous is discussed in Section 4, page 78.
(20) a. yaak dai maa tua nai
    want get dog CL which
    ‘Which dog are you getting?’

b. tua siikhaaw
    CL white
    ‘the white one’

For out of the blue context, one must not use a classifier, as shown in (21), meaning ‘I would like to adopt a white dog’. It is not necessary to have a presupposed set of dogs to choose from.

(21) chan yaak dai maa siikhaaw
    I want get dog white
    ‘I want a white dog/white dogs.’

To summarize, the three places where a classifier is obligatory are:

1. before an overt specific marker
2. after a numeral/quantifier
3. before a modifier in a specific NP

At first sight, these contexts can be divided into two categories, one being specificity and the other being quantification. Is there a way to unify these occurrences? I argue that there is. The unified analysis has to do with quantification and specificity within a noun phrase. In the following section, the semantics of classifiers as proposed in Chierchia (2009a) will be presented and applied to the contexts presented above.

4 Analysis

First, we have seen that Thai bare nouns themselves cannot be quantified without the help of a classifier. Krifka (1995), Chierchia (1998) and Yang (2001) agree that the classifier
provides an instantiation of the kind denoted by the noun in languages where nouns denote kinds. In these languages, a numeral cannot combine with a noun without an intermediating classifier. It is also assumed that number must combine with a property. Thus, it follows that the classifier phrase is a property-denoting expression. It is of type \textit{<e,t>}. The basic assumption adopted in this thesis is stated in (22).

(22) The classifier phrase is a property-denoting expression. It denotes a measured portion of a kind.

According to (22), a classifier phrase itself can function as a predicate. This can be seen from a language that has the order Nume > CL > N like Chinese. The subject + predicate structure N > Nume > CL is also available in certain situations.

(23) Chinese example

\begin{verbatim}
wo yao mai bi\_wu\_zhi, shu\_liang ben
I want buy pen five\_CL\_book two\_CL
‘I would like to buy five pens and two books.’
\end{verbatim}

The NPs in (23) must be in a list. I propose that in N > Nume > CL in many languages represents a clause with the noun as subject and the Nume + CL sequence as the predicate. In this case, the subject noun is coindexed with the empty pronoun in the complement of the classifier phrase. A piece of evidence comes from the separability between the noun and the classifier phrase. It is assumed that the subject can be separated from its predicate. In Thai, the noun can move away from the predicate separated by another predicate, as shown below.

(24) Thai example

\begin{verbatim}
tamruat maa haa khun song khon
policeman come see 2 two\_CL
‘Two policemen came to see you.’
\end{verbatim}

\footnote{See the derivation of this structure in Section 1.2 of Chapter 5.}
In (24), the noun tamruat ‘policeman’ is the subject of the predicate ‘come see’ and of the secondary predicate ‘two’. The classifier phrase is of type <e,t> and can therefore function as a predicate of the sentence. The literal translation is ‘Some policemen came to see you and they are two in number’.

Another piece of evidence supporting that the classifier is a predicate comes from compound nouns. It is assumed that nouns appearing in a compound must be predicative, for example toothbrush, paper clip, water bottle. That is why the compound portion cannot be inflected, i.e. *teethbrush, *papers clip. In Thai, the classifier, rather than the noun, appears as the compound. For example, tonmaai ‘tree’ occurs with the classifier ton. To create a compound such as Christmas tree, the classifier ton is used, i.e. ton Christmas rather than *tonmaai Christmas.

I have argued that the classifier is a predicate providing a numbered instantiation of a kind. The main question of the thesis is how a classifier can appear in a non-quantified context like the ones in (25).

(25)  a. maa tua nueng                      specific indefinite
             dog  CL one
      ‘one particular dog’

         b. maa tua nii                      deictic
             dog  CL this
      ‘this dog’

         c. maa tua siikhaaw                  specific modified NP
             dog  CL white
      ‘a particular white dog’

Without a classifier, (25a) and (25b) will be ungrammatical while (25c) will receive different interpretations depending on the context: maa siikhaaw ‘a/the white dog(s). The
questions raised from the above data are: 1) what do these noun phrases have in common? 2) why do they need a classifier here? 3) why can’t they co-occur with the numeral ‘one’ when they all have singular interpretation?

Recall that in Chapter 3, it is proposed that Thai nouns refer to kinds. Kinds derive from the context other interpretations such as indefinite, definite and generic. However, bare nouns cannot have a specific reading. A specific NP is usually taken to refer to an individual that the speaker has in mind as its referent (Cormack and Kempson 1991). Semantically, the specific NP takes scope over the sentence and thus must be associated to a quantifier.

I propose that the three contexts carry specificity. Specificity requires that the NP be quantified. Thus, a specific NP must contain a classifier phrase. The proposal of the thesis is formulated below:

\[(26)\] The classifier phrase is required in all specific noun phrases.

A specific noun phrase is defined as follows:

\[(27)\] A specific noun phrase refers to a particular entity that the speaker has in mind.

Let us consider the noun phrases in (25). The NP *maa tua neung* ‘a particular dog’ in (25a) is a specific indefinite NP. It establishes a discourse referent that can be referred back to by an anaphor, for example:

\[(28)\] raw hen maa tua nueng, thii talaad man, mai mii cawkhong

1 see dog CL one at market it NEG have owner

‘I saw a dog at the market. It has no owner.’
The NP *maa tua nan* ‘that dog’ in (25b) is a deictic expression. It also refers to a particular dog in the discourse. Similarly, the NP *maa tua siikhaaw* ‘the white dog’ in (25c) is a modified NP that refers to a particular white dog, rather than white dogs in general. All NPs containing a classifier allow cross-sentential anaphora such as (28). The specific indefinite NP introduces a discourse referent. The deictic NP must have a referent in the discourse while the modified NP must refer to a particular dog in a set of previously introduced dogs or in the context where dogs are the topic of discussion.

It has been argued that Thai bare nouns can be definite but not specific unless appearing in a Specific Phrase. There is a slight difference between definite and specific NPs. A definite NP must meet the uniqueness and familiarity conditions. It requires both the speaker and the hearer’s knowledge. Under Discourse Representation Theory (DRT) (Kamp 1981 and Heim 1982), the difference between definite and indefinite NPs corresponds to their ability to satisfy the Familiarity Condition and the Novelty Condition, respectively. All indefinites must be novel. They must introduce referents that were not previously in the domain of discourse. All definites must be familiar. The discourse referents that the definites are mapped onto must have been previously introduced in the discourse\(^\text{31}\). Indefinites, on the other hand, cannot have antecedents in the discourse.

Specificity, on the other hand, does not require that the entity be familiar. It can be unique, such as a deictic or a specific indefinite NP. But it cannot be familiar to the hearer. Therefore, a specific NP is different from a definite NP in that the former is unfamiliar to the hearer while the latter must be familiar to him.

Some languages distinguish between a specific and non-specific noun phrase such as Samoan, Sissala and Hebrew where a specific NP is marked with a different determiner or suffix from a non-specific NP (Ionin 2006). I propose that Thai is one of

\(^{31}\) It is important to note that I do not take Thai definite NPs to be the same as English definite NPs. The definiteness in Thai is achieved by applying a kind to a situation (cf. Chapter 3). This is different from the normal definition of definiteness which is assigned by an iota operator or the definite article THE.
these languages in which a specific NP is marked with a classifier while a non-specific NP is not.

From the proposal, we predict that all noun phrases containing a classifier will be specific and all specific NPs will obligatorily contain a classifier. One piece of evidence comes from the *which*-question. The *which*-question, which picks an entity out of an available set, is a good example of a specific noun phrase since it refers to a particular individual and is called a D(iscourse)-Linking element. In Thai, a *which*-question must contain a classifier.

