ANOTHER LOOK AT ASPECT IN THAI

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Abstract
The aim of the paper is twofold. The first aim is to analyse aspect in Thai in the framework of the selection-theory approach developed by Breu and Sasse (1991). The second aim is to study all possible co-occurrences of each of the three aspect markers: leew, yuu, and kamlag, with the four classes of verbs and the verbs occurring with other strategies within the five classes of states of affairs. It was found that the selectional approach chosen helped explaining the inceptive-stative state of affairs in Thai clearly. It also pointed out that the Thai aspectuality focused on the initial boundary and terminative boundary of the state of affairs. It is here that combinations of the three aspect markers occur. The study shows that they have certain rules of co-occurrences.

Keywords: aspect, selection-theory, Thai

1. Introduction
The aim of this paper is to describe the three aspect markers: leew, yuu and kamlag in Thai from the selection-theory approach developed by Breu and Sasse (1991). We select this approach because it allows us to explain an inceptive-stative state of affairs in Thai which an approach such as a viewpoint approach cannot. In this approach, aspect markers interact with the relevant temporal structure of verbs/states of affairs. A further aim is to study both the mutual compatibility of the three aspect markers among themselves as well as with different classes of states of affairs.

We will begin first with a brief discussion of aspect from a general perspective followed by a brief survey of previous studies of aspect in Thai. Then, we will present classes of verbs and states of affairs in Thai within the selection-theory framework. In the last part, we will give a picture of aspect in Thai, first with each of the three aspect markers mentioned above, then with the combination of these aspect markers.

2. Aspect from a general perspective
Aspect and its definition is a notorious problem in linguistics. Few grammatical categories have been treated and still are treated more extensively and with more terminological and notional confusion than the one of aspect. A recent study by Sasse (2002) which provides an excellent survey of the different approaches to this phenomenon confirms this statement. In our present study, we shall look at aspect from the perspective of a selection-theory of aspect as defined by Bickel (1997). This perspective combines the two main traditions in research on aspect, that is, the viewpoint approach (Koschmieder 1928/1929, 1934, Maslov 1962, Comrie 1976) and the time-schema approach which was mainly developed in the United States (Vendler 1967, Dowty 1979).
The viewpoint approach: This approach roughly distinguishes two types of aspect, perfective and imperfective which are inflectional and thus obligatory. This dichotomy is typically attested in languages such as Greek, Russian or Bulgarian. The viewpoint dichotomy can also be referred to as aspect proper or ASPECT\(^1\) as defined by Sasse (1991). The main dichotomy between perfective and imperfective can be defined as follows:

The operator of imperfective aspect presents a state of affairs as a situation without any reference to its temporal boundaries. It highlights the phase.

The operator of perfective aspect presents a state of affairs as a change of state with explicit reference to its inherent temporal boundaries.

The time-schema approach: This approach is considered by Sasse (1991) as an Anglo-American answer to the continental, perfective-imperfective-based theory. In this approach inherent temporal characteristics of predicates are discussed as temporal patterns or time-schemata. Four time-schemata: states, activities, accomplishments and achievements were proposed by Vendler. These time-schemata are roughly described in terms of verb classes. Semantic temporal features such as [±static], [±punctual] are used to distinguish the verbs. In Table 1 verb classes in English based on the semantic properties: [±static], [±telic] and [±punctual] following Vendler (1967) are given.

| State       | [+static], [-telic], [-punctual] | be sick, be dead, love, know |
|-------------|----------------------------------|-------------------------------|
| Activity    | [-static], [-telic], [-punctual] | march, walk, swim, read      |
| Accomplishment | [-static], [+telic], [-punctual] | melt, freeze, learn         |
| Achievement | [-static], [+telic], [+punctual] | pop, explode, collapse, shatter |

[+static]: suggesting non-dynamic state of affairs.

[+telic]: suggesting inherent terminal point in the state of affairs.

[+punctual]: suggesting states of affairs with no internal duration.

