A HISTORICAL STUDY OF TIME MARKERS IN 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 time deixis include both calendric expressions such as 8 o’clock, to-day, 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-Ratanakosin (RN) (1851-1910), and Modern Thai (MT), a historical study is therefore taken into account.

It will be assumed that the 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 paper.

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 niti\textsuperscript{45} (SK, AY, RN, MT) (this)\textsuperscript{2} ‘now’, nan\textsuperscript{45} (SK, AY, RN, MT) (that) ‘before’, naa\textsuperscript{12} (SK, AY, RN, MT) (here) ‘now’, and nan\textsuperscript{45} (SK, AY, RN, MT) (there) ‘before’.

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RN, MT) (front) ‘future’, *)(22 (SK, AY, RN, MT) (preceding) ‘before’, *)(42 (SK, AY, RN, MT) (point of time) ‘when’, *)(33 (AY, RN, MT) (origin) ‘before’. Except for the last two which can occur independently, these monosyllabic 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 *)(42 do not basically denote time. *)(45, )(55 are demonstratives; )(42 is a noun denoting a body organ, a face; *)(22 is an adverb meaning ‘in front’.

Non-monosyllabic lexical time markers include bat22 *)(45 ‘now’ (SK, AY, RN, MT), *)(42 *)(22 ‘before’ (SK, AY, RN, MT), tee22 *)(22 ‘before’ (SK, AY, RN, MT), tee22 *)(22 *)(45 ‘before’ (RN, MT), diaw24 *)(45 ‘now’ (RN, MT), phaa33 *)(24 ‘later, time ahead’ (AY, RN, MT), phaa33 )(42 ‘time ahead’ (RN, MT), *)(24 *)(24 (MT) ‘recently’. These lexical time markers either developed from noun phrases or preposition phrases.

From noun phrases:

i) bat22 *)(45 < bat22 ‘breath’ *)(45 ‘this’

ii) *)(42 *)(22 < *)(42 ‘point of time’ *)(22 ‘preceding period’

iii) phaa33 *)(24 < phaa33 ‘side’ *)(24 ‘back’

iv) phaa33 )(42 < phaa33 ‘side’ )(42 ‘front’

v) *)(24 *)(24 < *)(33 *)(24 *)(24 < *)(33 *)(24 < *)(33 ‘portion’

vi) tee22 *)(22 < tee22 ‘from’ *)(22 ‘preceding period’

vii) tee22 *)(22 *)(45 < tee22 ‘from’ *)(22 ‘preceding period’ *)(45 ‘this’

From preposition phrases:

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. By way of contrast, the monosyllabic lexical time markers seem to be a closed class with members almost all of which do not occur independently. Secondly, some non-monosyllabic 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 *)(45, *)(42 *)(22 and tee22 *)(22. 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 phaa33 *)(24 ‘in the future’ with the head noun ‘phaa33’ meaning ‘a side’; phaa33 )(42 ‘in the future’ again with ‘phaa33’ meaning ‘a side’; *)(33 *)(24 ‘afterwards’ with the head noun *)(33 meaning ‘a portion’. Lastly, the reduplication in *)(33 *)(24 *)(24 may illustrate that *)(33 *)(24 has not yet been finalized as a one-word time marker. *)(24 *)(24 which shows a further development from *)(33 *)(24 *)(24, 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 *)(45 which means the present point of time. diaw24 )(45 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 prepositional 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 nii\textsuperscript{45}/nan\textsuperscript{45}
b) temporal noun – spatial noun naa\textsuperscript{42}/laa\textsuperscript{24} – direction word pay\textsuperscript{33}/maa\textsuperscript{33}
c) spatial noun – locative preposition - demonstrative pronouns nii\textsuperscript{45}/nan\textsuperscript{45}

a) Temporal noun - demonstrative nii\textsuperscript{45}/nan\textsuperscript{45}

\begin{itemize}
  \item[viii)] mua\textsuperscript{42} nan\textsuperscript{45} \quad \text{‘the past’ (SK, AY, RN)}
  \item[ix)] chua\textsuperscript{42} nii\textsuperscript{45} \quad \text{‘the present’ (SK, AY, RN)}
  \item[x)] chua\textsuperscript{42} nii\textsuperscript{45} \quad \text{‘this life time’ (SK)}
  \item[xi)] chua\textsuperscript{42} nii\textsuperscript{45}/nan\textsuperscript{45} \quad \text{‘this/that period’ (RN, MT)}
  \item[xii)] tcoon\textsuperscript{33} nii\textsuperscript{45}/nan\textsuperscript{45} \quad \text{‘this/that moment’ (MT)}
  \item[xiii)] ra\textsuperscript{45} yai\textsuperscript{45} nii\textsuperscript{45}/nan\textsuperscript{45} \quad \text{‘the present/past period’ (MT)}
  \item[xiv)] khoo\textsuperscript{33} naa\textsuperscript{22} nii\textsuperscript{45}/nan\textsuperscript{45} \quad \text{‘at present/at that time’ (AY, RN, MT)}
  \item[xv)] wee\textsuperscript{33} laa\textsuperscript{33} nii\textsuperscript{45}/nan\textsuperscript{45} \quad \text{‘the present/past time’ (MT)}
\end{itemize}