(29)  yaak dai maa *(tua) nai
   want get dog  CL  which
   ‘Which dog would you like to get?’

Another piece of evidence is from a set of adjectives that requires an NP to refer to a presupposed entity such as *first, last, next, only*. They must obligatorily co-occur with a classifier, as illustrated in (30).

(30)  khaw pen phuchai *(khon) diaw thii  chan  rak
   3  COP  man  CL  only  COMP 1  love
   ‘He is the only man I love.’

Our proposal also predicts that a quantified NP must be specific. Considering (31a), it is necessary that the speaker know the identity of the men. On the other hand, if stated for the first time, the noun must be disjoint or separated from the numeral + CL sequence, as shown in (31b).

(31)  a.  chan hen  phuchai saam khon
       1  see  man  three  CL
       ‘I saw (the) three men.’
b. chan hen phuuchai thangmot saam khon, John, Peter lae Mike
1 see man altogether three CL and
‘I saw three men: John, Peter and Mike

The noun phrase in (31a) referring to the three men that have previously been mentioned must be continuous. In contrast, the newly introduced quantified NP in (31b) must be discontinuous. The noun and Nume + CL must be separated. This contrast is also found in the indefinite NP containing the numeral ‘one’, as shown in (32). The specific NP must be continuous and the non-specific NP must be discontinuous.

(32)  a. chan yaak dai maa *(tua) nueng specific indef.
     1 want get dog CL one
     ‘I want a dog.’ (There is a dog such that I want it.)

     b. chan yaak dai maa sak *(tua) nueng non-specific
     1 want get dog just CL one
     ‘I want a (non-specific) dog.’

The elements that can break the noun and the classifier phrase are aspect markers, verbs, adverbs and even a pause. In certain situations where the noun phrase is not specific, such as in restaurant orders, the noun and the quantifying element can be continuous. However, there must be a pause between them, as shown in (33).

(33) What would you like to order?
     a. khaaw (pause) saam caan
        rice three plate
        ‘three orders of rice’

     b. naam (pause) saam kaew
        water three glass
        ‘three glasses of water’
I propose that the NPs in (33) have a subject-predicate structure. All discontinuous NPs will be analyzed as subject-predicate as well. All continuous NPs containing a classifier are proposed to be a Specific Phrase. See more details in Chapter 5.

Furthermore, we also predict that a non-specific NP must not appear in a specific phrase. That means it cannot be next to a classifier. Let us apply the analysis to a possessive construction. In Thai, a possessive NP is in the form of ‘N of N’. It cannot contain a classifier and the preposition is optional, as shown below.

\[
\begin{align*}
(34) & \quad a. \quad \text{maa (khong) chan/John mai sabai} \\
& \quad \text{dog of 1/John NEG healthy} \\
& \quad \text{‘My/John’s dog is sick.’}
\end{align*}
\]

\[
\begin{align*}
(34b) & \quad \text{maa tua khong chan/John} \\
& \quad \text{dog CL of 1/John}
\end{align*}
\]

(34b) illustrates that it is ungrammatical to have a classifier in a possessive construction. Under our analysis, an NP containing a classifier must be specific. What prevents a possessive from being a specific expression? A possessed noun refers to an entity that has a constant extension in every situation. For example, if John has only one dog, Fido, then John’s dog always refers to Fido in every situation whereas the referent of that dog will depend on the context. The possessive NP receives a definite rather than a specific interpretation. We have seen that definiteness is derived by applying a kind to a situation. In this case, a classifier phrase is prohibited because the noun is definite rather than specific.

However, if the possessive NP occurs with a demonstrative, a classifier must be used with the demonstrative and the CL + demonstrative and the prepositional phrase can be permuted, as shown below.

\[
\begin{align*}
(35) & \quad a. \quad \text{maa tua nan khong John or} \\
& \quad \text{dog CL that of John}
\end{align*}
\]
Similarly, the possessive NP occurring with the numeral ‘one’ must contain a classifier. The permutation between the CL + one and the prepositional phrase is also permitted, as shown below.

(36) a. maa tua nueng khong John or
dog CL one of John

b. maa khong John tua nueng
dog of John CL one
‘a dog of John’s’

Both word orders are allowed for an indefinite possessive NP. The prepositional phrase and the indefinite portion CL + one can be permuted without changing the meaning of the noun phrase. The examples in (35) and (36) demonstrate that it is the demonstrative and the numeral ‘one’ that require the presence of a classifier. The underlying structure of the deictic and specific indefinite NP is shown below.

(37) SpecP
     Spec’
     Spec
         CI

   Spec’
   Spec
\[ Spec\]

   CI
   CI
   N

   tua
   dog
Notice that (37) represents the underlying merge order of Thai specific noun phrase. The derivation of the surface order is discussed in Chapter 5. It will be proposed that the noun moves cyclically to the specifier of Specific Phrase and pied-pipes CIP along with it.

As for the specific modified NPs, things seem different on the surface since there is no overt element that shows specificity, unlike the deictic and the specific indefinite NPs. The noun simply appears with a classifier and a modifier, which can be an adjective or a relative clause. The number interpretation must be singular.\(^{32}\)

\[(38) \quad \text{maa tua siikhaaw} \]
\[\text{dog CL white} \]
\[\text{‘the/a particular white dog’ (among a pool of dogs in sight)} \]

In order to state (38), a set of dogs must be previously introduced in the discourse or must be available in sight. Therefore, the specific modified NP carries contrastiveness as well as specificity. It cannot be used if there are no dogs in the context or if the topic of dogs has not been established. (38) can be used to answer the question ‘Which dog is the most expensive?’ It can also be used when one tries to describe the characteristics of each dog in a group, such as ‘the white dog is playful and the black one is dominant’. The question ‘which’ is in fact asking ‘which one of the available individuals’. The classifier picks out the individual from a set of presupposed entities. Therefore, I assume that the specific modified NP is also the projection of a Specific Phrase, selecting a classifier phrase as its complement and the adjective modifier right-adjoints the NP. The head of SpecP is null. The underlying structure of (38) is shown below.

\(^{32}\) How to derive the singular vs. group reading will be discussed in Section 6.
In this case, the NP ‘dog’ raises to the specifier of ClP, yielding the $\text{dog} > \text{CL} > \text{white}$ order. See more details in Chapter 5.

To recap, I propose that the classifier is required in a specific noun phrase to turn a kind into a property that is quantified. In other words, the classifier provides an individual portion of a kind. It can function as a predicate by itself or is required in a Specific Phrase, in which case the NP must be continuous. The word order of different types of noun phrases will be discussed in Chapter 5. Next, I will discuss some contexts where the proposal is challenged.

5 Challenges to the proposed analysis

Two proposals have been made so far. First, nouns are kinds and cannot directly combine with quantifiers. Second, specific NPs must contain a classifier. There appear to be two situations that present a challenge to these proposals. In this section, we will discuss how abstract nouns may appear with a numeral without a classifier and how inanimate nouns do not always require a classifier in a deictic expression.
5.1 Abstract nouns

In certain situations, the noun seems to combine directly with a numeral. Abstract nouns\(^{33}\) appear as a repeater after a numeral/quantifier. The noun in the initial position is usually omitted. On the surface, it seems that these nouns directly combine with numerals. Examples for enumerated abstract nouns are shown below.

\[(40) \quad \begin{array}{ll}
\text{a. (heetpon) laay} & \text{heetpon} \\
& \text{reason several reason} \\
& \text{‘several reasons’} \\
\text{b. (chiiwit) nueng chiiwit} \\
& \text{life one life} \\
& \text{‘one life’}
\end{array} \]

In (40), we see that abstract nouns can appear in the classifier slot\(^{34}\). I propose that what appears in the classifier slot is the copy of the noun. After copying takes place, the noun moves to Spec of SpecP. It has the option of getting deleted at PF (41a) or staying overt (41b)\(^{35}\). This accounts for why the noun is optional in (40).

\[(41) \quad \begin{array}{ll}
\text{a. } & [\text{SpecP chiiwit}_i [\text{CLP nueng} [\text{CL chiiwit}_i ] [\text{NP[N t]}]]] \\
\text{b. } & [\text{SpecP chiiwit}_i [\text{CLP nueng} [\text{CL chiiwit}_i ] [\text{NP[N t]}]]]
\end{array} \]

This copy-to-CL is language-specific. In Mandarin, for example, the abstract nouns occur with a generic classifier ge\(^{36}\).