Table 1. English verb classes following Vendler’s (1967)

A number of tests have been developed for deciding to which class a verb in a given language belongs. Table 2 from Van Valin & LaPolla (1997: 94) provides a nice summary:
### Table 2. Criteria for verb classification (from Van Valin & LaPolla 1997: 94)

| Criteria                              | States | Achievements | Accomplishments | Activities |
|---------------------------------------|--------|--------------|-----------------|------------|
| Occurs with progressive               | No     | No           | Yes             | Yes        |
| Occurs with adverbs like vigorously, actively, etc. | No     | No           | No              | Yes        |
| Occurs with adverbs like quickly, slowly, etc. | No     | No*          | Yes             | Yes        |
| Occurs with time adverbials like for an hour. | Yes*   | No           | Irrelevant      | Yes        |
| Occurs with time adverbial: in an hour | No     | No*          | Yes             | No         |

* = not always

The selection-theory approach: The combination of the viewpoint approach and the time-schema approach in selection theories is quite straightforward insomuch as aspect markers as defined in the viewpoint approach operate on the temporal properties of states of affairs as defined in the time-schemata approach. If we take the opposition between passé simple (perfective) and imparfait (imperfective) in French and apply these two operators to a state of affairs belonging to the class of activities with the use of an activities verb régler ‘to rule’, we get the following clauses:

1. a. Perfective:
   
   *Il régla trente ans.*
   
   ‘He ruled thirty years.’

   b. Imperfective:

   *Il rûlait trente ans.*

   ‘He ruled thirty years.’

Although the English translation is the same, in the perfective case of (1a), the state of affairs of ‘ruling thirty years’ is seen within the initial and the terminal boundaries of thirty years. This is not the case with the imperfective in (1b), in which no attention is paid to the boundary structure of the state of affairs.

Selection theories of aspect understand aspect markers as operators that select matching temporal phases as they are determined in the temporal semantics of a state of affairs with the temporal boundaries (Bickel 1997). The basic idea of this approach is that verbs and states of affairs as a whole as they are syntactically reflected by sentences have their temporal structures. These structures consist of temporal boundaries and phases. Temporal boundaries are characterized by changes of situations; situations are stretches of time within which a given state of affairs takes place. The temporal structure of verbs is inherent in the sense that it is part of the lexicon. Some theories only look at temporal structures as they are defined in the lexicon of individual languages. Other theories also integrate entire states of affairs. In the latter case, additional temporal boundaries can be added by adverbials or other markers. In this paper, we will take this stand. Given the temporal structure of verbs or states of affairs, the function of temporal operators is to operate on these structures. How this is done and what models of temporal
structures there are will be further clarified in the rest of this paper.

A number of selection-theory approaches are based on the four-class system as developed by Vendler (1967) and Dowty (1979). For our description of aspect in Thai in this paper, however, we need to introduce another system developed by Breu and Sasse (presented here according to Sasse (1991)); for Breu’s approach and its further development, see Breu (1985, 2000.) The Breu and Sasse system distinguishes five classes. These classes are defined on the basis of the following components: the initial change of situation (CS1) or the initial temporal boundary, the situation (S) or the phase itself and the terminal change of situation (CS2) or the terminal temporal boundary.

| Totally stative (TSTA): | CS1 | [S] CS2 | know, be dead, exist |
|------------------------|-----|---------|---------------------|
| Inceptive-stative (ISTA): | CS1 S | CS2 | sit down, get to know |
| Action (ACTI): | CS1 S CS2 | work, sing, drink |
| Gradually terminative (GTER): | CS1 | S CS2 | die, kill, melt |
| Totally terminative (TTER): | CS1 S | CS2 | reach |

Table 3. The Breu and Sasse five classes of states of affairs with examples of verbs in English (Sasse, 1991)

