A HISTORICAL STUDY OF TIME MARKERS IN THAI¹

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Abstract

In general, time markers which mark a sequence of events can be divided into two main types: markers that have locution time of utterance as the referential point, and markers that have the mentioned time in the text as the referential point. Both types of markers range from one word which can be either inherent or derived to such constructions as noun phrases and preposition phrases. The study shows an increase in both the derived words and phrasal constructions in the four studied periods: Sukhothai, Ayutthaya, Mid-Rattanakosin and Modern Thai.

The study also shows that two types of metaphors, one of moving time and standing time, are used in the four periods with an increase of varieties in each of the periods. Time expressions such as /wan33 naa42/ 'day-front' and /wan33 laŋ24/ 'day-back' are good examples of metaphors of standing time and moving time respectively, both used to mean the future in Modern Thai.

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0. Introduction

To understand an event fully, one has to locate it in real time. Such a calendric expression as 'at 8 a.m. on the first of May 2003' can best fulfill the location task. However, in real life, for the purpose of everyday communication, one does not always want such an exact time to locate all events. Instead, one usually wants to understand an event in relation to another event, whether it occurs before or after that event or at the same time. When we talk about the time of an event in relation to a certain point of time or a temporal reference point, we are talking about time deixis.

According to Fillmore (1997), time deixis refers to the time at which the communication act takes place. Linguistic time markers or time expressions as the formal properties for the time deixis include both calendric expressions such as 8 o'clock, today, the past ten years, and non-calendric expressions which range from bound morphemes known as tense to lexical items and composite lexical constructions such as now, then, this, that, when, in the past. This paper deals with non-calendric expressions excluding tense which is not used in Thai. These time expressions will be referred to as deictic time markers or sometimes time markers.

The paper studies deictic time markers within a limit of a simple sentence and a subordinating clause in a complex sentence. Its purpose is first to examine the structure of the deictic time markers; secondly, to group the time markers into semantic types on the basis of their relation to the present moment or in relation to another event; and thirdly, to study how time markers reveal the

concept of time in Thai. Since materials studied are drawn from the four periods: Sukhothai (SK) (1283-1350), Ayutthaya (AY) (1350-1767), Mid-Rattanakosin (RN) (1851-1910), and Modern Thai (MT), a historical study is therefore taken into account.

It will be assumed that materials of all four periods are phonologically more or less of the same dialect, that is, the Bangkok dialect. Following this assumption, the transcription of the materials of all four periods is based on the phonemic system of Bangkok Thai given at the end of this paper¹.

1. Structure of Thai deictic time markers

Comrie (1985) proposed three classes of time expressions: lexical items, lexically composite expressions and grammatical categories. Since in Thai, time is expressed lexically, the third class is not relevant here.

1.1 Lexical items as deictic time markers

By lexical item, I mean a one-word structure. Based on the data of the four periods, deictic time markers of one-word structure can be grouped into two types: monosyllabic and non-monosyllabic words. The monosyllabic time markers are few in number. They are nii45 (SK, AY, RN, MT) (this)² 'now', nan45 (SK, AY, RN, MT) (that) 'before', naa42 (SK, AY, RN, MT) (front) 'future', koon22 (SK, AY, RN, MT) (proceeding) 'before', mua42 (SK, AY, RN, MT) (point of time) 'when', dæm33 (AY, RN, MT) (origin) 'before'. Except for the last two which can occur independently, these mono-

syllabic time markers must co-occur with a preposition in a preposition phrase (see 1.2.2) or a noun in a noun phrase (see 1.2.1). Some of the preposition phrases developed into lexical time markers in later periods as discussed below. As can be seen, these monosyllabic time markers except for mua42 do not basically denote time. nii45, nan45 are demonstratives; naa42 is a noun denoting a body organ, a face; koon22 is an adverb meaning 'in front'.

Non-monosyllabic lexical time markers include bat22 nii45 'now' (SK, AY, RN, MT), mua42 koon22 'before' (SK, AY, RN, MT), tæ22 koon22 'before', tæ22 koon22 nii45 'before' (RN, MT), diaw24 nii45 'now' (RN, MT), phaay33 laŋ24 'later, time ahead' (AY, RN, MT), phaay33 naa42 'time ahead' (RN, MT), laŋ24 laŋ24 'recently' (MT). These lexical time markers either developed from noun phrases or preposition phrases.

from noun phrases:

- i) bat22 nii45 < bat22 'breath' nii45 'this'
- ii) mua42 koon22 < mua42 'point of time' koon22 'preceding period'
- iii) phaay33 laŋ24 < phaay33 'side' laŋ24 'back'
- iv) phaay33 naa42 < phaay33 'side' naa42 'front'
- v) laŋ24 laŋ24 < toun33 laŋ24 laŋ24 < toun33 laŋ24 < toun33 'portion' laŋ24 'back'

from preposition phrases:

- vi) tæ22 koon22 < tæ22 'from' koon22 'preceding period'

- vii) tɛɛ22 kɔɔn22 nii45 < tɛɛ22
 'from' kɔɔn22 'preceding
 period' nii45 'this'

Some observations should be made here. First, from the Sukhothai period until now there has been an increase of lexical time markers in the non-monosyllabic group. On the contrary, the mono-syllabic lexical time markers seem to be a closed class with members almost all of which do not occur independently. Secondly, some non-monosyllabic time markers are analyzed as phrases in the Sukhothai period and probably in the Ayutthaya period. They have become lexical words, no longer analyzable synchronically, in the latter two periods. These include bat22 nii45, mɯa42 kɔɔn22, and tɛɛ22 kɔɔn22. Thirdly, the noun phrases formed in the later periods show the use of nouns denoting a portion or a part as the head noun. These lexical time markers include phaay33 laŋ24 'in the future' with the head noun 'phaay33' meaning 'a side'; phaay33 naa42 'in the future' again with 'phaay33' meaning 'a side'; tɔɔn33 laŋ24 'afterwards' with the head noun 'tɔɔn33' meaning 'a portion'. Lastly, the reduplication in tɔɔn33 laŋ24 laŋ24 may illustrate that tɔɔn33 laŋ24 has not yet been finalized as a one-word time marker. laŋ24 laŋ24 which shows a further development from tɔɔn33 laŋ24 laŋ24, however occurs as a one-word time marker. (see also 1.2.1 b) Fourthly, the time markers given here usually denote a stretch of time except bat22 nii45 which means the present point of time. diaw24 nii45 may denote either a point of time or a period of time, i.e. the present time.

1.2 Lexical composites as deictic time markers

Lexical composite deictic time markers can be grouped into two types of construction: a noun phrase, and a preposition phrase. Each construction displays several patterns. But although some new patterns are added, what actually gives variety is the introduction of new lexical items in the slots of the patterns.

1.2.1 Noun phrase deictic time markers

Noun phrase deictic time markers in the data of the four periods illustrate three main patterns:

- a) temporal noun – demonstrative
 nii45/nan45
- b) temporal noun – spatial noun
 naa42/ laŋ24 – direction word
 pay33/maa33
- c) spatial noun – locative preposition – demonstrative pronouns
 nii45/nan45

a) Temporal noun – demonstrative nii45/nan45

- viii) mɯa42 nan45 'the past' (SK, AY, RN)
- ix) mɯa42 nii45 'the present' (SK, AY, RN)
- x) chɯa42 nii45 'this life time' (SK)
- xi) chuay42 nii45/nan45 'this/that period' (RN, MT)
- xii) tɔɔn33 nii45/nan45 'this/that moment' (MT)
- xiii) raʔ45yaʔ45 nii45/nan45 'the present/past period' (MT)

- xiv) khə33 naʔ22 nii45/nan45 'at present/that time' (AY, RT, MT)
- xv) wee33laa33 nii45/nan45 'the present/past time' (MT)

It can be seen that in the first slot, a variety of nouns occur. The data show that in the Sukhothai and Ayutthaya periods, only temporal nouns, *mua42* 'when', *chua42* 'life time', *khə33 naʔ22* 'while' are used in this slot whereas in the Rattanakosin and Modern Thai periods, words with spatial notions as a portion *təʔn33* or distance *raʔ45yaʔ45* are introduced. The first nouns except *mua42* usually denote a portion or a part in the stretch of time specified by *nii45/nan45*. The last example, *wee33laa33 nii45* (time-this) 'now' in Modern Thai illustrates a semantically indefinite temporal word which when modified by demonstrative *nii45* denotes a specific portion of time i.e. the present time.

mua42 is interpreted as a noun in the Sukhothai and Ayutthaya period because of the evidence such as *thuk45 mua42* 'every time' where *mua42* is apparently a noun. In *mua42 nan45/nii45* where *nii45* and *nan45* are demonstratives, *mua42 nii45/nan45* denote the present period and the past period respectively. Because *mua42* could be followed by a noun or a noun phrase as in *mua42 chua42 phəʔ42 kuu33* (the time - the life time-father-I) 'in my father's life time', it is easy for *mua42* to be grammaticalized into a preposition 'when' in later periods as in *mua42 wee33laa33 - peet22 - naa33liʔ45kaa33 - wan33 nii45* (MT) (when-time-eight-o'clock-today) 'at 8 o'clock today'.