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\(^{33}\) Abstract nouns are those referring to abstract concepts such as dream, love, hope. See more examples in Appendix B.

\(^{34}\) Inalienable nouns also have this structure, e.g. (huu) song huu (ear-two-ear) ‘two ears’.

\(^{35}\) I will not discuss why it is the upper noun that gets deleted rather than the lower one. I speculate that the noun in the head position (CL) has the priority of staying overt before the noun in the specifier.

\(^{36}\) Julia Su (personal communication)
We also find Nume + N in expressions, headlines and titles where the noun combines directly with the numeral yielding an English-like surface order, as shown in (42).

(42) a. sip-paet mongkut
eighteen crown‘a crook’ (expression)

b. saam thahaansua
three musketeer‘The Three Musketeers’ (title)

The noun in expressions, titles or headlines seems to be a special condition that allows it to be individualized by the context. It might be the case that quantified NPs in these situations do not refer to kinds and are made individual by the context. I will not make further justification on this issue and will leave it to further investigation. Next, I present the second challenge found in a deictic NP with an inanimate noun.

5.2 Optionality in N-(Cl)-Dem

In casual speech, the classifier in a deictic expression can be omitted with the condition that the noun must be inanimate, as shown below. The demonstratives in Thai are nii ‘this’ and nan ‘that’.

(43) a. chan sua samut (lem) nii maa
1 buy notebook CL this ASP
‘I bought this notebook.’

b. chan chop baan (lang) nan
1 like house CL that
‘I like that house.’
(43c) and (43d) illustrate that the classifier cannot be omitted if the noun is animate. This optionality has not been explored before in the literature on Thai classifiers. Let us now consider the semantic difference between the presence and absence of the classifier within an NP. When the NP has a type reading, the classifier cannot be present. When the NP has an individual reading, the classifier may or may not be present.

\[(44) a. \text{ dai nam thorasap (khruaŋ) nii pai sɔm } \quad \text{ Individual} \\
\quad \text{ASP take phone CL this go fix} \\
\quad \text{‘I took this phone to fix.’} \\
\quad b. \text{ thorasap nii ca maa prɔm kap naacɔɔ samphat } \quad \text{ Type} \\
\quad \text{phone this will come together with screen touch} \\
\quad \text{‘This phone comes with a touch-screen.’} \]

\[(45) a. \text{ yaak sʉʉ rot (khan) nii phroʔ chap rot (khan) nii } \quad \text{ Individual} \\
\quad \text{want buy car CL this because like car CL this} \\
\quad \text{‘I want to buy this car because I like this car.’} \\
\quad b. \text{ kamlaŋ yaak ca sʉʉ rot nii pii 1999 } \quad \text{ Type} \\
\quad \text{ASP want to buy car this year 1999} \\
\quad \text{‘I’m wanting to buy this car, year 1999.’} \]
The above examples illustrate that the presence of the classifier affects the meaning of the noun phrase. Namely, the classifier forces the noun to have an individual reading whereas its absence allows both individual reading and type reading. Under our analysis, nouns are inherently kinds. We predict that without a classifier, \( N + \text{Dem} \) should yield a kind or type reading. The prediction is borne out. However, we need to determine how the individual reading is derived without the presence of a classifier. Let us consider the following example where the noun ‘house’ has an individual reading.

\[(46) \quad \text{a. } \text{baan (lang)} \ nii \ khɔŋ \ khrai \quad \text{Individual} \]

\[
\quad \text{house} \quad \text{CL} \quad \text{this} \quad \text{belong to} \quad \text{who} \\
\quad \text{‘Who does this house belong to?’} \\
\]

We predict that the lack of a classifier should only yield the type or abstract reading since we need a classifier to shift from a kind to an individual. How can the noun ‘house’ have an individual reading in (46)? I propose that for an \( \text{NP + Dem} \) without a classifier to be interpreted with an individual reading, two conditions must be met: first, the noun must be inanimate and second, the verb must be a stage-level predicate. The individual reading in (46) is derived from Derived Kind Predication (cf. Chapter 2, Section 1). The stage-level predicate ‘belong to’ requires an existential subject and therefore forces the noun to have an individual reading. The meaning of a noun phrase, whether individual or type, does not entirely depend on the presence of a classifier. It is the predicate that gives rise to an individual or type reading. The presence of a classifier enforces the individual reading in an existential context. However, without it, the individual reading is derived from the predicate.

If we assume that the classifier is required in a specific noun phrase, then how can we explain its optionality with a demonstrative? I suggest that the classifier phrase must project even when the overt classifier is omitted. The classifier can be null provided that the noun is inanimate. I maintain that the optionality of the classifier in \( N + (Cl) + \text{Dem} \) is not problematic for our analysis because it does not occur with all nouns and we can predict its pattern: inanimate nouns allow freer interpretations. When the classifier is not
overt, the NP may have a type or individual reading. It is possible that this option is available for inanimate nouns because they can be interpreted with abstract or concrete meanings, for example *baan* can mean ‘house’ or ‘family’, whereas animate nouns do not have such varieties in meaning.

We have discussed the proposed analysis and its challenges. Next, the elements in the classifier slot will be discussed.

### 6 The classifier slot

In the classifier slot, three sets of features are distinguished: mass vs. count, individual vs. group and noun class. Only the classifier occurring with individual (singular) count nouns encodes the noun class. A list of the most common classifiers in Thai is provided in Appendix B. This section discusses what can appear in the classifier slot and how mass/count and number distinctions are made through the classifier.

#### 6.1 Mass vs. count classifiers

Classifiers have long been distinguished from other measure terms. Hass (1942) calls classifiers that occur with count nouns sortal classifiers and the ones occurring with mass nouns measurers. Hundius and Kölver (1983) call all words that combine with numerals ‘numeratives’. They further divide the numeratives into three types: kind/type denoting, classifier-proper and measure terms. However, I follow Iwasaki and Ingkhapirom (2005) in dividing the lexical and functional items that can combine with numerals into six categories: 1) measure words; 2) partitives; 3) adverbial partitives; 4) classifiers; 5) repeaters; 6) collectives and type classifiers. Measure words specify the length, weight, volume, etc. of an object while partitives provide a means to measure mass entities. Adverbial partitives specify the number of repetitions of an activity. Classifiers categorize count nouns into different groups. Repeaters refer to a classifier that repeats the noun in the classifier slot. Collectives describe a group of the noun and type
classifiers denote types, kinds or styles of the noun. An example of each type is illustrated below (see Appendix B for a full list).

(47) Measure words
naamtaan  saam  kram
sugar    three  gram
‘three grams of sugar’

(48) Partitives
naam  neung  kaew
water    one   glass
‘one glass of water’

(49) Adverbial partitives
wing  song  pɔɔp
run    two  lap
‘run two laps’

(50) Classifiers
maa  nueng  tua
dog    one   CL
‘one dog’

(51) Repeaters
taa  song  taa
eye    two   CL
‘two eyes’

(52) Collectives and type classifiers
singto  fuung  nueng
lion    herd  one
Cheng and Sybesma (1999) call measure words and partitives ‘massifiers’. Comparing Thai to English, we find that English has all other types of measuring terms except classifiers and repeaters. This suggests that measuring terms and collectives are universal concepts. The classifier, on the other hand, is not universal and is only relevant with lexical count nouns in languages that set nouns to denote kinds. For the structure of massifiers, I follow Schwarzchild (2005) in assuming that they are projections of a Measure Phrase (MP).