The main reason why we need this approach is because the Vendler or Dowty system does not provide a class which is characterized exclusively by an initial temporal boundary and because, at the level of entire states of affairs, Thai aspect markers also operate on that boundary. Table 4 shows the lack of a class with only an initial boundary in the Vendler or Dowty system. In the first four lines, we present the classes of the Vendler or Dowty system, in the fifth line the temporal structure of inceptive-stative states of affairs is added in the second column:

| Vendler’s states of affairs | States of affairs in this paper | States of affair configurations and explanation |
|----------------------------|---------------------------------|-----------------------------------------------|
| States | Totally Stative (TSTA): | [S] situation only, no reference to temporal boundaries |
| Activities | Action (ACTI): | [CS1 S CS2] initial boundary – situation – terminal boundary |
| Accomplishments | Gradually Terminative (GTER): | [S CS2] situation plus terminal boundary |
| Achievements | Totally Terminative (TTER): | [CS2] initial and terminal boundary collapse into one, no situation |
| | Inceptive-stative (ISTA): | [CS1 S] initial boundary plus situation |

Table 4. Five classes of states of affairs adopted in this paper
Classes of states of affairs presented in Table 4 can minimally consist of an individual verb, or they can be in a more complex form consisting of a verb and its arguments or adverbials or both. As the Vendler and Dowty system understands the classification in terms of lexical properties of individual verbs, we shall adopt their classification in describing the four lexical classes of verbs for their interaction with aspect markers. At the level of states of affairs, we shall apply the classes distinguished by Sasse (1991) because it would otherwise be impossible to describe how aspect markers interact with states of affairs with only an initial boundary.

3. Previous studies of aspect in Thai

Compared to several other grammatical categories in Thai grammar, aspect has been studied by few grammarians and linguists. Most of these works treat aspect as one topic among others within the description of the whole language or within a complete study of syntax. Despite their brevity, they provide informative descriptions of aspect in Thai. Among these are Noss (1964), Panupong (1970), and Warotamasikkhadit (1972). Works which deal particularly with aspect in Thai are few. We will review two of them in this section: the one by Boonyapatipark (1983), and the other by Sookgasem (1990).

Based mainly on Lyons (1977) and also on Vendler (1967), Boonyapatipark (1983), in her dissertation entitled ‘A Study of Aspect in Thai’, proposes two main types of situations: static and dynamic. She subdivides static situations into permanent and temporary situations. Dynamic situations are subdivided into two types: processes and events; then processes are further subdivided into non-accomplishments and accomplishments; for event types, she proposes two subtypes: achievement and momentary, the latter sub-class being her own. Momentary events are described as situations which cover a very short period of time and the verbs used to express these situations can co-occur with progressive and continuative markers. Boonyapatipark thus has identified altogether six types of situations: permanent state, temporary state, accomplishment, non-accomplishment, achievement and momentary. With these six types of situations, Boonyapatipark also proposes six verb classes under the condition that these verbs occur in a simple sentence with no modifying unit like adverbials or aspect markers. Such a condition implies that the classification is based on inherent features. But Boonyapatipark’s third major type which she calls “verbs indicating either a dynamic situation or a state resulting from the completion of a dynamic situation” indicates that a lot of verbs in Thai cannot be exclusively classified as “dynamic” or “state” verbs but they can be either, depending on the environment in which they occur. In khāw pūt prātuu ‘He closes the door.’ pūt is a verb indicating a dynamic situation but in prātuu pūt ‘The door is closed.’ pūt is a verb indicating a state. The adequate interpretation depends on the animacy of the subject of the sentence.

This category of “verbs indicating dynamic situations or states arising from such situations” is typologically the most interesting. It seems to be typical of Southeast Asian languages that some verbs can belong to different verb classes and that it is basically context which
decides which interpretation actually applies.

Boonyapatipark’s contribution to a study of aspect is based on her careful examination of the occurrences of each of the six aspect markers: yùu, yan, léeew, khêey, cát and kamlag with the different types of verbs classified above. For example, kamlag as a progressive aspect marker, usually co-occurs with verbs indicating dynamic situation but not with verb indicating achievement situations. Therefore *này kamlag còp ‘the movie is ending’ is not acceptable in Thai because còp is a verb indicating achievement.