Another observation must be made for *mua42*. In the Ayutthaya period there were a great number of occurrences of

mua42 followed by a verb phrase that ends with *nan45*, for example, *mua42 - rap45 praʔ22 thaʔn33 - ʔaa33 haʔn24 - nan45 - mii33 - khon33 - maa33 - duu33 - maak42* (when-eat-food-that-have-man-come-see-much) 'When eating, many people came to look at us'. Here it is likely that *mua42* was modified by a kind of verb nominal, with *nan45* a demonstrative adjective marking the construction a noun phrase.

b) Temporal noun – spatial noun *naa42/laŋ24 – (pay33/maa33)*

- xvi) *mua42 naa42* 'the time ahead, the future' (SK, RN)
- xvii) *təʔn33 laŋ24* 'recently' (MT)
- xviii) *təʔn33 laŋ24 laŋ24* 'recently' (MT)
- xix) *raʔ45yaʔ45 laŋ24* 'in the immediate past' (MT)
- xx) *təʔn33 laŋ24 maa33* 'in the recent past to now' (MT)
- xxi) *khaaŋ42 naa42 pay33* 'in the future' (MT)

This pattern appears most in Modern Thai and the lexical composites in this pattern have certain restrictions. One cannot have **təʔn33 naa42*, **raʔ45yaʔ45 naa42* or *khaaŋ42 laŋ24* to convey temporal meaning. Because of the restriction, *təʔn33 laŋ24*, *khaaŋ42 naa42*, *raʔ45yaʔ45 laŋ24* are likely to become compound words in later time. In fact, *phaay33 laŋ24*, first appeared in the Ayutthaya period, was most probably a noun phrase which has become in Modern Thai a non-monosyllabic lexical time marker (see 1.1.) This use of *naa42* 'front' and *laŋ24* 'back' with spatial

notions illustrate the front/back orientation as will be discussed later in section 3.

tɔɔn33 laŋ24 laŋ24 also found only in Modern Thai shows an extension of the construction where the spatial word is reduplicated. From this reduplicated expression, laŋ24 laŋ24 ‘recently’, a lexical time marker is derived.

In the Rattanakosin period maa33 ‘come’ and pay33 ‘go’ appears after the non-monosyllabic temporal nouns such as phaay33 laŋ24 maa33 (recent past-come) ‘later (in the past)’. From then, temporal expressions meaning a period of time may be followed by pay33 or maa33 with temporal relation to the present time, if not otherwise specified (see Section 3); thus we have khaaŋ42 naa42 pay33 (future – go) ‘in the future’.

c) Spatial noun – locative preposition – demonstrative pronoun nii45/nan45

Deictic time markers of this type are found only in Modern Thai data. These are:

- xxii) laŋ24 caak22 nan45
(back-from-that)
‘afterwards’
- xxiii) laŋ24 caak22 nii45 (pay33)
(back-from-this-go)
‘from now (on)’
- xxiv) kɔɔn22 naa42 nii45
(preceding time-front-this)
‘before now’
- xxv) kɔɔn22 naa42 nan45
(preceding time-front-that)
‘before that time’

These time markers are best explained by means of metaphor i.e. the back of the referential time, nan45 or the front of the referential time, nii45. It should be pointed out here that there are prepositions laŋ24 caak22 ‘after’ and kɔɔn22 ‘before’ used in Modern Thai, for example:

- 1) laŋ24 caak22 - soŋ24
khraam33 - look42 - khraŋ45 -
thii42 - soŋ24
(after-war-world-time-two)
‘After World War II’
- 2) kɔɔn22 naa42 - ?u?22 bat22
ti?22 heet22 - khraŋ45 -
nan45
(before-accident-time-that)
‘Before that accident’

Considering the structure of the deictic time markers proposed above, i.e. spatial noun – locative preposition – demonstrative pronouns nii45/nan45, it is reasonable to say that the prepositions are derived from the temporal noun phrases rather than the other way around; general considerations of grammaticalization paths would also suggest this.

1.2.2 Preposition phrase deictic time markers

By preposition phrase deictic time markers, I mean the preposition phrases that occur as composite units functioning as time adverbials for example,

- 3) tɛɛ22 nan45 maa33 - khaw24 -
kɔ?42 - may22 - maa33 - ?iik22
- lɛəy33
(since then-he-not-come-again
-not any more-then)
‘Since then he never came again.’

Preposition phrase deictic time markers usually contain nii45 'this' or nan45 'that' which are analyzed here as demonstrative pronouns. A few preposition phrase deictic time markers contain naa42, a noun meaning 'face' or 'the front part'. The preposition phrase deictic time marker in the Sukhothai period illustrated a particular pair of preposition: tee22 (from)...maa33 (to) as in tee22 nii45 maa33 naa42 'from now till the time ahead'. In the Ayutthaya period, this preposition phrase has become tee22 nii45 maa42 naa42 with a change of tone in maa33. Following are some preposition phrase time markers that appear in the last two periods studied.