The classifier not only exhibits the mass/count distinction, but it also shows the difference between an individual and a group of objects. We will examine the group classifier _puak_ in the following section.

### 6.2 Group classifier ‘puak’

We have discussed the types of classifiers. For count nouns, we further divide the classifiers into individual and group classifiers. Only the individual classifier agrees with the noun. The examples below illustrate individual vs. group classifiers.

(53) Classifiers for count nouns
   a. Individual
      
      maa song _tua_ nan kamlang kat kan
      dog two CL that ASP fight RECIP
      ‘Those two dogs are fighting each other.’

   b. Group
      
      maa _puak_ nan kamlang kat kan
      dog group that ASP fight RECIP
      ‘Those dogs are fighting each other.’
The noun phrase in (53a) means ‘two individual dogs’ whereas the one in (53b) means ‘that group of dog’. It seems that puak marks plurality. Unlike the singular classifier, the group classifier does not agree with the semantic feature of the noun as they denote ‘group’.

I assume that when the numeral is not overt, the default number is ‘one’. Therefore, if the individual classifier is inserted in the classifier head, then the NP has a singular interpretation. On the other hand, if the group classifier is selected, the NP has a group interpretation, as in (53b).

There is something special about puak in that it can be used to pluralize animate nouns, as shown below.

(54) a. puak phuuying chop rong.pleng
   group woman like sing.song
   ‘(The) women like singing.’

b. puak phuuchaai chop len kiila
   group man like play sport
   ‘(The) men like sports.’

c. puak maew maa kin plaa iik laew
   group cat come eat fish again part
   ‘(The) cats came and ate fish again.’

Puak is also a productive morpheme turning pronouns into plural, as shown below.

(55) a. raw puak.raw
    1 PL. 1
    ‘I (colloq) ~ We’

b. khaw puak.khaw
   3 AN PL. 3 AN
   ‘He/She ~ They’
Pluralization with *puak* only applies to animate nouns. We have seen in Chapter 2 Section 4 that another way of pluralizing animate nouns is by means of reduplication. However, reduplication is more limited than *puak* in that it only applies to certain nouns that are monosyllabic.

<table>
<thead>
<tr>
<th>(56)</th>
<th>pii</th>
<th>‘elder sibling’</th>
<th>pii.pii</th>
<th>‘elder siblings’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>nong</td>
<td>‘younger sibling’</td>
<td>nong.nong</td>
<td>‘younger siblings’</td>
</tr>
<tr>
<td></td>
<td>pʰan</td>
<td>‘friend’</td>
<td>pʰan.pʰan</td>
<td>‘friends’</td>
</tr>
<tr>
<td></td>
<td>yaat</td>
<td>‘relative’</td>
<td>yaat.yaat</td>
<td>‘relatives’</td>
</tr>
<tr>
<td></td>
<td>dek</td>
<td>‘child’</td>
<td>dek.dek</td>
<td>‘children’ (in general)</td>
</tr>
<tr>
<td></td>
<td>luuk</td>
<td>‘child’</td>
<td>luuk.luuk</td>
<td>‘children’ (offspring)</td>
</tr>
</tbody>
</table>

Reduplication is preferred for family related nouns. It cannot apply to other types of animate nouns such as *khruu* ‘teacher’, *nakrian* ‘student’, or any nouns that have more than one syllable, in which case *puak* is preferred.

Thai exhibits asymmetry between animate and inanimate nouns. We have seen two examples of this asymmetry. First, a classifier can be omitted if the deictic expression contains an inanimate noun. Second, only animate nouns can be pluralized, either by reduplication or by adding *puak* in front of the noun. It is interesting to see if this pattern exists cross-linguistically. However, I will leave this for future research.

In this chapter, I have proposed a unified analysis for Thai classifiers in different contexts. It is proposed that the classifier phrase provides a measured portion of a kind in a quantified NP and is required in a specific NP because the latter needs to be quantified. Specificity is argued to be responsible for the presence of a classifier when the numeral is
absent. Two structures have been proposed: one involving a classifier phrase and the other with a Specific Phrase. In the next chapter, I will address the surface order of Thai NPs.
Chapter 5
Deriving Word Order in Thai NPs

In the previous chapter, it was proposed that the classifier phrase provides individuation of a kind expression. It has a noun phrase in its complement and the numeral/quantifier in its specifier. The proposed structure is repeated in (1). The constituent structure of a classifier phrase is \([Q [CL N]]\).

\[
(1) \quad \text{ClP} \quad \text{Nume/Q} \quad \text{Cl'} \quad \text{CI} \quad \text{NP}
\]

In this chapter, word orders within Thai NPs will be discussed. I assume the Minimalist framework (Chomsky 1995). Thai is a head-initial language with the order \(V + N\) in a VP and \(P + N\) in a PP. In the nominal domain, the noun always appears in the initial position. We have seen so far three types of NPs in Thai\(^{37}\):

\[
(2) \quad \text{Quantified NP: } N > \text{Nume} > \text{CL} \\
\text{Specific NP: } N > \text{CL} > \text{Dem/one} \\
\text{Specific modified NP: } N > \text{CL} > \text{Adjective/ Relative clause}
\]

In this chapter, the question of why the noun must always appear initially is addressed. I propose that the Specific Phrase has an uninterpretable nominal feature \([\text{uNominal}]\) that needs checking in Thai. The noun phrase moves cyclically to check this feature under head-specifier agreement. The structure of discontinuous NPs, an NP with two classifiers and an NP ellipsis will also be dealt with. I will first discuss the previous analyses as proposed in Kookiattikoon (2001) and Simpson (2005). Then a new syntactic structure is proposed for Thai NPs. This chapter also concludes the thesis in Section 3.

\(^{37}\) For the mass nouns, we can replace \(\text{CL}\) with a measurer or partitive.
1 Previous analyses

I will discuss recent analyses on Thai nominal phrase structure as proposed in Kookiattikoon (2001) and Simpson (2005). Let us first consider Kookiattikoon (2001) who proposes that DP always projects in determiner-less languages such as Thai, Mandarin and Japanese. He proposes a structure that accounts for different word orders in these three languages, which is given below.

(Kookiattikoon 2001)

Kookiattikoon (2001) assumes that the Thai surface order: \(N \succ \text{Numeral} \succ \text{CL}\) is the underlying order. He proposes three levels of nominal expressions: level 1 is the noun; level 2 the measure phrase and level 3 the numeral plus classifier. SC2 (or small clause) is the site for a measure noun (MS), which is the predicate of the noun. The classifier phrase is the predicate of SC3. The surface structure in Mandarin \(\text{Numeral} \succ \text{CL} \succ N\) results from the classifier phrase raising to Spec NumP to check the Num feature, which is strong in Mandarin. Thai, on the other hand, possesses a weak Num feature and does not cause ClP to raise. Finally, Japanese possesses both weak and strong Num features allowing both orders of DP.

Although Kookiattikoon nicely accounts for the difference between word orders in three classifier languages, certain aspects are problematic in his analysis. First, the
numeral and classifier are in the same head: CL, which is assumed to be a predicate that can be raised if the Num feature is strong and stays in situ if the number feature is weak. However, there is nothing in the Number head and the only reason why it projects is to host a Num feature. Therefore, the projection of the Number Phrase seems rather ad hoc. Second, quantifiers such as ‘all’, ‘many’, ‘some’, are not accounted for under this approach. Third, it does not explain why a language like Thai needs a small clause within the DP and a language like English or French does not. Kookiattikoon assumes the standard analysis that the classifier’s function is individuation. However, the cases of classifiers in non-quantified contexts were not considered.

