

# THAI NUMERAL CLASSIFIERS IN NON-QUANTIFIED NOUN PHRASES\*

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## 1. Introduction

The use of numeral classifiers in Thai is not limited to the noun phrase with a numeral or a quantifier. They also appear with a demonstrative, an adjective and a relative clause without requiring an overt cardinal. This presents a challenge to the approaches claiming that classifiers are part of the numeral phrase (Borer (2005), Simpson (2005), Cheng and Sybesma (2005) among others) since they may appear without a numeral. Moreover, the position of the classifier with the non-quantificational elements is different from its normal occurrence: it follows the numeral except the cardinal 'one' but precedes the demonstrative, adjective and relative clause. Thai presents a challenge to the approach that claims that a classifier provides a unit to be counted. The fact that it can appear in a non-quantified noun phrase suggests that a classifier might play more roles than simply being a mass divider. The purpose of this paper is to explore the function of classifiers in the non-quantified contexts in Thai.

In its normal position, a classifier appears right after a numeral. The numeral-classifier sequence appears after a noun. (The tones are omitted.)

- (1) N-Nume-CL  
baan                    **song**                    **lang**  
house                    two                    CL:construction  
'two houses'

An exception is found with the numeral 'one'. The classifier may appear before or after it. When 'one' appears before the classifier, it signifies the amount of that noun. On the other hand, 'one' appearing after the classifier signifies indefiniteness (Iwasaki and Ingkaphirom, 2005).

- (2) N-'one'-CL → amount  
baan                    **nueng**                    **lang**  
house                    one                    CL:construction  
'one house'

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- (3) N-CL-‘one’ → indefiniteness  
 baan                    **lang**                    **nueng**<sup>1</sup>  
 house                    CL:construction            one  
 ‘a house’

In Thai, classifiers also precede such non-quantificational elements as a demonstrative, an adjective and a relative clause.

- (4) N-CL-Dem  
 baan                    **lang**                    **nii**  
 house                    CL:construction            this  
 ‘this house’
- (5) N-CL-Adj  
 baan                    **lang**                    **yai**  
 house                    CL:construction            big  
 ‘the big house’
- (6) N-CL-RC  
 baan                    **lang**                    **thii**    yuu    nai    soi  
 house                    CL:construction            that    be    in    alley  
 ‘the house that is in the alley’ (as opposed to the one at the intersection)

When all elements appear altogether, the default word order is in (7). The numeral-classifier sequence precedes other elements except the noun and the adjective. However, the order may be different depending on which element is in focus. The focused element will be closest to the noun.

- (7) N-A-Nume-CL-RC-Dem  
 baan    yai    **song lang**    thii    rao    pueng suu    maa    nan  
 house    big    two    CL    that    we    just    buy    ASP    that  
 ‘those two big houses that we just bought’

We see that the adjective, which usually follows the classifier (cf. (5)), appears before it. I will not discuss how the surface order is derived. For a syntactic structure analysis of Thai noun phrases, see Simpson (2005). The focus of the paper is to determine why a classifier is required in non-quantified contexts in Thai. Section 2 presents the cases in question. Section 3 discusses Thai bare common nouns. Section 4 presents an analysis to account for the functions of classifiers in Thai. Section 5 concludes the paper.

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<sup>1</sup> The indefinite ‘one’ and the numeral ‘one’ have different tones in speech although they have the same written form. The indefinite ‘one’ has a mid tone in speech while the numeral ‘one’ has a low tone in both speech and writing.

## 2. The differences between the presence and absence of a classifier in a non-quantified noun phrase

A classifier is obligatory when a countable noun appears with a quantifier or a numeral. The classifier changes its form according to the noun it appears with. The data in (8)-(11) illustrate the classifier corresponding to different countable nouns.