However we find that a sentence such as này kamlag cát? còp léeew ‘The movie is about to end’ is well accepted. Probably this is due to the fact that Boonyapatipark’s framework only allows her to talk about the lexical temporal structures of verbs but not the temporal structure of state of affairs. kamlag cát? còp is an example of a move towards the terminative state of affairs.

Boonyapatipark refers to terms such as progressive, completive, perfective when she talks about aspect markers. Sometimes, she uses these terms to refer to situations, too. It is not clear how these aspectual features of the aspect markers interact with the six types of situations she sets up.

The second work that we would like to mention is Sookgasem’s dissertation (1990) entitled “Morphology, Syntax and Semantics of Auxiliaries in Thai”. In this work, Sookgasem dedicates a whole chapter to aspect which she calls “eventualities”. She defines eventualities or aspect in terms of Johnson (1981). Thus, the concept of eventualities involves the idea of temporally distinct phases of an event, which are to be understood broadly as encompassing the whole sequence of an event’s evolution through time. That is, the phases of an event begin with the earliest time that the event may be taken to be concrete reality in the projected course of events, and lasts until the latest time that the event continues to affect the shape of later events. Consequently, the phases of an event include times that are strictly earlier or later than the time of the event itself.” It is apparently the last sentence of the definition that lets Sookgasem talk about the initial point and final point of an event. Another point that should be noted is that according to her, eventualities can be expressed at all levels from lexical word to verb phrase and sentence. This means that aspectual meaning is not only indicated within the lexical word but also by the co-occurrences of a verb and temporal expressions and aspect markers. Sookgasem divides verbs into non-temporal verbs such as này ‘to sit’, dôn ‘to walk’ and temporal verbs which are more or less equivalent to auxiliaries used by other linguists. She proposes that these temporal verbs have certain aspect elements of their own, for example, râám ‘to begin’ has an inchoative element; léeew, a perfective element; kamlag, a progressive element; phôyg cát? sêt, a post-completive element. She then examines the occurrences of these temporal verbs with the types of aspect introduced by Vendler (1967): state, activity, accomplishment, and achievement. The temporal verb kamlag which is the progressive aspect verb, for example, cannot occur with a certain type of state. The temporal verb sêt which highlights or
establishes a terminal boundary, cannot occur with the copula verb *pen ‘be’ as in *khăw pen khon sét lĕew [he be person stop ASP]. Sookgasem then investigates the four situation types at the sentence level, considering, for example, the plurality and singularity of the subject of the sentence with achievements. When it comes to non-temporal verbs, it is not clearly presented how types of situation and temporal aspect verbs are dealt with in relation to them.

4. Classification of verbs and states of affairs

In this section, we shall first look at classes of verbs based on their inherent temporal properties as described by Vendler (1967). Secondly, we will examine derived temporal structures and derived classes of states of affairs which are the result of the use of strategies for manipulating the temporal structure of states of affairs beyond the lexical properties of the verbs.

4.1 Temporal structures inherent to the verbs

All the four following classes of verbs can be distinguished:

4.1.1 State verbs

At the lexical level, state verbs can be identified by the semantic feature [+static, –telic, –punctual]. Some examples of state verbs are *pen ‘to be’, mii ‘to have’, khēn ‘to be hard’, kroot ‘to be angry’, rāk ‘to love’, khāwcaj ‘to understand’.

The following illustrates these verbs in sentences:

(2) khon thay rāk bāan kōot
   person-Thai-love-homeland
   ‘The Thai people love their homeland.’
(3) hīn khēn máay ṭōn
    stone-hard-wood-soft
    ‘Stone is hard, wood is soft.’
(4) mēe pen khon cay dīi
    mother-be-person-heart-good
    ‘Mother is a kind person.’