The second approach is proposed in Simpson (2005). Simpson also assumes the DP approach in a determiner-less language. The underlying merge order for Thai NPs is like the one proposed in Cinque (2005)\(^{38}\) with an added projection of a classifier phrase above the NP. Thai surface order within DP results from NP movement plus pied-piping.

\[
\text{Simpson 2005: Surface order: N > Nume + CL > Dem}
\]

\[
\text{\begin{figure}[h]
\begin{center}
\begin{tikzpicture}
\node (DP) at (0,0) {DP};
\node (Spec) at (-2,-2) {Spec};
\node (D) at (0,-2) {D};
\node (Dp) at (0,-2) {D'};
\node (nii) at (-2,-4) {\textit{nii}};
\node (Specp) at (-2,-4) {Spec};
\node (nume) at (-2,-6) {\textit{this}};
\node (nume') at (0,-6) {\textit{two}};
\node (song) at (-2,-8) {song};
\node (cl) at (0,-8) {Cl};
\node (np) at (0,-10) {NP};
\node (lang) at (-2,-10) {\textit{lang}};
\node (house) at (2,-10) {house};
\draw (DP) -- (Spec);
\draw (Spec) -- (D);
\draw (Spec) -- (Dp);
\draw (nii) -- (Specp);
\draw (nii) -- (nume);
\draw (nii) -- (nume');
\draw (D) -- (nume);
\draw (D) -- (nume');
\draw (song) -- (cl);
\draw (song) -- (np);
\draw (lang) -- (cl);
\draw (lang) -- (np);
\end{tikzpicture}
\end{center}
\end{figure}}
\]

Notice that the NP movement skips the classifier projection. Simpson claims that this is due to the strict adjacency between the numeral and the classifier. Simpson assumes that NP raises to be in the focused position, which he calls the ‘DP-internal presentational focus’. Although the structure in (4) is similar to the one proposed here, I do not assume

\(^{38}\) Cinque (2005) proposes a universal merge order: D > Num > A > N, where Num is numeral.
that DP projects in Thai for the reasons already presented so far. If we assume a DP in a
determiner-less language, then we need an independent reason for a classifier phrase to
project in some but not other languages. On the other hand, under our analysis we have
an explanation for why DP is associated with the absence of classifiers while the absence
of DP is associated with its presence. Simpson also did not discuss why Nume-CL heads
are inseparable or how to derive the modified NPs. Having shown that previous accounts
cannot account for all Thai NPs, I will now present an alternative analysis for word order
in Thai NPs.

2 Proposed structure of Thai NPs

I propose that bare noun phrases, those without a classifier, are NPs. A modified NP
contains a noun phrase modified by an adjective, a relative clause or a prepositional
phrase. I assume that the modifiers are right-adjoined. The structure of Thai bare noun
phrases is presented below.

(5)

NP
NP (AP/CP/PP)

The above structure predicts that the modifiers do not appear in fixed order. As predicted,
the adjective, prepositional phrase and relative clause can be permuted, as shown below.

(6) ‘my white house(s) that is/are at the end of the street’

a. baan [sii.khaaw] [thii yuu thaai soi] [khong phom]
   house white COMP be end street of l
   A RC PP

b. baan [khong phom] [sii.khaaw] [thii yuu thaai soi]
   house of l white COMP be end street
   PP A RC
The structure above also explains why number interpretation of a bare NP is vague. The classifier phrase, which carries the number interpretation of a noun phrase, does not project. Without a classifier, the bare NPs in (6) can be used to refer to any number of houses.

As for a continuous noun phrase containing a classifier, I propose that it is headed by a Specific Phrase.

(7)  
\[
\text{SpecP} \\
\text{Spec'} \\
\text{Spec} \\
\text{CLP} \\
\text{Nume/Q} \\
\text{CI'} \\
\text{CI} \\
\text{NP} \\
\text{NP} \\
\text{(AP/CP/PP)}
\]

In this section, we will concentrate on deriving the noun phrase containing a classifier. The following word orders are considered:

(8)  
The contexts to be considered:

1. Quantified NPs: \( N > \text{Nume} > \text{CL} \)
2. NPs with overt specific markers: \( N > \text{CL} > \text{Dem/one} \)
3. Specific modified NPs: \( N > \text{CL} > \text{Modifier} \)
4. Discontinuous NPs: \( N \ldots \text{Nume} > \text{CL} \)
5. NP-ellipsis: \( \text{CL} > \text{Dem/one/modifier} \)
6. NPs with doubling classifiers \( N > \text{CL} > \text{A} > \text{Nume} > \text{CL} \)
I propose that the noun in the initial position results from cyclic NP raising from Spec to Spec (plus pied-piping). Since the modifiers are adjoined to NP, it is predicted that either the NP alone or the modified NP can move. Unlike Simpson’s account, I propose that the movement of an NP is motivated by feature checking. The movement plus pied-piping is the unmarked type of movement in the nominal domain (Cinque 2005 and Kayne 2005). The head of Specific Phrase contains the feature [uNom] that needs to be checked by the noun39 (Feature Checking operation of Chomsky 1995). The noun phrase raises to the specifier of Specific phrase to check this uninterpretable feature under Spec/head agreement, as shown in (9) (abstracting away the intermediate projection). (9a) shows the movement of the whole modified NP and (9b) shows the movement of NP only.

\[
\begin{align*}
(9) \quad & a. \quad \text{SpecP} \\
& \text{Spec'} \quad \text{Spec}_{[u\text{Nom}]} \quad \text{NP} \\
& \quad \text{that/one} \quad \text{NP} \quad \text{AP} \\
& b. \quad \text{SpecP} \\
& \text{Spec'} \quad \text{Spec}_{[u\text{Nom}]} \quad \\
& \quad \text{that/one} \quad \text{NP} \quad \text{AP}
\end{align*}
\]

This ensures that the noun always ends up at the initial position preceding all other elements in the noun phrase in Thai, assuming that no other elements can be merged in the spec of SpecP. For languages that have Nume > CL > N such as Chinese, I assume that

39 This uninterpretable feature is inspired by Cinque’s (2005) proposal that different word orders within the nominal domain in different languages result from different movement patterns of the noun phrase. Each higher projection may or may not need licensing by the NP. So, the NP may or may not raise to the projection above it and it may or may not pied-pipe that projection to the next one.
the feature \([uNominal]\) is weak and does not require checking by an overt noun. Let us consider word order in different contexts in Thai according to the order presented in (8).

2.1 Quantified noun phrases

The quantified noun phrase has the surface order \(N > Nume > CL\). As demonstrated in Chapter 4, all continuous quantified NPs are specific and therefore, they must be headed by a Specific Phrase. The derivation is illustrated below.

(10) \[\text{maa siikhaaw song tua}\]
    \[\text{dog white two CL}\]
    \[\text{‘two (specific) white dogs’}\]

(11)

The NP ‘white dog’ raises to the Spec of ClP then pied-pipes the ClP and raises to the Spec of Specific Phrase. I assume that there are two specifiers in the classifier phrase. The first specifier is occupied by the numeral and the second specifier is the landing site for the NP.
2.2 Discontinuous noun phrases

In a quantified noun phrase and an NP containing the indefinite ‘one’, the noun can be separated from the numeral and classifier sequence by some verbal or aspectual elements. A discontinuous noun phrase separated by a verb particle and an aspectual element is illustrated in (12).