- (8)    nakrian    saam            **khon**  
       student    three            CL: human  
       ‘three students’
- (9)    paakkaa    laai             **daam**  
       pen        many            CL: pen  
       ‘many pens’
- (10)    rot            kii               **khan**  
       car            how many      CL: vehicle  
       ‘How many cars?’
- (11)    maew        mai kii         **tua**  
       cat            not many      CL: animal  
       ‘Not many cats’

According to Borer (2005), in line with Chierchia (1998), a classifier provides a unit to be counted because common nouns are mass in classifier languages and they cannot directly combine with a numeral. Borer claims that classifiers have the same function as plural marking due to their complementary distribution. Thus, both plural marking and classifiers are mass divider. If classifiers and number marking are the same thing (one is the morphological mass divider and the other is the syntactic mass divider), then why must classifiers classify while number marking does not? Borer’s analysis would also run into a problem accounting for a classifier in non-quantified noun phrases such as those in (12) and (13). The nouns are not being counted in these situations. Why do they need to be individuated? When appearing with an adjective, a classifier is used to contrast the noun among a set of available individuals.

- (12)    (maew)    **tua**            **nai**            khong        khun  
       cat        CL: animal    which        belong to    you  
       ‘Which cat belongs to you? (\*maew nai)
- (13)    (maew)    **tua**            **siidam**  
       cat        CL: animal    colour black  
       ‘the black cat’ (to answer the above question)
- (14)    maew        siidam                            ‘Black cats’  
       cat        colour black

In (12) and (13), the situation is that there are some cats in sight. The noun can be omitted from (12) and (13) because it is understood that the topic of conversation is the cat. However, in (14), when talking about cats in general, a classifier is not required and the noun cannot be omitted. If we assume that common nouns in classifier languages are mass, they should be able to combine directly with an adjective (cf. ‘dark water’, ‘fine cotton’). This is achieved in Thai except the meaning of the bare noun phrase without a classifier becomes generic (14). If a specific individual is referred to, then a classifier is required as in (12) and (13). This suggests that a classifier turns a generic noun into specific. This observation supports Chierchia’s (1998) analysis that nouns in classifier languages represent kinds rather than individuals.

Let us take a look at the presence of a classifier with a demonstrative. A demonstrative should make a noun phrase specific. Yet, a classifier is required when talking about a specific noun. The sentences (15) and (16) illustrate a noun phrase with a demonstrative. In (15), the presence of a classifier makes the noun singular. In (16), when the noun is plural, the classifier is replaced with the word ‘group’. In (17), the noun directly combines with the demonstrative which ambiguates the meaning of the sentence.

(15) (maew) **tua** **nii** naarak  
 cat CL this be cute  
 ‘This cat is cute’

(16) maew puak nii naarak  
 cat group this be cute  
 ‘These cats are cute’

(17) maew nan naarak  
 cat that be cute  
 ‘That/those cat(s) is/are cute’ *or*  
 ‘Cats are cute’<sup>2</sup>

We see that the demonstrative, which is supposed to make a noun phrase specific, does not give information about number of the noun. Without a classifier, the noun can be interpreted as singular or plural.

Another case where we find a classifier in a non-quantified context is a noun phrase containing a relative clause. A relative clause makes a noun phrase more specific, for example ‘the black cats that we saw yesterday’ versus \*‘black cats that we saw yesterday’. Consider (18) and (19).

(18) rot **khan** thii yuu naa baan  
 car CL that be front house  
 ‘the car that is in front of the house’

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<sup>2</sup> Under this interpretation, the demonstrative is not used as a deictic but as a topic marker, as in ‘Cats, they are cute’.

- (19) rot thii yuu naa baan  
 car that be front house  
 ‘The car(s) that is/are in front of the house’

Similar to a demonstrative phrase, the noun phrase containing a classifier is singular whereas the absence of the classifier makes the number vague.

The result from examining the non-quantified noun phrases in Thai shows that the presence of a classifier makes the noun phrase more specific and more individuated. In the next section, we will explore the behaviours of Thai bare common nouns in order to see whether they are always generic.