If we use the test in Table 2, we will get the following results as expected:

| State Verb     | khēn ‘to be hard’ as in hīn khēn ‘Stone is hard’ |
|----------------|-----------------------------------------------|
| 1 Occurs with progressive                        | - |
| 2 Occurs with adverbs like yāŋ khēn kōh ‘actively’ | - |
| 3 Occurs with adverbs like yāŋ ruatrew ‘quickly’  | - |
| 4 Occurs with time adverbials like pen chūa moong ‘for an hour’ | - |
| 5 Occurs with time adverbials like nāy nāh chūa moong ‘in an hour’ | - |

Table 5. Example of state verb in Thai with identification criteria
4.1.2 Activity verbs

Activity verbs are identified by the semantic features [-static, -telic, -punctual]. Some examples of activity verbs are ดี ‘to walk’ คุยกัน ‘to chat’ ตาน ‘to read’. Some examples of these verbs in sentences follow:

(5) ข้าวดีเล่น
he-walk-play
‘He takes / is taking a stroll.’

(6) ข้าวคุยกัน

Table 6. Example of activity verb in Thai with classification criteria

| Activity Verb | Occurs with progressive | Occurs with adverbs like ย่านเข็นขน ‘actively’ | Occurs with adverbs like ย่านรุ่ตREW ‘quickly’ | Occurs with time adverbials like เพนชูมูน ‘for an hour’ | Occurs with time adverbials like นาญน่านชูมูน ‘in an hour’ |
|---------------|--------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| ดี ‘to walk’ as in ข้าวดีเล่น | ✔ | ✔ | ✔ | ✔ | — |

4.1.3 Accomplishment Verbs

Accomplishment verbs are identified by the semantic features [-static, +telic, -punctual]. There is only a small number of verbs belonging to this class for examples, ตัดสิน ‘to make dress’ สรุป ‘to conclude’, in sentences follow:

(8) ข้าวตัดสิน
she-make-dress-self
‘She makes her own clothes.’

(9) รายงานจากสรุปปรีดา
report-will-conclude-tomorrow
‘Work / report will be concluded tomorrow.’
Compared to other verb classes, inherent accomplishment verbs are quite rare in Thai. It seems that in Thai inherent action verbs are generally used with object noun phrases or adverbials to indicate accomplishment situation:

\[ \text{khāw khān nāgsū cop lēew} \text{ [he write book finish ASP], “He finished writing his book.”} \]

If we use the test in Table 2, we will get the following results as expected:

| Accomplishment Verb | sarūp ‘to conclude’ as in khāw sarūp lēew |
|---------------------|------------------------------------------|
| ‘he concluded already’ |

Table 7. Example of accomplishment verb in Thai with classification criteria

4.1.4 Achievement verbs

Achievements verbs can be identified by [-static, +telic, +punctual]. The following verbs belong to this class: sēt ‘to be finished’, thāng ‘to reach’, taay ‘to die’.

(10) \[ \text{paan khān khāw sēt ?aw naathii sūthāay} \]

work-of-he-finish-minute-last ‘His work was finished in the last minute.’

If we use the test in Table 2, we will get the following results as expected:
4.1.5 Some generalizations about verb classes in Thai

Of the four verb classes suggested by Vendler (1967), two cover a large number of verbs in Thai (i.e. state verbs and activity verbs) and two consist only of a comparatively small number of entries (i.e. verbs of achievement and verbs of accomplishment). Besides, a number of verbs do not adhere to just one verb class. Thus, the following verbs can either be understood as activities or as states:

(11) **sày sùa**
put on/wear-shirt
1. ‘to wear (state)’
2. ‘to put on (activity)’

(12) **pìt**
close
1. ‘be closed (state)’
2. ‘to close (activity)’

(13) **pàòt**
open
1. ‘to be open (state)’
2. ‘to open (activity)’

4.2 Derived temporal structures and derived classes of states of affairs

There is quite a number of strategies for manipulating the temporal structure of states of affairs beyond the lexical temporal structure of individual verbs. If a state of affairs consists of just the verb, it is the lexical boundary structure of that verb which interacts with aspect operators. However, if more information is overtly added, the temporal structure of the verb can be overridden.

Here, we would like to enumerate the following strategies for adding information on to the temporal structure of a state of affairs beyond the lexical properties of the verb:

- Directional verbs with certain stative verbs
- Resultative verbs
- Adverbials that add temporal boundaries or change a verb with boundaries into a state
Quantified arguments

The use of phasal verbs/phasal markers

The addition of terminal markers

The following examples illustrate how additional information introduced by the above strategies produces states of affairs whose temporal structures clearly differ from the temporal structure as it is determined by the inherent temporal structure.