It can be seen that in the first slot, a variety of nouns occur. The data show that in the Sukhothai and Ayuthaya periods, only temporal nouns, mua\textsuperscript{42} ‘when’, chua\textsuperscript{42} ‘life time’, khoo\textsuperscript{33} naa\textsuperscript{22} ‘while’ are used in this slot whereas in the Ratanakosin and Modern Thai periods, words with spatial notions as a portion tcoon\textsuperscript{33} or distance ra\textsuperscript{45} yai\textsuperscript{45} are introduced. The first nouns except mua\textsuperscript{42} usually denote a portion or a part in the stretch of time specified by nii\textsuperscript{45}/nan\textsuperscript{45}. The last example, wee\textsuperscript{33} laa\textsuperscript{33} nii\textsuperscript{45} (time-this) ‘now’ in Modern Thai illustrates a semantically indefinite temporal word which when modified by demonstrative nii\textsuperscript{45} denotes a specific portion of time i.e. the present time.

mua\textsuperscript{42} is interpreted as a noun in the Sukhothai period and Ayuthaya because of the evidence such as thuk\textsuperscript{45} mua\textsuperscript{42} ‘every time’ where mua\textsuperscript{42} is apparently a noun. (In mua\textsuperscript{42} nan\textsuperscript{45} nii\textsuperscript{45}/nan\textsuperscript{45} where nii\textsuperscript{45} and nan\textsuperscript{45} are demonstratives, mua\textsuperscript{42} nan\textsuperscript{45} nii\textsuperscript{45} denote the present period and the past period respectively. Because mua\textsuperscript{42} could be followed by a noun or a noun phrase as in mua\textsuperscript{42} chua\textsuperscript{42} pho\textsuperscript{42} kuu\textsuperscript{33} (the time - the life time - father - I) ‘in my father’s life time’, it is easy for mua\textsuperscript{42} to be grammaticalized into a preposition ‘when’ in later periods as in mua\textsuperscript{42} wee\textsuperscript{33} laa\textsuperscript{33} - peet\textsuperscript{22} - naa\textsuperscript{33} lii\textsuperscript{45} kaa\textsuperscript{33} - wan\textsuperscript{33} nii\textsuperscript{45} (MT) (when - time - eight - o’clock - today) ‘at 8 o’clock today’.

Another observation must be made for mua\textsuperscript{42}. In the Ayuthaya period there were a great number of occurrences of mua\textsuperscript{42} followed by a verb phrase that ends with nan\textsuperscript{45}, for example, mua\textsuperscript{42} rap\textsuperscript{45} pra\textsuperscript{22} than\textsuperscript{33} - ?aa\textsuperscript{33} haan\textsuperscript{24} - nan\textsuperscript{45} - nii\textsuperscript{33} - khon\textsuperscript{33} - maa\textsuperscript{33} - duu\textsuperscript{33} - maak\textsuperscript{42} (when - eat - food - that - have - man - come - see - much) ‘When eating, many people came to look at us). Here it is likely that mua\textsuperscript{42} was modified by a kind of
verb nominal, with nan\textsuperscript{45} a demonstrative adjective marking the construction a noun phrase.

\textbf{b) Temporal noun - spatial noun naa\textsuperscript{42}/laŋ\textsuperscript{24} - (pay\textsuperscript{33}/maa\textsuperscript{33})}

xvi) mua\textsuperscript{42} naa\textsuperscript{42} ‘the time ahead, the future’ (SK, RN)
xvii) tcoon\textsuperscript{33} laŋ\textsuperscript{24} ‘recently’ (MT)
xviii) tcoon\textsuperscript{33} laŋ\textsuperscript{24} laŋ\textsuperscript{24} ‘recently’ (MT)
xix) raʔ\textsuperscript{45} yaʔ\textsuperscript{45} laŋ\textsuperscript{24} ‘in the immediate past’ (MT)
x) tcoon\textsuperscript{33} laŋ\textsuperscript{24} maa\textsuperscript{33} ‘in the recent past to now’ (MT)
xx) khaañ\textsuperscript{42} naa\textsuperscript{42} pay\textsuperscript{33} ‘in the future’ (MT)

This pattern appears most in Modern Thai and the lexical composites in this pattern have certain restrictions. One cannot have *tcoon\textsuperscript{33} naa\textsuperscript{42}, *raʔ\textsuperscript{45} yaʔ\textsuperscript{45} naa\textsuperscript{42} or *khaañ\textsuperscript{42} laŋ\textsuperscript{24} to convey temporal meaning. Because of the restriction, tcoon\textsuperscript{33} laŋ\textsuperscript{24}, khaañ\textsuperscript{42} naa\textsuperscript{42}, raʔ\textsuperscript{45} yaʔ\textsuperscript{45} laŋ\textsuperscript{24} are likely to become compound words in later time. In fact, phaay\textsuperscript{33} laŋ\textsuperscript{24}, which 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). The use of naa\textsuperscript{42} ‘front’ and laŋ\textsuperscript{24} ‘back’ with spatial notions illustrate the front/back orientation as will be discussed later in section 3.

tcoon\textsuperscript{33} laŋ\textsuperscript{24} laŋ\textsuperscript{24} also found only in Modern Thai shows an extension of the construction where the spatial word is reduplicated. From this reduplicated expression, laŋ\textsuperscript{24} laŋ\textsuperscript{24} ‘recently’, a lexical time marker is derived.