### 3. Thai bare NPs

In this section, we will look at the interpretation of Thai bare nouns, their meanings and the mass/count distinction. First, I will start with the mass/count distinction. In English, mass and count nouns are distinguished by the type of predicates they appear with. For example, count nouns select ‘many’ while mass nouns select ‘much’. Thai does not have such distinction, as shown in (20)-(22). Count nouns are in (a) and mass nouns are in (b).

- (20) a. khon **yuh** pai                      b. klua **yuh** pai  
       human be many too much        salt be many too much  
       ‘There are too many people’      ‘There is too much salt’
- (21) a. ruup **noi**                              b. naam **noi**  
       picture be little                    water be little  
       ‘There are a few pictures’        ‘There is little water’
- (22) a. baan **kii** lang                      b. nguhn **kii** baat  
       house how many CL                money how many baht  
       ‘How many houses?’                ‘How much money?’

Unlike English, Thai count and mass nouns are not distinguished by the type of predicates such as much/many, few/little. Both nouns appear with the same words. The only difference between the semantic count and mass nouns is that count nouns require a classifier but mass nouns require a measurer in a quantified context. A classifier refers to a whole unit of the noun whereas a measurer refers to a part or quantity of the noun, as shown in (23) and (24).

- (23) kho naam song **kaew**  
       request water two glass  
       ‘Can I have two glasses of water?’
- (24) kho kaew song **bai**  
       request glass two CL:container  
       ‘Can I have two glasses?’

Notice that the container ‘glass’, which is used as a unit provider for a mass noun, cannot directly combine with a numeral when being counted itself and requires a classifier ‘bai’.

Next, I will demonstrate that the interpretation of Thai bare common nouns is similar to that of English bare plural nouns. Specifically, Thai bare nouns may have generic, specific or kind interpretations depending on the type of predicates they appear with. Carlson (1977) proposes that the type of predicates determines the interpretation of English bare plural nouns. If a noun occurs with a stage-level predicate, which is true of a temporal stage of its subject, it will have a specific interpretation. A stage-level predicate can be modified by temporal adverbs, for example ‘Rice is cooked a while ago’ or ‘Black cats come to my backyard everyday’. In this case, bare nouns are specific, or as in Carlson’s term, they are referential.

- (25) Maew dam      **maa thii sanaam** khong chan thuk wan  
       cat black come to yard of I every day  
       ‘(A) black cat(s) come(s) to my yard everyday’

The bare noun in (25) is not specified for number thus can be interpreted as singular or plural. ‘maew dam’ in this case refers to a specific cat or a set of cats rather than black cats in general. However, the interpretation of the noun changes when appearing with an individual-level predicate, as shown in (26).

- (26) Maew dam **duu naaklua**  
       cat black look scary  
       ‘Black cats look scary’

‘Black cats’ in (26) has a generic meaning because it co-occurs with an individual-level predicate ‘look scary’, which is true throughout the existence of an individual. Finally, the kind interpretation in (27) is derived from a kind-level predicate such as ‘become extinct’ which can only be applied to the kind rather than an individual.

- (27) Maew dam klai      **suunpan**  
       cat black almost be extinct  
       ‘Black cats are almost extinct’

In sum, the bare common nouns in the subject position in Thai behave like bare plural nouns in English in that they may have a specific meaning (25), a generic meaning (26) or a kind meaning (27) depending on the type of predicates they appear with.

When bare nouns appear in the object position, they usually have a generic interpretation regardless of the type of predicates. Compare (28), where ‘black cat’ is the object of the verb ‘see’ with (29), where it is the object of the verb ‘like’. Bare nouns in both cases do not refer to any specific cats and thus receive a generic interpretation.