4.2.1 Directional verb strategy

With directional verbs khun ‘up’ or log ‘down’, we can get dynamic inceptive-stative state of affairs with lexically stative main verbs:

(14) ʔuān khun
fat-up
‘getting fat’

(15) phōm log
thin-down
‘getting thin’

4.2.2 Resultative verb strategy

With resultative verbs such as ʔim ‘to be full’ or ʔöok ‘to be out’, we can get terminative state of affairs with an action verb as the main verb.

(16) ʔim
eat-full
‘eat to one’s fill’

khīt ʔöok
‘think-out’

4.2.3 Temporal-adverbial strategy

With certain temporal adverbials such as tēe ḳōn ‘before’ or täŋ tēe näy tēe ray ‘from time unknown’ we can get, stative state of affairs with action verbs as main verb.

(17) khon thay kin khāaw tāŋ tēe näy tēe ray
people-Thai-eat-rice-since-where-since-when
‘Thais eat rice from time unknown.’

4.2.4 Quantified argument strategy

With quantified phrase such as sāam chōbāp ‘three letters’ we can get terminative states of affairs with action verbs as main verbs.

(19) khāw khian cōtnāay sāam chōbāp
she-write-letter-three-Clf.
‘She has written three letters.’

4.2.5 Phasal verb strategy

With phasal verbs like rōm ‘to begin, to start’ we can get inceptive-stative state of affairs with lexically stative main verbs.

(20) nāam rōm khēŋ
water-start-hard
‘The water is freezign.’
4.2.6 Addition of terminal marker strategy

With certain terminal markers such as còp ‘to end’, we can get terminative state of affairs with action verb as the main verb.

(21) khăw khían nàgsûu còp
    he-write-book-finish
    ‘He finished writing his book.’

5. Types of Aspect

If one looks at the aspectual system of Thai as a whole, there seems to be four layers. The first layer is based on the inherent temporal structure of the verb (see 4.1), the second on the temporal structure of the entire state of affairs and the strategies to manipulate temporal structure (see 4.2). On the third layer which will be discussed in 5.1, we find the individual aspectual markers as they interact with the semantics of the first two layers. At the fourth layer which will be the topic for 5.2, we will deal with combination of aspect markers. The mere fact that temporal markers can be combined does not sound possible if one thinks in terms of the classical aspectual functions of perfective vs. imperfective which are complementary and thus mutually exclusive in the classical aspect languages.

Since aspect crucially depends on the interaction of aspect markers with the temporal semantics of verbs or states of affairs, we do not need to discuss each class of states of affairs in detail in this paper. Instead, we would like to discuss how an aspectual marker with its particular semantic properties reacts if it is applied to a situation with no temporal boundary or to a situation with an initial boundary or with a terminal boundary that includes the distinction between gradually and totally terminative or with both boundaries. It is for that reason that in 5.1 we will not strictly distinguish whether a temporal boundary is provided by the lexicon discussed in 4.1 or by one of the derivational strategies discussed in 4.2.

5.1 The three aspect markers lêew, yûu and kamlaj

5.1.1 The aspect marker lêew

The aspect marker lêew highlights a time boundary either the initial or the terminal one. If it interacts with the initial boundary, it expresses change to a new situation. If it interacts with a terminal boundary, it indicates that “a crucial amount of some activity has been reached” (See Boonyapatipark 1983:154-159).

It should be noted that the temporal boundary is either part of the state of affairs, (lexically in subsection 4.1 or by one of the strategies mentioned in subsection 4.2) or it is established by lêew. We first look at those instances in which lêew operates on temporal boundaries which are part of a given state of affairs. With inceptive-stative states of affairs and with terminative states of affairs, gradually as well as totally terminative ones, lêew operates only on the existing temporal boundaries. In the following analysis, we will follow this order: with existing temporal boundaries, either initial or terminative [S][S][S][S]; with both temporal boundaries [CS][SC]; and no temporal boundary [S].
Inceptive-stative (ISTA) [CS₁ S]

(22) With the resultative verb khāw ‘to enter’ expressing the initial boundary:

phōm rāk thāo khāw lēew
I-love-she-enter-ASP
‘I have fallen in love with her (before I did not love her but now I do).