In the Ratanakosin period maa\textsuperscript{33} ‘come’ and pay\textsuperscript{33} ‘go’ appeared after the non-monosyllabic temporal nouns such as phaay\textsuperscript{33} laŋ\textsuperscript{24} maa\textsuperscript{33} (recent past come) ‘later (in the past)’. From then, temporal expressions meaning a period of time may be followed by pay\textsuperscript{33} or maa\textsuperscript{33} with temporal relation to the present time, if not otherwise specified (see Section 3); thus we have khaañ\textsuperscript{42} naa\textsuperscript{42} pay\textsuperscript{33} (future-go) ‘in the future’.

c) Spatial noun - locative preposition - demonstrative pronoun nii\textsuperscript{45}/nan\textsuperscript{45}

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

xxii) laŋ\textsuperscript{24} caak\textsuperscript{22} nan\textsuperscript{45} ‘afterwards’
(back-from-from-that)

xxiii) laŋ\textsuperscript{24} caak\textsuperscript{22} nii\textsuperscript{45} (pay\textsuperscript{33}) ‘from now (on)’
(back-from-this-go)

xxiv) kcoon\textsuperscript{22} naa\textsuperscript{42} nii\textsuperscript{45} ‘before now’
(preceding-time-front-this)

xxv) kcoon\textsuperscript{22} naa\textsuperscript{42} nan\textsuperscript{45} ‘before that time’
(preceding time -front-that)

These time markers are best explained by means of metaphors i.e. the back of the referential time, nan\textsuperscript{45} or the front of the referential time, nii\textsuperscript{45}. It should be pointed out
here that there are prepositions laŋ²⁴ caak²² ‘after’ and kōn²² naa⁴² ‘before’ used in Modern Thai, for example:

1) laŋ²⁴ caak²² - soŋ²⁴ khraam³³ - look⁴² - khraŋ⁴⁵ - thii⁴² - sœŋ²⁴  
(after - war - world - time - two)  
After World War II

2) kōn²² 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 ni⁴⁵/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.
The term "preposition phrase deictic time marker" can be used to refer to preposition phrases that occur as composite units functioning as time adverbials for example.

(since then - he - then - not - come - again - (not any more))  
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 was constructed with a particular pair of prepositions: teε²² (from) .......... mua³³ (to) as in teε²² nii⁴⁵ mua³³ naa⁴² ‘from now till the time ahead’. In the Ayutthaya period, this preposition phrase has become teε²² nii⁴⁵ mua²² naa⁴² with a change of tone in mua³³. Following are some preposition phrase time markers that appeared in the last two periods studied.

xxvi) teε²² nii⁴⁵ pay³³  
(from - this - go)  ‘from now on’ (RN, MT)

xxvii) teε²² nan⁴⁵ maa³³  
(from - that - come)  ‘from that time’ (RN, MT)

xxviii) nay³³ wee³³ laa³³ diaw³³ kan³³  
(in - time - one - together)  ‘at the same time’ (RN, MT)

xxix) tan⁴² teε²² nan⁴⁵ maa³³  
(from - that - come)  ‘since then’ (RN, MT)
xxx) nay\(^{33}\) may\(^{42}\) cha\(^{45}\) ‘soon’ (MT)
   (in - not - slow)

xxxi) tan\(^{42}\) t\(\ddot{e}\)\(^{22}\) nii\(^{45}\) too\(^{23}\) pay\(^{33}\) ‘from this time’ (MT)
   (since - this - connect - time)

As can be seen, most time markers above contain the initial boundary or the source prepositions t\(\ddot{e}\)\(^{22}\) or tan\(^{42}\) t\(\ddot{e}\)\(^{22}\). The time marker nay\(^{33}\) may\(^{42}\) cha\(^{45}\), which 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 nii\(^{45}\) ‘this’ or nan\(^{45}\) ‘that’ which serve as the temporal referential point for the temporal interpretation. nii\(^{45}\) ‘this’ is interpreted as coinciding with the present time. nan\(^{45}\) ‘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 phaa\(^{33}\) la\(^{24}\), mua\(^{42}\) ko\(\ddot{e}\)\(^{22}\), t\(\ddot{e}\)\(^{22}\) ko\(\ddot{e}\)\(^{22}\) which do not contain the words nii\(^{45}\) and nan\(^{45}\), unless specified otherwise, refer to the locution 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 thun\(^{24}\) diaw\(^{24}\) nii\(^{45}\) ‘until now’ thun\(^{24}\) marks diaw\(^{24}\) nii\(^{45}\) 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) mua\(^{42}\) ‘when’ (SK, AY, RN, MT)

xxxiii) tan\(^{42}\) t\(\ddot{e}\)\(^{22}\) ‘since’ (RN, MT)

xxxiv) con\(^{33}\) ‘till’ (RN, MT)

and grammaticalized temporal prepositions such as

xxxv) t\(\ddot{e}\)\(^{22}\) ‘since’ (RN, MT)

xxxvi) nay\(^{33}\) ‘in’ (AY, RN, MT)

xxxvii) caak\(^{22}\) ‘from’ (MT)

xxxviii) thun\(^{24}\) ‘to, till’ (MT)

thun\(^{24}\) and caak\(^{22}\) 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. nay\(^{33}\) ‘in’, a locative preposition, grammaticalized from a noun, is similarly used as a temporal preposition. t\(\ddot{e}\)\(^{22}\) 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 as the temporal reference to the event in the main clause of a complex sentence. In the data, thirteen temporal subordinators are found:

| xxxix) mua²² | ‘when’ | SK | AY | RN | MT |
| xl) tiam²² teε²² | ‘since’ | SK | - | - | - |
| xli) khran⁴⁵ | ‘when’ | - | AY | RN | - |
| xlii) kwaa²² | ‘till’ | - | AY | RN | MT |
| xliii) con³³ | ‘until’ | - | AY | RN | MT |
| xliv) phoɔ³³ | ‘when, as soon as’ | - | AY | RN | MT |
| lxv) con³³ kwaa²² | ‘until’ | - | - | RN | MT |
| lxvi) kha³³ naa²² | ‘when, while’ | - | - | RN | MT |
| lxvii) kɔɔn²² | ‘before’ | - | - | RN | MT |
| lxviii) laŋ²⁴ caaɔ²² | ‘after’ | - | - | - | MT |
| lxix) kɔɔn²² naa⁴² | ‘before’ | - | - | - | MT |
| l) wee³³ laa³³ | ‘when’ | - | - | - | MT |
| li) tɔɔn³³ | ‘when’ | - | - | - | MT |

As can be seen from the list above, only mua²² has been used as a temporal subordinator since Sukhothai, while tiam²² teε²² and khran⁴⁵ are now obsolete. Besides, several subordinators are synonyms, for example mua²², 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 phrases such as laŋ²⁴ caaɔ²² from laŋ²⁴ caaɔ²² naa⁴⁵, kɔɔn²² naa⁴² from kɔɔn²² naa⁴² naa⁴⁵. 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) tɔɔn³³ - khaw⁴² - hɔɔk²² lɔm⁴⁵ - chan²⁴ - may⁴² - yuu²² - baan⁴²
   (time - he - fall - I - not - stay - home)
   ‘When he fell, I was not home.’

5) mua⁴² - kuu³³ - khun⁴² - yay²² - daaɔ⁴² - 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 location time of utterance (Lyons, 1995). However, the necessary temporal reference point does not always have to coincide with the location 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 assumed: the location 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 a subordinating clause or phrase, or is alterantively present in surrounding text. 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 or 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 bracket: 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 more consistent with the other terms in Givón’s set in the sense that all terms now refer directly to the temporal reference point. Givón's terms, precedence and subsequence, refer rather to the clauses in relation to the temporal reference point than directly to the temporal reference point itself. Secondly, we will include ‘point coincidence’, ‘intermediacy’ and ‘simultaneity’ under the same terms, ‘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: 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 is situated relative to the present moment, there is 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. The five sub-types identified are: simultaneity, anteriority, initial boundary, posteriority and terminal boundary.

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

6) biz⁴⁵ nii⁴⁵ - phom⁴⁴ - khoɔ⁴⁴ - pɔɔt⁴⁴ - kaan³³ pra?²² chum³³
now - I - request - open - meeting
Now I would like to declare open the meeting.
The event ‘open the meeting’ occurs at the time *bat*²² *nii*:⁴⁵ ‘now’ which coincides with the locution time. Below are the time markers in this sub-type with the indication of the periods when they are found.

lii) **bat**²² *nii*:⁴⁵ SK AY RN MT
liii) **chua**⁴² *nii*:⁴⁵ SK - - -
liv) **mua**⁴² *nii*:⁴⁵ SK AY RN -
lv) **mua**⁴² **lun**³³ *nii*:⁴⁵ SK AY - -
lvi) **dian**²⁴ *nii*:⁴⁵ - - RN MT
lvii) **tuan**³³ *nii*:⁴⁵ - - RN MT
lviii) **chuan**⁴² *nii*:⁴⁵ - - RN MT
lix) **wee**³³ **lai**³³ *nii*:⁴⁵ - - RN MT
lx) **kho**³³ **naai**²² *nii*:⁴⁵ - - RN MT
lx) **pat**²² **cu**³³ **ban**³³ (*nii*:⁴⁵) - - - 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, *bat*²² *nii*:⁴⁵ seemed to indicate the second sub-type. It has been changed to the first sub-type in Modern Thai. *dian*²⁴ *nii*:⁴⁵ can be in either sub-type whereas the rest of the time 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,

7) **kcon**²² - *nii*:⁴⁵ - **khaw**²⁴ - **tua**³³ - **lek**⁴⁵
    before - this - he - body - small
  Before, he was slim.

The event ‘being slim’ occurred before the locution time or the present time. The following time markers are in this type:

lxii) **mua**⁴² **kcon**²² SK AY RN MT
lxiii) **tee**²² **kcon**²² SK AY RN MT
lxiv) **tee**²² **kcon**²² *nii*:⁴⁵ - - - MT
lxv) **kcon**²² **naai**⁴² *nii*:⁴⁵ - - - MT
lxvi) **kcon**²² *nii*:⁴⁵ - - - MT

The data show that several posteriority markers are coined in Modern Thai. It is interesting to see that in **tee**²² **kcon**:³³ *nii*:⁴⁵ found in Modern Thai, *nii*:⁴⁵ is added in analogy with other *nii*:⁴⁵ constructions probably to refer to the zero point or the present time.
2.1.3 Initial boundary

8)  caak\textsuperscript{22} nii\textsuperscript{45} pay\textsuperscript{33} - khun\textsuperscript{33} - may\textsuperscript{42} - khuan\textsuperscript{33} - maa\textsuperscript{33} - haa\textsuperscript{24} - phom\textsuperscript{24} - ?iik\textsuperscript{22}

(from now on - you - not - should - come - see - I - again)
From now on, you should not come to see me any more.