Borer (2005) proposes that classifiers have the feature [divide] that provides a unit to be counted. Cheng and Sybesma (2005) propose that when a classifier shows definiteness, it undergoes the  $\iota$  operator insertion. The feature [divide] does not encompass the three functions of classifiers mentioned above. If we use [divide] as the feature on the classifier phrase, then it would not explain the specificity function and if we use [divide] plus  $\iota$  operator for definiteness then we cannot account for the noun class function of a classifier. Moreover, how do we explain the fact that the classifier projection selects a specific lexical item? That lexical item must represent the class or category or superset of the noun it classifies.

Let us compare the function of classifiers with other languages. First, the individuation function of a classifier resembles that of number marking (Borer, 2005). If a language has number marking, it will not have a classifier and vice versa. In Chinese, the number marking *-men* occurs in complementary distribution with the classifier. Second, the specificity function of a classifier resembles that of the definite/indefinite articles. As shown in (3), it is required in an indefinite noun phrase. Finally, the noun classification function of a classifier resembles that of gender in many languages. Examples in (32) illustrate noun classification in Thai. Most classifiers are lexical nouns. Those that are nouns are glossed as both noun and classifier.

(32)	<i>tua</i>	N. 'body'	CL. classifier for animals, clothing, ghosts
	<i>bai</i>	N. 'leaf'	CL. classifier for leaves, hats, bags and containers
	<i>khon</i>	N. 'human'	CL. classifier for humans
	<i>sen</i>	N. 'line'	CL. classifier for stringy objects
	<i>an</i>		CL. classifier for small objects
	<i>phaen</i>		CL. classifier for thin, flat objects
	<i>lem</i>		CL. classifier for any types of publications
	<i>khan</i>		CL. classifier for vehicles and umbrellas

Most classifiers encode the information about what an object looks like. It seems that classifiers combine the function of number marking (which is individuation, according to Borer, 2005), definiteness and gender within one lexical item. This suggests that the projection of a classifier phrase may have other purposes on top of providing units to be counted.

To account for these functions of classifiers, I assume Borer's (2005) analysis that *all nouns in all languages are mass*. Since they are mass, they are not stored in the lexicon with the syntactic features like [specific] or [individuated]. Rather, they are specified only for semantic notions, for example {cat}<sup>3</sup> would be specified as [four-legged furry animal, house animal, mammal, tiger-like, etc.]. The specificity and individuation of a noun are derived when the noun enters into the syntactic computation. For example, *cat* in English is not specified for number or specificity. Only when it is combined with other functional elements in a phrase will it derive those features. In

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<sup>3</sup> A listeme, which is a word directly taken from the lexicon, is represented in between curly brackets (Borer, 2005).



English, the specificity of {cat} is achieved via a definite article (e.g. *the cat*) and individuation is achieved via an indefinite article (which also encodes indefiniteness) and number marking (e.g. *a cat* vs. *cats*). However, not all languages are equipped with a determiner and number marking in their syntactic representation. For example, Thai does not have a definite/indefinite determiner or number marking. It allows bare count nouns to appear freely in the sentence such as *maew* ‘cat’ in *maew mii sii khaa* (cat-have-four-leg) ‘Cats have four legs’. This can be accounted for by Chierchia’s proposal that nouns in Thai are argumental and therefore, do not require a determiner and number marking in an argument position. In this sentence, ‘cat’ and ‘leg’ are not specific since they do not refer to a specific cat or leg. The meanings of the bare nouns *maew* and *khaa* are thus generic. If we assume that *maew* are not specified for the features [specific] and [individuated] and that these features are derived from a functional element, then the only thing that shows number and specificity in Thai noun phrases is a classifier. Therefore, we can conclude that the specificity and individuation of a noun are derived from classifiers in Thai. The configurations in (33) illustrate how the features [specific] and [individuated] are derived in English and Thai.