- xxvi) tee22 nii45 pay33
'from now on' (RN, MT)
(from-this-go)
- xxvii) tee22 nan45 maa33
(from-that-come)
'from that time, since then' (RN, MT)
- xxviii) nay33 wee33 laa33 diaw33
kan33
(in-time-one-together)
'at the same time' (RN, MT)
- xxix) taŋ42 tee22 nan45 maa33
(from - that - come)
'since then' (RN, MT)
- xxx) nay33 maj42 chaa45
(in - not - slow)
'soon' (MT)
- xxxi) taŋ42 tee22 nii45 tao22 pay33
(since - this - connect - time)
'from this time' (MT)

As can be seen, most time markers above contain the initial boundary or the source preposition tee22 or taŋ42 tee22. The time marker nay33 may42 chaa45

first appeared in Modern Thai seems to be a loan translation from an English expression 'in no time'.

1.3 Deictic temporal prepositions and subordinators

Most deictic time markers discussed above contain the words nii45 'this' or nan45 'that' which serve as the temporal referential point for the temporal interpretation. nii45 'this' is interpreted as coinciding with the present time. nan45 'that' refers to the time mentioned earlier in the text and usually it is the time before the present time. Some time markers such as phaay33 laŋ24, maa42 koon22, tee22 koon22 which do not contain the words nii45 and nan45, unless specified otherwise, refer to the location time of the utterance as the temporal referential point. The deictic temporal prepositions and subordinators are different. They mark the noun or noun phrase, in case of preposition, or the subordinating clauses in case of subordinators, as the temporal referential point. For example, in the deictic temporal preposition thaŋ24 diaw24 nii45 'until now' thaŋ24, marks diaw24 nii45 as the temporal terminal point.

1.3.1 Deictic temporal prepositions

From the Sukhothai period until the modern time, there are both inherent temporal prepositions such as

- xxxii) maa42 'when' (SK, AY, RN, MT)
- xxxiii) taŋ42 tee22 'since' (RN, MT)
- xxxiv) con33 'till' (RN, MT)

and grammaticalized temporal prepositions such as

xxxv) tɛɛ22 'since' (RN, MT)

xxxvi) naj33 'in' (AY, RN, MT)

xxxvii) caak22 'from' (MT)

xxxviii) thɯŋ24 'to, till' (MT)

thɯŋ24 and caak22 are inherent verbs meaning 'to arrive' and 'to depart'. They have been grammaticalized into locative prepositions 'to' and 'from' respectively. As derived temporal markers, they convey the meanings of terminal point and initial points of time respectively. naj33 'in', a locative preposition, grammaticalized from a noun, is similarly used as a temporal preposition. tɛɛ22 is most probably grammaticalized from a borrowed Burmese verb meaning 'to begin'.

1.3.2 Deictic temporal subordinators

As has been mentioned, temporal subordinators mark the subordinating clause immediately after them the temporal reference to the event in the main clause of a complex sentence. From the data thirteen temporal subordinators are seen:

xxxix) mɯa42 'when'
SK AY RN MT

xl) tiam33 tɛɛ22 'since'
SK - - -

xli) khran45 'when'
- AY RN -

xlii) kwaa22 'till'
- AY RN MT

xliii) con33 'until'
- AY RN MT

xliv) phɔɔ33 'when, as soon as'
- AY RN MT

xliv) con33 kwaa22 'until'
- - RN MT

xlvi) khə33 naʔ22 'when, while'
- - RN MT

xlvi) kɔɔn22 'before'
- - RN MT

xlvi) laŋ24 caak22 'after'
- - - MT

xlix) kɔɔn22 naa42 'before'
- - - MT

l) wee33 laa33 'when'
- - - MT

li) tɔɔn33 'when'
- - - MT

As can be seen from the list above, only mɯa42 has been used as a temporal subordinator until now since Sukhothai while tiam33 tɛɛ22 and khran45 are now obsolete. Besides, several subordinators are synonyms, for example mɯa42, khran45, wee33 laa33, tɔɔn33 all mean 'when'. Moreover, several temporal subordinators are made up from a combination of two synonymous words such as con33 kwaa22 both of which mean 'till' or they are derived from noun phrase such as laŋ24 caak22 from laŋ24 caak22 nan45, kɔɔn22 naa42 from kɔɔn22 naa42 nan45. In Modern Thai, a temporal noun as wee33 laa33 'time' and tɔɔn33 'period of time' are also used as temporal subordinators. Below are examples of the temporal subordinating clauses in complex sentences:

- 4) tɔn33 - khaw24 - hok22 lom45
 - chan24 - may42 - yuu22 -
 baan42
 (time-he-fall-I-not-stay-home)
 'When he fell, I was not home.'