(23) With the directional verb khān ‘to go up’ expressing the initial boundary:

?aa{kāat rōon khān lēew.
weather-hot-up-ASP
‘The weather has started to become hot (the temperature did not increase before but now it is doing so).’

Gradually terminative (GTER) [S CS₂]

(24) With a resultative verb ?āk ‘to be out’ expressing the terminative boundary.

khāw khīt ?āk lēew
he-think-out-ASP
‘He saw a solution (he was thinking about the solution and the phase of looking for a solution came to a successful end).’

(25) With locative adverbial thān bāan ‘reaching home’ expressing the terminative boundary.

khāw ḫaen thūn bāan lēew
he-walk-reach-home-ASP
‘He has reached home (the process of walking home has come to a terminal point).’

Totally terminative (TTER) [CS₂]

With an achievement verb sēt ‘to be finished’ expressing the terminative boundary.

(26) gaan sēt lēew
work-finish-ASP
‘The work is/was finished (end of the work is achieved).’

Action (ACTI) [CS₁ S CS₂]

Action states of affairs can be ambiguous due to the presence of two boundaries. Thus, in (27b) we get a completive interpretation if lēew applies to the terminal boundary. If it applies to the initial boundary as in (27a), we get an inchoative interpretation. If lēew applies to the situation between the two boundaries we get an interpretation in which a change of state takes place with regard to the object of the verb (before, he ate, but he did not eat rice). This interpretation is possible because khāw ‘rice’ is taken as the object of the verb kin ‘eat’ and is focused, whereas it is incorporated with kin in (27a) and (27b).

(27) khāw kin khāw lēew
he-eat-rice-ASP
a. (Inchoative): ‘He has started eating.’

b. (Completive): ‘He has finished eating.’
c. (Change of State): ‘He eats rice now, before he ate something else.

State (TSTA) [S]

With simple state verbs, there is no temporal boundary for lēew to interact with. Thus, it is used to establish a temporal boundary. The establishment of such a boundary implies a change of state as in the following example:

(28) pākāat rōn lēew
weather-hot-ASP
‘The weather became hot.’

5.1.2 The aspect marker yuu

Boonyapatipark (1983) describes the function of yuu as follows:

‘... with the use of yuu, the speaker can be said to view a situation as accumulating through time. The situation referred to is normally thought of as starting some time before a particular point in time which will be taken to be the time of speech unless otherwise indicated, and as continuing until some time afterwards. An exception to this generalization would be the case where a specific duration of time is given within which a situation lasts. In such a case the situation will be viewed as continuing through that time.”
(Boonyapatipark, 1983: 110-111).

In our view, accumulating through time is not necessarily involved with yuu. The marker yuu describes that a situation is continuous through time or along time without reference to boundaries. For that reason yuu cannot operate on temporal boundaries and thus it is incompatible with inceptive-stative and with terminative states of affairs. With action states of affairs, the interaction is different because here yuu can operate on the phase between the initial and the terminal boundaries.

yuu is not compatible with a non-continuity state over time or a generic state. This is the reason why yuu may not co-occur with preverbs like māk cā? ‘often, usually’ or adverbials like taam thammadaa ‘usually’ which convey the meaning of non-continuity, for example, the sentence *khon thay māk cā? kin khāaw yuu is not possible. The continuity of the situation expressed by yuu does not imply permanence. Given its temporary meaning, yuu is thus incompatible with generic statements. Therefore, a sentence like *hin khēen yuu is not acceptable in Thai. In the rest of this section, we look at the compatibility of different types of states of affairs with yuu.