Time markers indicating the initial boundary type include the following:

| lxxiii) | tee\textsuperscript{22} nii\textsuperscript{45} | SK | AY | - | - |
| lxxiv)  | tee\textsuperscript{22} nii\textsuperscript{45} pay\textsuperscript{33} | - | AY | RN | MT |
| lxxv)   | t\textsuperscript{22} pay\textsuperscript{33} nii\textsuperscript{45} | - | - | - | MT |
| lxxvi)  | caak\textsuperscript{22} nii\textsuperscript{45} pay\textsuperscript{33} | - | - | - | MT |

Again, time markers in the initial boundary type include nii\textsuperscript{45}, the word for the zero point. The markers for initial boundary increase from tee\textsuperscript{22} ‘since’, found since Sukhothai to grammaticalized prepositions from verbs, t\textsuperscript{22} ‘connecting’ and caak\textsuperscript{22} ‘from’, found only in Modern Thai. It must be noted that all initial boundary time markers, since they have nii\textsuperscript{45} as the starting point, convey future time. The use of the direction word pay\textsuperscript{33} ‘go’ indicating ‘time forward’ emphasizes future time.

2.1.4 Anteriority
Anteriority markers include naa\textsuperscript{42} ‘front’ and lan\textsuperscript{24} ‘back’ from the front-back axis as in:

9)  lan\textsuperscript{24} caak\textsuperscript{22} nii\textsuperscript{45} raw\textsuperscript{33} kho\textsuperscript{33} ca\textsuperscript{22} di\textsuperscript{33} khun\textsuperscript{42}

(after - this - likely - will - good - up)
After this, we should become better.

| lxxvii) | phaay\textsuperscript{33} lan\textsuperscript{24} | - | AY | RN | MT |
| lxxviii) | phaay\textsuperscript{33} lan\textsuperscript{24} pay\textsuperscript{33} | - | - | - | MT |
| lxxix) | phaay\textsuperscript{33} naa\textsuperscript{42} (pay\textsuperscript{33}) | - | - | - | MT |
| lxx) | lan\textsuperscript{24} caak\textsuperscript{33} nii\textsuperscript{45} | - | - | - | MT |
| lxxi) | khaan\textsuperscript{42} naa\textsuperscript{42} pay\textsuperscript{33} | - | - | - | MT |

Time markers with lan\textsuperscript{24} ‘back’, which implies a point behind the zero point, express the time after the zero point. Similarly, the word naa\textsuperscript{42} ‘front’ indicates time ahead of the zero point. Again the use of the direction word pay\textsuperscript{33} ‘go’ emphasizes time after the zero point or in the future.

2.1.5 Terminal boundary
The data available show only two terminal boundary time markers as absolute time references: thu\textsuperscript{24} to\textsuperscript{33} nii\textsuperscript{45} ‘until now’ and con\textsuperscript{33} (thu\textsuperscript{24}) diaw\textsuperscript{24} nii\textsuperscript{45} ‘until now’.

10)  thu\textsuperscript{24} to\textsuperscript{33} nii\textsuperscript{45} yan\textsuperscript{33} may\textsuperscript{42} mii\textsuperscript{33} thaan\textsuperscript{33} rak\textsuperscript{45} saa\textsuperscript{24}
(till now - still - not - have - way - cure)
Till now there is still no way to cure ‘it’.
These markers with nii\textsuperscript{45} or diaw\textsuperscript{24} nii\textsuperscript{45} as the zero point mark the present time as the end point of a stretch of time.

The diagram below is an attempt to summarize the semantic types of the deictic time markers of the absolute time reference group.\textsuperscript{1}

2.2 Relative time reference

In the following two sentences the temporal reference point for the event in the main clauses is not the location time but another event. In sentence 11, the reference point is nan\textsuperscript{45}, which must be identified from the text. This is referred to as relative time reference. In Thai, the time markers indicating the relative time reference usually include nan\textsuperscript{45} ‘that’. However, when the time markers function as the subordinator of a subordinating clause, the subordinating clause functions as the relative reference for the main clause.

11) laŋ\textsuperscript{24} caak\textsuperscript{22} nan\textsuperscript{45} - khaw\textsuperscript{24} - duu\textsuperscript{33} - dii\textsuperscript{33} - khun\textsuperscript{42}
   after - he - look - good - up
   Afterwards, he looked better.

12) phoɔ\textsuperscript{33} - khaw\textsuperscript{24} - ṭɔok\textsuperscript{22} - caak\textsuperscript{22} - lîf\textsuperscript{45} - kɔʔ\textsuperscript{42} - thuuk\textsuperscript{22} - yin\textsuperscript{33}
   as - he - out - from - elevator - then - touch – shoot
   As he got out of the elevator, he was shot.

In the first example, the event ‘looked better’ occurs relative to nan\textsuperscript{45}. In order to locate real time, one has to look for an identification of nan\textsuperscript{45} in the text. It is however sufficient that the event ‘looked better’ occurs after the reference point nan\textsuperscript{45} without having to look for the real time. In the second example, the subordinator phoɔ\textsuperscript{33} indicates the temporal relation between the event in the main clause and that in the subordinating clause in the manner that both occur at the same time or simultaneously.

Below are semantic types of time markers in the relative time reference group. It can be noticed that similar semantic types occur as those for the absolute reference group.

2.2.1 Simultaneity

Some sentence examples are given here:

13) nay\textsuperscript{33} - wee\textsuperscript{33} laa\textsuperscript{33} - nan\textsuperscript{45} - may\textsuperscript{42} - mii\textsuperscript{33} - khray\textsuperscript{33} - yuu\textsuperscript{22} - baan\textsuperscript{42}
   in - time - that - not - have - who - stay - home
   At that time, no one was home.