- 5) mua42 - kuu33 - khun42 - yay22
 - day42 - sip22 kaaw42 -
 khaw42,...
 (when-I-up-big-get-nineteen-
 year,...)
 'When I was nineteen years
 old,...'

2. Semantic types of deictic time markers

In order to locate an event in a time line, a temporal point of reference is needed. The deictic temporal point of reference linguists usually mention is the zero point of reference (Comrie, 1985; Lyons, 1995) which coincides with the present moment (Comrie, 1985) or the locution time of utterance (Lyons, 1995). However, the reference point needed not always have to coincide with the locution time of utterance, it can be another event identifiable in a context either in an adjacent phrase or clause or in a larger text. In this article two types of temporal reference point are also proposed: the locution time of utterance or in this paper the time when the text was written, and the text time reference which in this paper can be found in the subordinating clause or phrase or assumed to be in the unseen texts. Comrie (1985) called the first type of temporal reference the absolute time reference and the second, the relative time reference. Comrie's terms will be adopted because they are generally known but from time to time, the terms 'text time reference' will be used for the latter type of reference.

In discussing semantic types of temporal relations or connections between the main clause and its subordinating clause in English, Givon (1993) mentioned altogether eight types of relations. They are given here with an example of the temporal subordinator which conveys the semantic type in the blanket: precedence (before), subsequence (after), simultaneity (while), point coincidence (as), terminal boundary (till), initial boundary (since), and intermediacy (between). He also mentioned 'when' as a generic time subordinator which can convey several semantic relations, for example, 'when' can indicate subsequence as well as simultaneity:

When he left home, she felt ill.
(Subsequence)

When she walked back home, it started to snow. (Simultaneity)

We will use these terms with some modifications. First, in connection with the terms 'precedence' and 'subsequence', we will use Kortmann's (1997) terms 'posteriority' and 'anteriority' respectively instead. The reason is that the two terms given by Kortmann are consistent with the other terms in the set in the manner that the semantic types now are all marked at the temporal expressions. Secondly, we will include 'point coincidence', 'intermediacy' and 'simultaneity' under the same term 'simultaneity'.

Thus, in discussing semantic types of the deictic time markers either as absolute time reference or relative time reference, we will be referring to the following semantic types as follows: anteriority, posteriority, simultaneity, terminal boundary, initial boundary and

generic 'when'. These terms are primarily Givón's terms (1995) with some terms introduced by Kortmann (1997).

2.1 Absolute time reference

As mentioned above, when the temporal point of reference coincides with the present moment or relative to the present moment, we have the absolute time reference. In Thai, this is usually displayed by the inclusion of *nii45* in the time markers. However, some of the time markers in this type do not have *nii45*, especially those in the anteriority sub-type. Five sub-types are identified: simultaneity, anteriority, initial boundary, posteriority and terminal boundary.

2.1.1 Simultaneity

When the time of the time markers is the same time as that expressed in the locution time, we have the simultaneity semantic type, for example in

- 6) bat22 *nii45* - phom24 - khəə24 -
pəət22 - kaan33 praʔ22 chum33
(now - I - request - open -
meeting)
'Now I would like to declare
open the meeting.'

the event 'open the meeting' occurs at the time bat22 *nii45* 'now' which coincides with the locution time. Following is the time markers in this sub-type with the indication of the periods they are found.

- lii) bat22 *nii45*
SK AY RN MT
- liii) chua42 *nii45*
SK - - -

- liv) mua42 *nii45*
SK AY RN -
- lv) mua42 lun33 *nii45*
SK AY - -
- lvi) diaw24 *nii45*
- - RN MT
- lvii) tɔɔn33 *nii45*
- - RN MT
- lviii) chuaŋ42 *nii45*
- - RN MT
- lix) wee33 laa33 *nii45*
- - RN MT
- lx) khə33 naʔ22 *nii45*
- - RN MT
- lxi) pat22 cu33 ban33 *nii45*
- - - MT

It can be seen that some of the time markers in the simultaneity sub-type are now obsolete and many are introduced in the two latter periods. Two sub-types can be distinguished in simultaneity. One is 'the point of time' sub-type. The other is 'the period of time' sub-type. In the Sukhothai period, bat22 *nii45* seemed to indicate the second sub-type. It has been changed to the first sub-type in Modern Thai. diaw24 *nii45* can be in either sub-type whereas the rest of the markers in the above list are in the second sub-type.