- (33) a. Derivation of specificity and individuation in **English** nouns  
( $\alpha$  represents a functional element)

$$\begin{aligned} \{\text{listeme}\} &\rightarrow \text{specific} / \alpha \text{ [+definite]} \underline{\hspace{2cm}} \\ \{\text{listeme}\} &\rightarrow \text{individuated} / \alpha \text{ [-definite]} \underline{\hspace{2cm}} \text{ or} \\ &\hspace{10em} / \underline{\hspace{2cm}} \text{ [+plural]} \end{aligned}$$

- b. Derivation of specificity and individuation in **Thai** nouns

$$\begin{aligned} \{\text{listeme}\} &\rightarrow \text{specific} / \underline{\hspace{2cm}} \text{ Classifier} \\ \{\text{listeme}\} &\rightarrow \text{individuated} / \underline{\hspace{2cm}} \text{ Classifier} \end{aligned}$$

The rules in (33) are simply restatements of what we observe in two languages. They are by no means a mechanism assumed to be working in Universal Grammar. The representation of the two mechanisms is not in the scope of the paper but will be a very important aspect for a future study. For now, we will concentrate on how a classifier encodes the specificity, individuation and classification of a noun it modifies.

Let us look at (33b). It states that a noun becomes specific and individuated when followed by a classifier. This rule is illustrated by the examples in (13) and (14), repeated below:

- (13)    *maew*        **tua**    *siidam*  
          cat            CL    black  
          ‘the black cat’

- (14)   maew       siidam  
           cat        black  
           ‘black cats’

The specificity and singularity of ‘maew’ is assumed to derive from the classifier ‘tua’. As for the noun class function of the classifier, I propose that a classifier must contain the information about ‘form’ of a noun because a Thai listeme is not specified for ‘form’. For example, the listeme {maew} is specified for such semantic features like [furry, tiger-like...] but not for the feature [animal]. I assume that this feature is derived by pragmatics. This can be supported by the fact that {maew} can be both common and proper nouns. Therefore, when {maew} is used in a specific context such as *maew tua nan* (cat-CL-that) ‘that cat’, it requires another listeme that is specified for the feature [animal] which functions as a classifier. This requirement is formulated in (34).

- (34)   {listeme  $\alpha$ }  $\rightarrow$  [specific] [individuated] / \_\_\_\_ {listeme  $\beta$ } [form of  $\alpha$ ]  
           Classifier = {listeme  $\beta$ } [form of  $\alpha$ ]

The rule in (34) states that a listeme  $\alpha$  is specific and individuated when followed by a classifier which is a listeme  $\beta$  specified for the feature that refers to its form. To illustrate, take English ‘banana’ as an example. ‘banana’ may come in many forms: tree, flower, fruit, preserved fruit, chips, etc. The word ‘banana’ refer to a type of edible plant but the compounds ‘banana tree’, ‘banana flower’, ‘banana chip’ and ‘banana bunch’ refer to the form the notion ‘banana’ has. I assume that all Thai common nouns behave like the word ‘banana’ in that they are not encoded for the information about their forms. The classifiers are like the clarification words used when the noun is being individuated and referred to. In Thai, the classifier of ‘banana’ depends on which form of banana is being talked about.

- (35)   a.   kluay        neung        **ton**        ‘one banana tree’  
           banana     one         CL:tree
- b.   kluay        nueng        **luuk**       ‘one banana’  
           banana     one         CL:fruit
- c.   kluay        nueng        **wii**        ‘one bunch of banana’  
           banana     one         bunch
- d.   kluay        nueng        **khrua**      ‘one branch of banana  
           banana     one         branch        bunches’

This predicts that the sequence classifier-noun can form a compound just like English ‘banana chip’. This is the case for Thai compounds for plants. They are mostly composed of a classifier + noun such as *ton kluay* (tree-banana)

'banana tree', *bai kluay* (leaf-banana) 'banana leaf', *dok kulaap* (flower-rose) 'rose'.