14) khaw\textsuperscript{24} - thuuk\textsuperscript{22} - yin\textsuperscript{33} - raʔ\textsuperscript{45} waan\textsuperscript{22} - khap\textsuperscript{22} - rot\textsuperscript{45} - pay\textsuperscript{33} - hua\textsuperscript{24} - hin\textsuperscript{24}
   he - touch - shoot - between - drive - car - go - Huahin
   He was shot while he was driving to Huahin.

\textsuperscript{1} Editorial note: the manuscript as it came to us had a diagram placeholder at this point, but the intended diagram was either not received or misplaced, and we regret that we were unable to obtain it before proceeding to publication. We offer out apologies to Praneev.
In the first example which is a simple sentence, the event, yuu^22 baan^42 ‘stay home’ occurred at the same time as nan^45 ‘that’ serving as a relative time reference. In the second sentence, the event in the subordinating clause with raʔ^45 waan^22 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 (phɔɔ^33, khɔ^33 naʔ^22) while others mark the stretch of time (nay^33 wee^33 laa^33 nan^45, raʔ^45 waan^22 nan^45). The relative reference time markers of the simultaneity type were infrequently attested in the first two periods, whereas in the latter two periods they are common in their occurrence.

2.2.2 Posteriority

15) nat^45 - phɔɔ^45 - nay^33 - rua^33 - kɔɔn^22 - rua^33 - ?ɔɔk^22
appointment - meet - in - ship - before - ship - out
(We) made an appointment to meet in the ship before it left the port.

The posteriority time markers listed above indicate that the temporal relative reference point nan^45 occurred in the past, after, or in subsequence to the event in the simple sentence. Similarly, the event in the subordinating clause with kɔɔn^22 as the subordinator occurred following or after the event in the main clause. In Givón’s terms, the event in the main clause preceded the temporal relative reference nan^45.
16)  koonʰ²² - naːʰ⁴² - nan⁴⁵ - chanʰ²⁴ - yuː²² - chian⁵³ - may²²
before - that - I - stay - Chiangmai
Before that, I stayed in Chiangmai.

Between koonʰ²² naːʰ⁴² and koonʰ²² naːʰ⁷² nan⁴⁵ khunʰ⁷² pay³³, the latter indicates the event deeper in time before the relative reference nan⁴⁵. (see Section 3)

2.2.3 Anteriority

17)  kʰwaː⁴⁴ - klapʰ²² - baanʰ⁴² - laŋʰ⁴⁴ caakʰ²² - sɔɔpʰ²² - setʰ²²
he - return - home - after - examination - finish
He went back home after he finished with his exam.

lxxxviii)  laŋʰ⁴⁴ caakʰ²² nan⁴⁵
‘after that’
- - - RN MT

lxxxix)  laŋʰ⁴⁴ caakʰ²² nan⁴⁵ maa³³
‘after that’ (past)
- - - MT

xc)  laŋʰ⁴⁴ caakʰ²² nan⁴⁵ pay³³
‘after that’ (future)
- - - MT

xci)  tɔɔ²² maa³³ phaay³³ laŋʰ⁴⁴
‘after that, afterwards’
- - - MT

xcii)  laŋʰ⁴⁴ caakʰ²² (subordinator)
‘after’
- - RN MT

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

(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)  laŋʰ⁴⁴ - caakʰ²² - naːʰ⁴⁵ - maa³³ - khawʰ⁴⁴ - kʰenʰ⁴⁴ reŋ³³ - khunʰ⁴²
back - from - that - come - he - strong - up
After that time/afterwards, he became stronger.

Sentences 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 a time before the zero point and if specified, nan⁴⁵ refers to a point of time in the future. It must be observed that pay³³ ‘go’ and maa³³ ‘come’ help mark time in the future and time in the past respectively.
2.2.4 Initial boundary

Initial boundary subordinators found in the data include tiam⁴³ tē⁰²² ‘since’ which was used only in the Sukhothai period, and taŋ⁴² tē⁰²² which is used in the later periods, for example:

20) phi⁴² - phua⁴² - phuu⁴² - ŋaay⁴² - taay⁴³ - caak²² - phua⁴² - tiam⁴³ tē²² - yan⁴³ - lek⁴⁵
   (brother - we - man - eldest - die - from - us - since - still - small)
   Our eldest brother died when he was small.

21) taŋ⁴² - tē²² - khaw²⁴ - maa³³ - thsō³³ - kō⁴² - dii³³ - khun⁴²
   (since - he - come - she - then - good - up)
   Since he came, she has become better.

Besides subordinators, a prepositional phrase tē²² nan⁴⁵ is found marking an initial boundary.

22) tē²² - nan⁴⁵ - maa³³ - thuk⁴⁵ - khon³³ - kō⁴² - 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 - ca⁰²² - sín⁴² - ŋaay³³ yu⁴⁵ (AY)
   endure - stay - till - finish - age
   (They have to) endure until their lives end.

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

24) kwaa²² - khaw²⁴ - ca⁰²² - klap²² - luuk⁴² - kō⁴² - lap²² - leew⁴⁵ (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, for example:
Simultaneity:
25)  มี 42 - ชัว 42 - พ่อ 42 - กู 33 - กู 33 - บัม 33 รู้ 33 - เหม 22 - พ่อ 42 - กู 33 (SK)
    (when - life - time - father - I - I - please - to - father - I)
    During my father’s life time, I pleased him.