2.1.2 Posteriority

When the event in the sentence occurred before the locution time we have the posteriority type, for example in,

2.2.1 Simultaneity

Some examples are given here:

- 13) *nay33 - wee33 laa33 - nan45 -*
 may42 - mii33 - khray33 - yuu22
 - baan42
 (in-time-that-not-have-who-
 stay-home)
 'At that time, no one was
 home.'
- 14) *khaw24 - thuuk22 - yij33 -*
 raʔ45 waan22 - khap22 - rot45
 - pay33 - hua24 hin24
 (he-touch-shoot-between-
 drive-car-go-Huahin)
 'He was shot while he was
 driving to Huahin.'
- lxxviii) *nay33 wee33 laa33 nan45* 'at
 that time'
 - - - MT
- lxxix) *raʔ45 waan22 nan45* 'during
 that time'
 - - RN MT
- lxxx) *chuan42 nan45* 'in that period of
 time'
 - - - MT
- lxxxi) *khə33 naʔ22 nan45* 'during that
 time'
 - - - MT
- lxxxii) *khə33 naʔ22* (subordinator)
 'while'
 - - RN MT
- lxxxiii) *phə33* (subordinator) 'as soon
 as'
 - - RN MT
- lxxxiv) *raʔ45 waan22* (subordinator)
 'while, as soon as'
 - - - MT

In the first example which is an example sentence, the event, *yuu22 baan42* 'stay home' occurred at the same time as *nan45* 'that' serving as a relative time reference. In the second sentence, the event in the subordinating clause with *raʔ45 waan22* as a subordinator occurs at the same time as the event in the main clause. In other words, the subordinating clause serves as the reference temporal point. Again, some time markers indicate a point of time (*phə33*, *khə33 naʔ22*) while others mark the stretch of time (*nay33 wee33 laa33 nan45*, *raʔ45 waan22*). The relative reference time markers of the simultaneity type were hardly found in the first two periods whereas in the latter two periods they are plenty.

2.2.2 Posteriority

- 15) *nat45 - phop45 - nay33 - raa33*
 - kə33n22 - raa33 - ʔə33k22
 (appointment-meet-in-ship-
 before-ship-out)
 (We) made an appointment to
 meet in the ship before it left
 the port.
- lxxxv) *kə33n22 naa42 nan45* 'before that
 time'
 - - - MT
- lxxxvi) *kə33n22 naa42 nan45 khən42*
 pay33 'before that time'
 - - - MT
- lxxxvii) *kə33n22* (subordinator) 'before'
 - AY RN MT

The posteriority time markers listed above indicate that the temporal relative reference point *nan45* occurred in the past after, or in subsequence to the event in the simple sentence. Similarly, the event in the subordinating clause

with $k\ddot{o}n22$ as the subordinator occurred post or after the event in the main clause. In Givon's terms, the event in the main clause preceded the temporal relative reference $nan45$.

- 16) $k\ddot{o}n22$ - $naa42$ - $nan45$ - $chan24$
 - $yu22$ - $chian33$ $may22$
 (before-that-I-stay-Chiangmai)
 'Before (that) I stay in Chiangmai.'

Between $k\ddot{o}n22$ $naa42$ $nan45$ and $k\ddot{o}n22$ $naa42$ $nan45$ $kh\ddot{u}n42$ $pay33$, the latter indicates the event deeper in time before the relative reference $nan45$. (see Section 3)

2.2.3 Anteriority

- 17) $khaw24$ - $klap22$ - $baan42$ -
 $lan24$ - $caak22$ - $s\ddot{o}p22$ - $set22$
 (he-return-home-after-examination-finish)
 'He went back home after he finished with his exam.'

lxxxviii) $lan24$ $caak22$ $nan45$ 'after that'
 - - RN MT

lxxxix) $lan24$ $caak22$ $nan45$ $maa33$
 'after that' (past)
 - - - MT

xc) $lan24$ $caak22$ $nan45$ $pay33$ 'after that' (future)
 - - - MT

xc) $t\ddot{o}22$ $maa33$ $phaay33$ $lan24$
 'after that, afterwards'
 - - - MT

xcii) $lan24$ $caak22$ (subordinator)
 'after'
 - - RN MT

Although, $nan45$ marks the time anterior to the event involved, it does not have to only refer to the anterior time in the past but it can be used to refer to the time ahead in the future. In other words, it only marks subsequent event from $nan45$ whether or not $nan45$ refers to the past or future event:

- 18) ($raw33$ - $ca?22$ - $pay33$ - $th\ddot{u}n24$
 - $room33$ - $wan33$ - $can33$ -
 $naa42$) $lan24$ - $caak22$ - $nan45$ -
 $?iik22$ - $s\ddot{o}n24$ - $wan33$ - $c\ddot{u}n33$
 - $ca?22$ - $paj33$ - $paa33$ $riit42$
 (we-will-go-arrive-Rome-Monday-next) back-from-that-more-two-day-so-will-go-Paris
 '(We will arrive in Rome next Monday.) Two days after that, we will go to Paris.'