(12) a. chan suu sua maa saam tua
    1 buy shirt ASP three CL
    ‘I bought three shirts.’

b. chan tham naan set pai laew song chin
    1 do work finish ASP already two piece
    ‘I have already finished two pieces of work.’

c. chan suu sua maa tua nueng
    1 buy shirt ASP CL one
    ‘I bought a shirt.’

According to Simpson (2005), the discontinuous NP has a partitive reading. The numeral-classifier sequence is outside the DP, parallel to the partitive construction in English \([QP three of [DP the children]]\). This might be the case for (12b) but not (12a) and (12c) since they can be stated out of the blue without ‘shirt’ being the topic of conversation. Under his analysis, there is no movement since the quantifier part is DP-external. However, a Thai partitive construction does not look like the ones in (12). In a partitive reading, the NP must co-occur with the demonstrative *nan* ‘that’, with a relative clause or is topicalized at the left periphery of the sentence.
(13) Partitive constructions of (12a,b)
   a. raw aw sua puak nan maa (khae) song tua
      1 take shirt group that ASP (just) two CL
      ‘I brought (just) two of those/the shirts.’
   b. raw tham naan thii sang set pai laew song chin
      1 do work COMP assign finish ASP already two piece
      ‘I have finished two pieces of the assigned work.’
   c. sua (puak nan) raw aw maa song tua
      shirt group that 1 take ASP two CL
      ‘Those shirts, I brought two.’
   d. ngaan (thii sang) raw tham set pai laew song chin
      work COMP assign 1 do finish ASP already two piece
      ‘The assigned work, I have finished two pieces.’

As shown above, a partitive NP must contain an overt element showing specificity such as a demonstrative. The definite NPs such as those containing a demonstrative or a modifier: N > CL > Dem/ A/ RC, can never be discontinuous, as shown below.

(14) a. chan suu sua tua nan maa
     1 buy shirt CL that ASP
     ‘I bought that shirt.’
   b. *chan suu sua maa tua nan
     1 buy shirt ASP CL that

Let us now compare the discontinuous NP with its continuous counterpart. The difference is that the continuous indefinite NP is specific whereas the discontinuous indefinite NP is
non-specific. The specificity plays the key role in determining the continuity of an indefinite NP.

(15) a. chan aw sua song tua maa \textit{specific}
    1 take shirt two CL ASP
    ‘I brought two (specific) shirts.’

b. chan aw sua maa song tua \textit{non-specific}
    1 take shirt ASP two CL
    ‘I brought two shirts.’

(16) a. ao naam song kaew maa hai noi \textit{specific}
    take water two glass ASP give a little
    ‘Bring two (specific) glasses of water, please.’

b. ao naam maa hai noi song kaew \textit{non-specific}
    take water ASP give a little two glass
    ‘Bring two glasses of water, please.’

We can test the constituency by a movement test. A sequence that forms a constituent will move together when topicalized. When a specific NP is topicalized, all elements must be preposed together. On the other hand, a topicalized non-specific NP must be separated from the classifier phrase, as shown below.

(17) a. sua song tua chan aw maa \textit{specific}
    shirt two CL 1 take ASP
    ‘Two shirts, I brought.’

b. sua chan aw maa song tua \textit{non-specific}
    shirt 1 take ASP two CL
    ‘As for shirts, I brought two.’
As noted in Chapter 3, noun phrase like (15a) and (16a) are always specific. Languages have different ways of marking specificity. A language may also mark specificity by means of case marking such as Turkish (Enç 1991).

(18) Turkish
   a. iki kîz-ɨ tanɨyordum  \textit{specific}
      two girl-\textit{ACC}  I-knew
      ‘I knew the two girls.’

   b. iki kîz tanɨyordum  \textit{non-specific}
      two girl  I-knew
      ‘I knew two girls.’

Like Thai, Turkish has no (in)definite articles. The specific object is marked with an accusative case while the non-specific NP is case-less. In Thai, specificity is achieved by projecting the noun phrase under a Specific Phrase, which requires the NP to be continuous.

Specificity in Thai is also observed in subject position. In (19a) and (20a), the subject NP is continuous showing that the speaker knew the identity of the two policemen and the three children beforehand. On the other hand, the identities of the subject are unknown in (19b) and (20b).

(19) a. tamruat song khon maa haa khun  \textit{specific}
      police two CL come see 2
      ‘Two (specific) policemen came to see you.’

   b. tamruat maa haa khun song khon  \textit{non-specific}
      police come see 2 two CL
      ‘Two policemen came to see you.’
I argue that the discontinuous NP in Thai is not a partitive NP but rather a non-specific NP. We have seen that a specific NP is the projection of a Specific Phrase. As for a non-specific NP, I propose that the classifier phrase is a secondary predicate of the noun. The noun in the subject is interpreted as indefinite via DKP. The predicate ‘come see’ is the stage-level predicate, which assigns the existential reading to the noun ‘police’ via DKP. Therefore, the NP has the meaning ‘Some policemen came to see you and they are two in number’. This reading yields the non-specific interpretation. The structure of the discontinuous NP in (19b) is shown in (21) (abstracting away irrelevant detail such as CP and IP). The NP ‘police’ is merged at the Spec vP of the main predicate ‘come see’. The classifier phrase is a secondary predicate with an empty pronoun in its complement coindexed with the noun ‘police’.

I assume that the secondary predicate headed by the classifier phrase is merged as an adjunct of the VP. As for the non-specific object NP as in (15b), repeated below, the noun is also separated from the classifier phrase.

(15b) chan aw sua maa song tua non-specific
take shirt ASP two CL
‘I brought two shirts.’

The structure for the discontinuous object noun phrase is given below (abstracting away irrelevant detail). The noun ‘shirt’ is the object of the verb complex aw... maa (take..come) ‘bring’. It is also the subject of the predicate ‘two CL’. It raises from the object position to be incorporated with the lower V ‘come’ in order to be discontinuous from the classifier phrase.

Next, we will consider the noun phrase with overt specific elements: demonstrative and numeral ‘one’.

2.3 NPs with overt specific elements

When the noun phrase contains a demonstrative or the numeral ‘one’, the noun phrase can be interpreted as singular or plural depending on the type of classifier. If the
individual classifier is selected, then the noun phrase is interpreted as singular, as shown in (23a). If the group classifier *puak* is selected, the noun phrase is interpreted as plural, meaning ‘that group of X’, as shown in (23b).

(23)  

a. *tamruat khon nan maa haa khun*  
police    CL that come see    2  
‘That policeman came to see you.’

b. *tamruat puak nan maa haa khun*  
police group that come see    2  
‘Those policemen came to see you.’

The structure of (23a) and (23b) is shown in (24). The number interpretation is derived from the classifier inserted at the head of CIP. I assume that when the numeral is absent, the classifier phrase is defaulted to have the numeral ‘one’ in its specifier.

(24)  

As for an indefinite noun phrase, we replace the demonstrative with *nueng* ‘one’ in the specific head. The derivation takes place in the same way.
2.4 Specific modified NPs

Consider a modified NP with a classifier in (25). The NP is interpreted as singular and specific. It must refer to a specific policeman or contrast a policeman with others.

(25) tamruat khon thii____ sai____ waen      maa haa
     police CL COMP wear glasses come see
     ‘The policeman who wore glasses came to see you.’

Jenks (2006) proposes that the classifier preceding a nominal modifier introduces a relative clause. Consider the sentences below. His analysis predicts that the NP in (26a) means ‘a/the big house(s)’ and the one in (26b) means ‘a/the house(s) that is/are big’, which is not the case. The NP in (26b) can only have a specific singular interpretation.

(26) a. chan   chop  baan   yai
     I       like    house big
     ‘I like a/the big house(s).’

       b. chan   chop  baan   lang   yai
     I       like    house CL  big
     ‘I like the/ a (specific) big house.’