Anteriority:
26)  มี 42 - ฆ่า 24 - ตาย 33 - ล่อน 33, บ้าน 42 โค 42 ทุก 22 - ฆ่า 24 (MT)
    (when - he - die - down - house - then - touch - sell)
    When/after he passed away, the house was sold.

Posteriority:
27)  มี 42 - กลับ 33 - กลับ 22 - มี 33 - กว่า 24 - ตาย 33 - ยิน 33 - แล้ววัน 45
    when - she - return - come - he - die - go - already
    When she returned, he already passed away.

In fact, there is no need to have a distinct subordinator for the above semantic types. The context itself indicates the ordering of the events. Most probably because of this, temporal subordinators were few in the earlier periods.

Besides มี 42, the Ayutthaya period displayed หริน 45, and พ่อ 33, both of which can also denote several semantic relations. พ่อ 33 is still used in Modern Thai whereas หริน 45 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 of 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 time is a static object. The study of deictic time markers in Thai also can be illustrated via 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 กลับ 22 ‘preceding’ and แล้ว 24 ‘behind, back’:

xcvi) เหม 22 กลับ 22 ‘before’
xcvii) มี 42 กลับ 22 ‘before’
xcviii) wan 33 กลับ 22 ‘the previous day(s)’
xcix) กำย 33 แล้ว 24 ‘future’
xcx) wan 33 แล้ว 24 ‘future’

Considering that all deictic time markers above with กลับ 22 convey the past time or the preceding time and all deictic markers with แล้ว 24 convey the future or the time to come, it is reasonable to think of time as a moving object. If a speaker stands with his face in the same direction as the 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: กำย 33 แล้ว 24 (side-back), wan 33 แล้ว 24 (day-
back). Because the time has yet to pass him, it is in the future. The following diagram illustrates moving time and the speaker orientation.

\[ \text{moving time} \]
\[ \text{laŋ}^{24} \quad \text{laŋ}^{24} \]
\[ \text{koon}^{22} \quad \text{laŋ}^{24} \]

\[ \text{ci)} \quad \text{teeq} \text{koon}^{22} \text{ ‘before’} \quad \text{ci)} \quad \text{phaay}^{33} \text{laŋ}^{24} \text{ ‘future’} \]
\[ \text{cv)} \quad \text{mha}^{42} \text{koon}^{22} \text{ ‘before’} \quad \text{cv)} \quad \text{wan}^{33} \text{laŋ}^{34} \text{ ‘future’} \]
\[ \text{ciii)} \quad \text{(wan}^{33} \text{koon}^{22} \text{ ‘the previous days’)} \]

If the speaker changes his orientation and turns his back to the past, facing the moving time, he will now see the future as the time ahead. The deictic time marker phaay^{33} naa^{42} (side-ahead) ‘future’ illustrates the moving time metaphor with the new orientation. tcoon^{33} laŋ^{24} ‘the past’ and laŋ^{24} laŋ^{24} ‘recent past’ also illustrate the past in the new orientation.

\[ \text{moving time} \]
\[ \text{laŋ}^{24} \quad \text{laŋ}^{24} \]
\[ \text{naa}^{42} \quad \text{laŋ}^{24} \]

\[ \text{cix)} \quad \text{tcoon}^{33} \text{laŋ}^{24} \text{ ‘past time’} \quad \text{cix)} \quad \text{phaay}^{33} \text{naa}^{42} \text{ ‘future’} \]
\[ \text{cx)} \quad \text{laŋ}^{24} \text{laŋ}^{24} \text{ ‘past time’} \quad \text{cx)} \quad \text{wan}^{33} \text{naa}^{42} \text{ ‘future’} \]
\[ \text{cviii)} \quad \text{phaay}^{33} \text{laŋ}^{43} \text{ ‘past time’} \]

### 3.2 The standing time metaphor

Time is always moving but we can freeze a portion on the real time line. When we do this, we have the standing time metaphor. The following sets of deictic markers indicate two static temporal points: nan^{45} ‘that’, and nii^{45} ‘this’.

\[ \text{cxi)} \quad \text{laŋ}^{24} \text{caak}^{22} \text{nan}^{45} \quad \text{laŋ}^{24} \text{caak}^{22} \text{nii}^{45} \]
\[ \text{cxi)} \quad \text{caak}^{22} \text{nan}^{45} \quad \text{koon}^{22} \text{naa}^{42} \text{nii}^{45} \]
\[ \text{cxiv)} \quad \text{taŋ}^{42} \text{teeq}^{22} \text{nan}^{45} \text{maa}^{33} \quad \text{taŋ}^{42} \text{teeq}^{22} \text{nii}^{45} \text{pay}^{33} \]

The words laŋ^{24} ‘back’ and naa^{42} ‘front’ indicate the back portion and front portion of the static points nan^{45} and nii^{45}. The time is moving in the same direction as in the first type of metaphor only in this metaphor, we stop it for the purpose of sequencing the events. The words caak^{22} and taŋ^{42} teeq^{22} seem to confirm the static status of the reference points: laŋ^{24} caak^{22} nan^{45}, (the back portion from that), ‘after that, afterwards’. Because nii^{45} ‘this’ is usually conceived as the present time, laŋ^{24} caak^{22} nii^{45}, caak^{22} nii^{45} pay^{33}, taŋ^{42} teeq^{22} nii^{45} pay^{33} refer to time beyond the present or time in the future.