I propose that Thai common nouns are made specific by a lexical item that refers to its form. This is how specificity is derived by the presence of a classifier. The noun class function of a classifier derives from the fact that classifiers must refer to a form a noun has. As for the individuation function, it is assumed that it is derived from the specificity of the classifier the same way individuation is derived from the indefiniteness article 'a/an' in English. This speculation, however, needs a more in-depth study.

As mentioned earlier, most monosyllabic words are polysemous. A classifier also helps determine the meaning of the noun. This is illustrated in (36)-(37).

- |      |    |               |       |                        |
|------|----|---------------|-------|------------------------|
| (36) | a. | khon          | nueng | <b>khon</b>            |
|      |    | human/stir    | one   | CL:human               |
|      |    | 'one person'  |       |                        |
|      | b. | khon          | nueng | <b>khrang</b>          |
|      |    | human/stir    | one   | time                   |
|      |    | 'one stir'    |       |                        |
| (37) | a. | taa           | nueng | <b>duang</b>           |
|      |    | eye/grandpa   | one   | CL: star-shaped object |
|      |    | 'one eye'     |       |                        |
|      | b. | taa           | nueng | <b>khon</b>            |
|      |    | eye/grandpa   | one   | CL:human               |
|      |    | 'one grandpa' |       |                        |

This analysis predicts that a classifier should only be relevant with a concrete noun. It should not be required for abstract nouns which have no forms. What we find with the abstract nouns are two things. The abstract nouns may appear directly after a numeral or they may repeat themselves as a classifier. But they do not require a classifier in other contexts such as a demonstrative or an adjective. This is shown in (38) and (39).

- |      |    |                |         |         |
|------|----|----------------|---------|---------|
| (38) | a. | (chiiwit)      | nueng   | chiiwit |
|      |    | (life)         | one     | life    |
|      |    | 'one life'     |         |         |
|      | b. | (*chiiwit)     | chiiwit | nii     |
|      |    | *life          | life    | this    |
|      |    | 'this life'    |         |         |
| (39) | a. | (ruang)        | haa     | ruang   |
|      |    | (story)        | five    | story   |
|      |    | 'five stories' |         |         |

- b. (\*ruang) ruang thangmot  
 \*story story whole  
 ‘the whole story’

There are certain nouns that combine directly with the numeral, demonstrative, adjective and a relative clause. Those are unit nouns such as day, time, duration, value, weight units. They are assumingly the unit providers and do not require the feature [form] any further. This is shown in (40).

- (40) a. song wan (\*wan song) (\*wan song wan)  
 two day  
 ‘two days’
- b. wan nan (\*wan wan nan)  
 day that  
 ‘that day’
- c. wan thii lua yuu (\*wan wan thii lua yuu)  
 day that remain still  
 ‘the remaining days’

In sum, I propose that a classifier is a listeme representing the form of the noun it modifies. Thai bare nouns are not specified for forms and require a lexical item encoding their form in case they need to be made specific and individuated both in quantified and non-quantified contexts.

## 5. Conclusion

It has been shown that numeral classifiers in Thai are used in non-quantified contexts to show specificity and individuation. To account for this, I assume Borer’s (2005) proposal that all nouns in all languages are mass. Nouns are specified only for the semantic features and derive the syntactic features such as specificity or mass/count from the syntactic computation. Thai is different from English in that it uses a classifier to indicate specificity and individuation instead of the definite/indefinite determiners and number marking. This is because Thai allows bare nouns to appear freely without a determiner. A classifier has the specificity and individuation functions because it is assumed that Thai listemes are not specified with the feature [form]. It is shown that classifiers must be the lexical items that correspond to the form of the noun they modify. If the noun has no forms, it can be individuated by repeating itself or requires no classifiers. The current literature on classifiers only looks at the individuating function of a classifier. This paper demonstrates that classifiers can function as a determiner, number marking and gender at the same time. It is interesting to see how a classifier is derived in the syntactic structure and how

its structure is different from a language that has a determiner and number marking.

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