Therefore, the classifier preceding a relative clause is NOT a linker introducing a relative clause. I propose that the NPs such as (26b) are specific NPs since the interpretation must be singular and specific. Moreover, unlike the quantified noun phrase, the modified NP cannot be discontinuous.

(27) a. aw   stta   tua   siidam    maa
     bring shirt CL  black come
     ‘Bring the black shirt.’
b. *aw stta maa tua siidam

The fact that N > CL > Mod must be continuous suggests that all elements are within the same projection: Specific Phrase. Under our analysis, baan yai ‘big house(s)’ is headed by an NP while baan lang yai ‘the big house’ is headed by a Specific Phrase. The derivation of the surface order in a specific modified NP is shown in (28).

The derivation above shows that it is the NP that moves to the specifier of CIP and pied-pipes it to the specifier of the specific phrase while leaving the adjective ‘big’ behind since it is an adjunct.

### 2.5 NP-ellipsis

Once a noun is known in the discourse, it can be omitted. (29) and (30) illustrate an NP-ellipsis in Thai.

(29) a. sụụ khaaw, maa rụ yang
     buy rice ASP Q yet
     ‘Have you bought rice yet?’
b. ʂʉ ɬæw ʂɔŋ hɔɔ e_i
   buy already two order
   ‘I have already bought two orders (of rice).’

(30) a. chop şʉ a tua nai
    like shirt CL which
    ‘Which shirt do you like?’ (holding two shirts in hand)

b. tua e_i siikhaaw
   CL white
   ‘(I like) the white one.’

In (29) and (30), the nouns ‘rice’ and ‘shirt’ are the topic of the sentence. Once the topic is known, it tends to be dropped later in the conversation. I assume that an empty pronoun is present in an NP-ellipsis. The empty pronoun is coreferential with the discourse referent. This is reminiscent of what we find in the pronoun system in Thai. Recall that in Chapter 1, it is claimed that Thai is a ‘radical Pro-drop’ language. The identity of the empty pronoun is retrieved from the topic of discourse.

Referent tracking is a prevalent process in Thai. For example, in casual speech, the first and second pronouns are omitted because the identity of the speaker and the hearer are assumed, as shown in (29) and (30). As for the third person, once a referent is established, it can be referred back to by several forms in subsequent events, e.g. by a noun phrase with a demonstrative, a pronoun or zero anaphora. According to Chodchoey (1986), zero anaphora is the most frequent device for coding a known referent while the use of pronouns is very limited. Below is an example of identity chain, introduction and subsequent mentions of a participant (Baron 2001). The underlined elements refer to the same individual dog.
(31) a. mii maa tua nueng raangkai suupphom
exist dog CL one body meager
‘There is a meager dog.’

b. man mai dai kin khaaw maa laai wan
3.IN NEG ASP eat rice ASP several day
‘He has not eaten anything for several days.’

c. caw maa mong haa khong kin
little dog look look for stuff eat
‘The dog is looking for something to eat.’

d. ø khoy waa ca mii khon maa hai aahaan man
wait COMP CM exist person come give food 3.IN
‘He is waiting for someone to feed him.’

The noun is dropped after it is first introduced. The empty pronoun is co-indexed with the discourse referent, which has already been established.

2.6 Doubling of classifiers

It is possible for an NP to carry two classifiers. Consider the following examples. The same classifier may precede an adjective and follow a numeral in the same phrase.

(32) a. maa [tua yai] [song tua]
dog CL big two CL
‘two big dogs’

---

41 A challengeability marker marks an event that the speaker thinks is challengeable, i.e. it may or may not happen (Givon 1982). A proposition is considered challengeable or non-challengeable depending on the degree of its acceptability as a fact. An example of a non-challengeable sentence is ‘I was born in April.’ An example of a challengeable sentence is ‘John will go to Vietnam next year.’
b. maa [tua yai] [tua nan]
dog CL big CL that
‘that big dog’

However, the adjective and the numeral or the demonstrative cannot be permuted.

(33) a. *maa [song tua] [tua yai]
b. *maa [tua nan] [tua yai]^{42}

It is important to note that the classifier tua can be used as a noun meaning ‘body’. The adjectives allowed to appear here are usually the ones describing ‘size’ such as yai ‘big’ or lek ‘small’. I propose that the classifier preceding the adjective is a nominal adjunct modifier describing the size of an object. We can replace the classifier in this position with another noun and the NP is still acceptable.

(34) maa huu yai song tua
dog ear big two CL
‘two big-eared dogs’

huu yai ‘big ear’ is an NP modifying the noun ‘dog’. It means two dogs that have big ears. The structure of the NP maa tua yai song tua ‘two big dogs’ in (32a) is presented below.

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^{42} It is possible only if it is a sentence, meaning ‘That dog is big.’
In this chapter, I have provided an analysis of different word orders in Thai NPs. It has been proposed that the noun always raises to the initial position to check an uninterpretable nominal feature in Specific Phrase. The classifier phrase is required in a Specific Phrase to provide the quantifier to the noun phrase. I argue that all continuous NPs are specific because they are headed by Specific Phrase while discontinuous NPs are non-specific and have the subject-predicate structure. This suggests that specificity of a noun phrase in Thai is reflected through the syntactic structure.

3 Conclusion of the thesis

I will conclude the thesis in this section beginning by summarizing each chapter. Then I discuss the implications of the study. Finally, some suggestions for future research will be presented.

In the first chapter, it was pointed out that there is a correlation between the existence of determiners and classifiers. Namely, a language that has an obligatory use of classifiers does not use obligatory (in)definite determiners. Nouns appear bare in argument position in classifier languages. A set of problems was then presented. The question that has been overlooked by Thai linguists and linguists working on classifiers
in general is what the role of a classifier in a non-quantified context should be. Thai is used as the language of investigation to test whether the Nominal Mapping Parameter could offer a better explanation than the universal DP approach.

Chapter 2 presents the theoretical background of the thesis. The Nominal Mapping Parameter (Chierchia 1998) assumes that noun denotations are subject to language-specific variation. Some languages may set nouns to properties while some do not. Languages that have obligatory use of classifiers are proposed to set nouns to denote kinds. Arguments for and against this approach have been presented. The Kind approach is adopted in this thesis because it explains not only the correlation between bare arguments and classifiers but also the absence of true plural marking.

Chapter 3 discusses Thai nominals in argument position. Adopting NMP, I argue that Thai nouns denote kinds. It has been shown that bare arguments in Thai exhibit similar properties as English bare plurals. They do not take scope in a sentence, as they do not have quantifiers associated to them. English bare plurals may be interpreted as indefinite, generic or kind, but not definite since the overt definite determiner THE blocks the covert definite operator from applying. Thai does not have overt determiners and therefore, Thai bare nouns can also be interpreted as definite.

Chapter 4 presents the semantic analysis of Thai classifiers. The semantics of classifiers proposed in Chierchia (2009a) is applied to Thai. The classifier takes a kind and then combines with a number and return the measured individuals of that kind. It is proposed that the classifier phrase is of type <e,t>. Then the classifier in non-quantified contexts is examined. It is proposed that the classifier is required in a specific noun phrase. A specific noun phrase may or may not appear with an overt element. However, it must contain a classifier. This is because a specific NP must be quantificational in order to take wide scope in a sentence.

Chapter 5 discusses different word orders in Thai NPs and how to derive them. It is proposed that the noun must appear in initial position in an NP to check an
uninterpretable nominal feature in the specific phrase. The specific NP must be continuous while the non-specific NP must be discontinuous or must have a pause between the noun and the classifier phrase. A non-specific NP is proposed to be the structure where the noun is the subject and the classifier is the predicate.