The direction word maa^{33} ‘come’ and pay^{33} ‘go’ seem to give the direction towards and from the zero point. This is evident from the fact that time markers denoting the past can co-occur with maa^{33} except for *koon^{22} naa^{45} nan^{45} maa^{33} and *koon^{22} naa^{45} nii^{45}
maa\textsuperscript{33}. Time markers denoting the time in the future can co-occur with pay\textsuperscript{33} ‘go’ and not with maa\textsuperscript{33} ‘come’. It is possible to explain why koon\textsuperscript{22} naa\textsuperscript{42} niit\textsuperscript{45} maa\textsuperscript{33} is not acceptable. This is because niit\textsuperscript{45} is the zero point and therefore there is no distance for maa\textsuperscript{33}. As for koon\textsuperscript{22} naa\textsuperscript{42} nan\textsuperscript{45} maa\textsuperscript{33}, it is probable that the time is too remote from the niit\textsuperscript{45} point and maa\textsuperscript{33} does not seem possible. The following diagram is an attempt to illustrate the standing time metaphor:

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 time ‘above’ the present time. A temporal expression in Thai reflects this concept of time metaphor: koon\textsuperscript{22} - naa\textsuperscript{42} - nan\textsuperscript{45} - khun\textsuperscript{42} - pay\textsuperscript{33} (preceding-that-up-go) ‘Before the past period, the remote past period’. The vertical axis reflects the layers of the periods and again pay\textsuperscript{33} is used as 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 than for the future. This may reveal that a Thai speaker feels more familiar with the present and the past and therefore, has more temporal expressions to refer to it with. With fewer expressions for the future, it probably means that he has no experience of the future and thus has no necessity to refer to hypothetical future events in detail. 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 shows that time markers in Modern Thai are larger in number than those in the other three periods. In fact, there was a sharp increase already in the Ratanakosin period. The time markers in the two latter periods especially in Modern Thai show not only more time markers but also longer time markers. The long time markers are either doublets such as con\(^{33}\) kwaa\(^{22}\) ‘until’ or phrases such as tōo\(^{22}\) pay\(^{33}\) khan\(^{42}\) naa\(^{42}\) ‘in the future’. Phrasal time markers can be either noun phrases such as laŋ\(^{24}\) caak\(^{22}\) naa\(^{45}\) ‘afterwards’ or preposition phrases such as tan\(^{42}\) tē\(^{22}\) naa\(^{45}\) maa\(^{33}\) ‘from that time, since then’.

It is seen that in the Sukhothai period demonstrative pronouns nii\(^{45}\) and naa\(^{45}\) 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 caak\(^{22}\) ‘from’, thun\(^{24}\) ‘to’ are used also as time markers. Thus, it can be said that more and more words are added to the time marker lexicon and only a few words become obsolete and disappear. Consequently, synonyms in time markers are not rare. For ‘now’, one may have bat\(^{22}\) nii\(^{45}\), diaw\(^{24}\) nii\(^{45}\), tōo\(^{33}\) nii\(^{45}\), rā̃\(^{45}\) yai\(^{45}\) nii\(^{45}\), wee\(^{23}\) laa\(^{33}\) nii\(^{45}\); for ‘the future’, one may have wan\(^{33}\) laŋ\(^{24}\), wan\(^{33}\) naa\(^{42}\), phaay\(^{33}\) naa\(^{42}\), khaan\(^{42}\) naa\(^{42}\) tōo\(^{22}\) pay\(^{33}\), tōo\(^{22}\) pay\(^{33}\) khaan\(^{42}\) naa\(^{42}\), tē\(^{22}\) nii\(^{45}\) pay\(^{33}\).

How time is conceived of in Modern Thai is not different from its conception during the Sukhothai period, that is, time is conceived as an entity moving from the back of a speaker or moving facing him; or as an entity standing still with the referential points nii\(^{45}\) ‘this’ and naa\(^{45}\) ‘that’. However, elaborations of these concepts are also 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 mu̍a\(^{42}\) 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) mua\(^{42}\) khaw\(^{24}\) may\(^{42}\) thon\(^{42}\) naŋ\(^{24}\) suu\(^{24}\) khaw\(^{24}\) kɔŋ\(^{42}\) khaŋ\(^{33}\) sɔɔ̃\(^{22}\) tok\(^{22}\)
    (since/if - he - not - read - book - he - then - fail - examination - fail)
    If he does not review his lessons, he will fail the exam.

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.
Notes
I would like to express my deep appreciation for the helpful comments given by Professor Bernard Comrie and Associate Professor Kingkarn Thepkanjanana who have both kindly spent their precious time reading through the original paper.

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

Consonants:  
\begin{align*}
p & t & c & k & ?  
ph & th & ch & kh  
b & d  
f & s & h  
m & n & \eta  
l & r  
w & y  
\end{align*}

Vowels:  
\begin{align*}
i & ii & u & uu & u & uu  
e & ee & \partial & \partial & \partial & \partial  
\end{align*}

Diphthongs:  
\begin{align*}
i\partial & u\partial & u\partial  
\end{align*}

Tones:  
\begin{align*}
24 & 33 & 22 & 42 & 45  
\end{align*}

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 brackets, the temporal meaning in inverted commas is secondary.

References

*CU Concordance*. 2002. Department of Linguistics, Faculty of Arts, Chulalongkorn University.