- 19) $lan24$ - $caak22$ - $nan45$ - $maa33$
 - $khaw24$ - $kh\ddot{e}n24$ $r\ddot{e}n33$ -
 $kh\ddot{u}n42$
 (back-from-that-come-he-strong-up)
 'After that time/afterwards he became stronger.'

Sentence 18 and 19 show that $nan45$ 'that' can be a relative time reference before the zero point or after the zero point, depending on the context. If the context is not specified, the common interpretation would be that $nan45$ 'that' indicates the time before the zero point and if specified, $nan45$ refers to the point of time in the future. It must be observed that $pay33$ 'go' and $maa33$ 'come' help mark the time in the future and the time in the past respectively.

2.2.4 Initial boundary

Initial boundary subordinators found in the data include $tiam33$ $t\ddot{e}22$ 'since' which was used only in the Sukhothai

period, and *taŋ42 tɛɛ22* which is used in the later periods, for example:

- 20) *phii42 - phua24 - phuu42 -
ʔaay42 - taaj33 - caak22 -
phua24 - tiam33 tɛɛ22 - yaŋ -
lek45*
(brother-we-man-eldest-die-
from-us-since-still-small)
'Our eldest brother died when
he was small.'

- 21) *taŋ42 - tɛɛ22 - khaw24 - maa33
- thəə33 - kəʔ42 - dii33 - khən42*
(since-he-come-she-then-good-
up)
'Since he came, she has
become better.'

Besides subordinators, a preposition phrase *tɛɛ22 nan45* is found marking an initial boundary.

- 22) *tɛɛ22 - nan45 - maa33 - thuk45
- khon33 - kəʔ42 - mii33 -
khwaam33 suk22*
(from-that-come-every-man-
then-have-happiness)
'From that time on, everyone
was happy.'

2.2.5 Terminal boundary

This semantic type is found only in a complex sentence marking the temporal relations between the events in the main clause and a subordinating clause. The subordinating clause conveys the terminal boundary, for example:

- 23) *thon33 - yuu22 - kwaa22 - caʔ22
- sin42 - ʔaa33 yuʔ45 (AY)*
(endure-stay-till-finish-age)
'(They have to) endure until
their lives end.'

- xciii) *kwaa22 'till'*
SK AY - -

- xciv) *con33 kwaa22 'till'*
- - RN MT

- xcv) *con33 'till'*
- - - MT

In Modern Thai, *kwaa22* does not convey the terminal boundary but posteriority, for example:

- 24) *kwaa22 - khaw24 - caʔ22 -
klap22 - luuk42 - kəʔ42 - lap22
- lɛɛw45 (MT)*
(before-he-return-child-then-
asleep-already)
'Before he returned, his child
has already fallen asleep.'

2.2.6 The generic When

mua42 can convey several temporal meanings: simultaneity, anteriority, posteriority, for example:

Simultaneity:

- 25) *mua42 - chua42 - phəə42 -
kuu33 - kuu33 - bam33 rəə33 -
kɛɛ22 - phəə42 - kuu33 (SK)*
(when-life-time-father-I-I-
please-to-father-I)
'During my father's life time, I
pleased him.'

Anteriority:

- 26) *mua42 - khaw24 - taay33 -
lon33, baan42 - kəʔ42 - thuuk22
- khaay24 (MT)*
(when-he-die-down-house-
then-touch-sell)
'When/after he passed away,
the house was sold.'

Posteriority:

- 27) maa42 - thaa33 - klap22 - maa33
- khaw24 - taay33 - pay33 -
lee45
(when-she-return-come-he-die-
go- already)
'When she returned, he already
passed away.'

In fact, there is no need to have distinct subordinator for the above semantic types. The context itself indicates which event occurred before or after or at the same time. Probably because of that, temporal subordinators were few in the earlier periods.

Besides maa42, the Ayutthaya period displayed khran45, and phoo33, both of which can also denote several semantic relations. phoo33 is still used in Modern Thai whereas khran45 is now obsolete.

3. Deictic markers and concept of time

In this section deictic time markers will be studied in terms of metaphors to see how time is conceived by the Thais. Fillmore (1977) mentioned two types of time metaphor in English in connection with time deixis. The first is the moving time metaphor in which time is the moving object. The other is what I call the standing time metaphor in which the time is a static object. The study of deictic time markers in Thai also shows these two types of metaphors with different orientations.