The most important point made in this thesis is that in order to understand the nature of classifiers, we need to also understand the nature of the nouns within a language. Languages differ in that they choose either number marking or classifiers. It has been shown that the difference may not lie only in the morphological realization. It may be rooted in the difference in the denotation each language sets the nouns to have.

The thesis also suggests that the semantic variation may also affect other domains such as the morphology and syntax within a language. A consequence of kind denotation is that bare nouns can occur without an overt determiner in argument position, have a variety of interpretations, lack plural marking and appear with classifiers. The thesis contributes to the study of classifiers in general in that they are not limited to counting context as previously assumed. They are also required in the contexts where bare nouns cannot stand alone such as in a specific noun phrase. Classifiers seem to play a more important role than they are assumed to do in previous literature. The role of classifiers has been limited to being a tool for classification (Aikhenvald 2000). Much work has put emphasis on the agreement between the noun and the classifier. However, this work shows that they have many more functions than being noun classificatory devices. They encode number distinction (via group and individual lexical items), mass/count distinction (via the grammatical or lexical items) as well as noun class. See also Cheng and Sybesma (2005) for a similar proposal.

Another contribution is about specificity in Thai. An English indefinite NP is usually ambiguous between specific and non-specific as in ‘John wants to marry a doctor.’ In Thai, it has been shown that this type of ambiguity is eliminated by the structural difference. The specific NP is continuous while the non-specific NP is discontinuous. This is another aspect of Thai grammar that has not been discussed before.
This study also has implications for second language acquisition. It explains why people who grow up speaking a language where nouns are mapped to kinds will have difficulty acquiring determiners when learning languages that have them. This can be seen in many second language learners of English whose first language is Chinese or Thai. They tend to use bare singular nouns in the argument positions and have difficulty assigning the correct article in a given situation. Plural marking is often missed. This is because in their languages nouns are not distinguished between singular and plural.

For future research, more classifier languages need to be examined under this approach. So far, this has been done for Chinese (Yang 2001). The difference between Thai and Chinese noun phrases is in word order. The noun is initial in Thai but final in Chinese. It has been proposed that this difference results from the nominal feature that is strong in Thai but weak in Chinese. There are also languages where nouns are bare but do not use classifiers or plural marking such as Tagalog and Dene. Nouns in argument position in these languages need to be carefully examined in order to test whether the semantic variation approach is valid cross-linguistically.
References


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Appendix A: Thai NPs and their interpretations

1. Thai bare NPs

(1) nuu klai suunpan  
    mouse almost extinct  
    ‘Mice are almost extinct.’

(2) nuu aasai taam thonaam  
    mouse live in sewer  
    ‘Mice live in the sewer.’

(3) muawaan nuu khaw maa nai khrua  
    yesterday mouse enter come in kitchen  
    wannii nuu haay pai laew  
    today mouse disappear ASP already  
    ‘Yesterday, a mouse/mice came in the kitchen. Today, the mouse/mice disappear.’

2. NPs with a classifier

(4) maa tua nueng  
    dog CL one  
    ‘one particular dog’

(5) maa tua nii  
    dog CL this  
    ‘this dog’
(6) maa tua siikhaaw  
    dog CL white  
    ‘a particular white dog’

3. Modified NPs

Default word order: N > A > Nume + CL > RC > Dem

(7) krapaw siidam saam bai thii kwaen yuu nan khong khrai  
    bag black three CL COMP hang ASP that belong to who  
    ‘Whom do those three black bags that are hanging over there belong to?’
Appendix B: A list of Thai classifiers

The following are examples of different types of Thai classifiers (Iwasaki and Ingkapirom 2005). Thai classifiers are divided into 6 groups. Those that can be used as nouns will be indicated in brackets.

1. Measure words
2. Partitives
3. Adverbial partitives
4. Classifiers
5. Repeaters
6. Collectives and type classifiers

1. Measure words
   Weight: kram ‘gram’, kilo ‘kilogram’
   Area: rai ‘1600 sq.meter’
   Time: pii ‘year’, aathit ‘week’, duan ‘month’, wan ‘day’
   Score: khanæn ‘point’
   Value: baat ‘baht’, rian ‘dollar’

2. Partitives
   khuat ‘bottle’
   chaam ‘bowl’
   maay ‘stick (of meat ball)’
   piip ‘a square container’
   chin ‘piece (of cake, cloth, etc.)’
   kææw ‘glass’
   klɔɔng ‘box’
   chɔɔn.chaa ‘teaspoon’
   krapong ‘can’
3. Adverbial partitives

khrang  ‘times’
hon  ‘times’
thii  ‘times’
rɔɔp  ‘laps’

4. Classifiers

4.1 Animate nouns

4.1.1 Human

ong  used with royal family members
ruup  used with monks
naaj  used with officers
khon  (N. person) used with other human-denoting nouns

4.1.2 Animals

chtak  (N. rope) used with elephants
tua  (N. body) used with other animals

4.2 Inanimate nouns

4.2.1 Shape

tua  (N. body) used with objects with legs e.g. tables, chairs, pants, shirts
phæn  (N. sheet) used with flat objects e.g. paper, CD, tissue
lem  used with sharp and slender objects e.g. knives, scissors
sen  (N. line) used with long objects e.g. threat, hair, necklace
met  (N. seed) used with small round objects e.g. pills, diamond
luuk  (N. child) used with large round objects e.g. fruits, balls
kɔɔn  (N. lump) used with irregular objects e.g. rocks, gold, tofu
muan  (V. to roll) used with rolled up objects e.g. cigarettes, film
an  generic classifier used for any unclassifiable objects
ton  (N. trunk) used with long straight objects e.g. plants, trees, pillars, logs
4.2.2 Function

**khan** (N. dike) i. vehicles ii. eating utensils such as forks, spoon

**bai** (N. leaf) i. container utensils such as plate, bowl, glass ii. cupboard iii. round objects such as egg, hat iv. flat objects such as photos, tickets

**phtthn** used with flat clothing e.g. towel, sarongs, cloth, fabric

**lam** used with boats, airplanes

**rtham** (N. house) used with clocks, watches

**lang** (N. back) used with houses, buildings

**daam** (N. handle) used with pens

**thaeng** (N. stick) used with pencils

**saai** (N. line) used with roads, rivers

**sii** (N. tooth) used with teeth

**chabap** (N. edition) used with newspapers, magazines

**dɔɔk** used with keys, individual flowers

**puang** (N. bunch) used with key-bunches, grapes

**chɔɔ** used with a bouquet of flowers

5. Repeaters

The following nouns repeat themselves in the classifier slot.

- Body parts e.g. **taa** ‘eyes’, **huu** ‘ears’, **khɔɔ** ‘throat’
- Geographical features e.g. **kɔʔ** ‘island’, **thaa** ‘port’, **fang** ‘bank (river)’
- Districts and organizational units e.g. **mtang** ‘city’, **kɔng** ‘division’
- Places: **hɔng** ‘room’, **raan** ‘shop’, **ɔrisat** ‘company’
- Furniture: **tiang** ‘bed’, **tuu** ‘cupboard’
- Book chapters and lessons: **bot** ‘chapter’, **khɔ** ‘item’, **naa** ‘page’
- Abstract concepts: **saheet** ‘cause’, **withii** ‘method’, **hetphon** ‘reason’, **kham** ‘word’
6. Collectives and type classifiers

- *khuu* ‘pair’
- *chut* ‘set’
- *law* ‘group’
- *klum* ‘group’
- *puak* ‘group’
- *fuung* ‘group (of animals)’
- *kɔng* ‘pile’
- *tang* ‘stack’
- *yaang* ‘kind’
- *baeb* ‘type/ style’
- *prapheet* ‘kind/ type’
- *run* ‘model’