3.1 The moving time metaphor

When the following set of deictic time markers are examined, two groups can be distinguished on the basis of the words koon22 'preceding' and lan24 'behind, back':

- xcvi) tee22 koon22 'before'
xcvii) maa42 koon22 'before'
xcviii) wan33 koon22 'the previous day(s)'
xcix) phaay33 lan24 'future'
C) wan33 lan24 'future'

Considering that all deictic time markers above with koon22 convey the past time or the preceding time and all deictic markers with lan24 convey the future or the time to come, it is reasonable to think of time as moving object. If a speaker stands with his face in the same direction as the a moving time and the time moves from behind his back, the time that he sees must be that which passed him and preceded him. The time behind his back is unseen, he can refer to it as the time behind: phaay33 lan24 (side-back), wan33 lan24 (day-back). Because the time has yet to pass him, it is in the future. The following diagram illustrates the moving time and the speaker orientation.

- ci) tee22 koon22 'before'
cii) maa42 koon22 'before'
ciii) wan33 koon22 'the previous day(s)'
civ) phaay33 lan24 'future'
cv) wan33 lan24 'future'

3.3 The time layer metaphor

So far we have the horizontal axis of time, which gives us the picture of a sequence of events. However, we also conceive time in a vertical line with the previous the 'above' the present time.

A temporal expression in Thai reflects this concept of time metaphor: *khun22 - naa42 - nan45 - khun42 - pay33* (preceding-that-up-go) 'Before the past period, the remote past period'. The vertical axis reflects the layers of the periods and again *pay33* is used as the time far away from the speaker.

If we look at the list of time markers, we can see that we have more expressions for the present and the past. This may reveal that a Thai speaker seems familiar with the present and the past and therefore, has more temporal expressions to refer to. With less expression for the future, it probably means that he has no experience with the future and thus has no necessity to refer to them in details. It is also apparent that the concepts of time revealed by the moving time metaphor and the standing time metaphor serve as the basis for the coining of new deictic temporal expressions in modern Thai.

4. Conclusion

In conclusion, the study of time markers from the four periods show that time markers in Modern Thai are larger in number than those in the other periods. In fact, there was a sharp increase already in the Rattanakosin period. The time markers in the two latter periods especially in Modern Thai show not only more time markers but also the longer time markers. The long time markers are either doublets such as *con33 kwaa22* 'until' or phrases such as *tau22 pay33 khaan42 naa42* 'in the future'. Phrasal time markers can be either noun phrases such as *lan24 caak22 nan45*

'afterwards' or preposition phrases such as *taŋ42 tɛɛ22 nan45 maa33* 'from that time, since then'

It is seen that in the Sukhothai period demonstrative pronouns *nii45* and *nan45* and the noun meaning 'face' have been extended to give temporal meanings. From the Ayutthaya period nouns denoting a distance have been used in temporal expressions. In Modern Thai, grammaticalized prepositions from verbs such as *caak22* 'from', *thəŋ24* 'to' are used also as time markers. Thus it can be said that words are added more and more to the time marker lexicon and only few words are obsolete. As a result, synonyms in time markers are not rare. For 'now', one may have *bat22 nii45*, *diaw24 nii45*, *tɔɔn33 nii45*, *raʔ45 ya45 nii45*, *wee33 laa33 nii45*; for future, one may have *wan33 laŋ24*, *wan33 naa24*, *phaay33 naa42*, *khaaŋ24 naa24 tɔɔ22 pay33*, *tɔɔ22 pay33 khaaŋ24 naa24*, *tɛɛ22 nii45 pay33*.

How time is conceived in modern Thai is not different from that of the Sukhothai period, that is, time is conceived as an entity moving from the back of a speaker or moving facing him; or as a stand still entity with the referential point *nii45* 'this' and *nan45* 'that'. However, elaborations of these concepts are apparent. One may now refer to the event as behind or in front of the referential point and close to or far from the zero point.

It is interesting to observe that *mua42* equivalent to 'when' in English can convey several semantic temporal types. Moreover, it can be used to mark not only time but conditioning or reason such as in

28) *mua42 - khaw24 - may42 - thəŋ42 naŋ24 suu24 - khaw24 - kɔʔ42 - khəŋ33 - sɔɔp22 - tok22*

(since/if-he-not-read-book-he-then-fail-examination-fall)

'Since he does not review his lessons, he will probably fail the examination.'

Although this is interesting to probe into, it is far beyond the scope of this paper.

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¹ The Modern Thai phonemic system given here is for a broad transcription used in this paper.

Consonants:

p	t	c	k	ʔ
ph	th	ch	kh	
b	d			
f	s			h
m	n		ŋ	
	l	r		
w		y		

Vowels:

i	ii	u	uu	o	oo
e	ee	ə	əə	ɔ	ɔɔ
ɛ	ɛɛ	a	aa	ɔ	ɔɔ

Diphthongs:

ia	ua	ua
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Tones:

24	33	22	42	45
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These tones correspond to the following Proto-Tai tones respectively: A1H, A1M-A2, B1-DS1-DL1, B2-C1-DL2, C2-DS2

² Inherent meaning of the word is given in bracket, the temporal meaning in inverted commas is secondary.

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