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4 In khāw māk cā? ?ook kamlag yuu tōn chāw chāw (he-usually-exercise-Asp-in the morning) ‘He is usually doing a body exercise in the morning’, a time reference is given. This makes the state of affairs non generic and yuu can therefore occur with māk cā?
Totally stative [S]

\( yu \) can occur with state verbs giving stative state of affairs.

(29) \( khaw \ pen \ khruu \ yu \)
he-be-teacher-ASP
‘He is a teacher (from the perspective of the speech act time he has been a teacher and continues to be a teacher. However this state may not last forever).’

(30) \( khaw \ pen \ khruu \ yu \ too \ ni \)
he-be-teacher-ASP-moment-this
‘He is a teacher right now (his being a teacher is going on at the particular moment but it may not last forever).’

(31) \( khaw \ pen \ khruu \ yu \ too \ nan \)
he-be-teacher-ASP-moment-that
‘He was a teacher at that time (his being a teacher was continuous at the reference time but not at the speech act time).’

Action (ACTI) [CS₁ S CS₂]

With activity verbs, for examples:

(32) \( khaw \ ?aan \ napsu \ yu \)
he-read-book-ASP
‘He is reading a book (the phase of his reading a book continues through time for a while).’

Inceptive-stative (ISTA) [CS₁ S]

\( yu \) cannot co-occur with inceptive stative verbs/states of affairs:

(33) \( *phom \ rak \ tha \ khaw \ yu \)
I-love-she-in-ASP
‘I fell in love with her.’

(34) \( *taakat \ rao \ maa \ song \ samm \ wan \ yu \)
weather-hot-come-two-three-day-ASP
‘It became hot for two days.’

(35) \( *khaw \ rao \ thammaan \ yu \)
He-start-work-ASP
‘He started working.’

Gradually terminative (GTER) [S CS₂]

\( yu \) cannot occur with gradually terminative state of affairs:

(36) \( *raw \ kin \ lim \ yu \)
we-eat-be-full-ASP
‘We are eating to our fill.’

Note that this sentence can be spoken by Thai native speakers as the answer to the question ‘Do you have enough?’ The answer indicates that the speaker does not exactly have enough but more or less. Observe that \( yu \) in this sentence does not give any aspectual meaning (see also sentence 41).

(37) \( *khaw \ khan \ cop \ yu \)
he-write-finish-ASP
‘He finished writing.’

(38) \( *khaw \ song \ cottomay \ mot \ yu \)
he-send-letter-finish up-ASP
‘He sent all letters.’
Totally terminative (TTER) [CS2]

*yu can neither occur with totally terminative states of affairs. Thus, it cannot occur with an achievement verb like taay ‘to die’:

(39) *khaw taay yu
    he-die-ASP
    ‘He was dead.’

However, totally terminative states of affairs are compatible with yu if the achievement verbs imply consecutive occurrences as in the following example.

(40) pam niamman rabot yu
    filling station-explode-ASP
    ‘The filling station is exploding.’
    (There is a series of explosions involved.)

The marker yu allows a pragmatic extension of its meaning beyond the domain of time if used with quality-denoting states. From the temporary states of a given quality, it is inferred that the quality itself is somewhat reduced. Thus in an example like (41) one can infer that this meal does not exhaustively meet the standard associated with the qualitative state of paruy.

(41) paahaan paruy yu
    meal-be delicious-ASP
    ‘The meal is quite good.’

5.1.3 The aspect marker kamlaŋ

We agree with Boonyapatipark that kamlaŋ marks a state of affairs which is in progress at reference time. Since this marker crucially depends on a potential time span to which it can apply, it is incompatible with states of affairs which have no situation (S). As in the case of yu, kamlaŋ is not compatible with modal markers such as mak ca? ‘often’ and with adverbials such as taam thammadaa ‘usually’ and with generic statements for the same reasons. Thus, a sentence like *khon thay mak ca? kamlaŋ kin khaw [people Thai often PROGR eat rice] is impossible. In the rest of this section, we look at the compatibility of different types of states of affairs with kamlaŋ.

Totally stative (TSTA) [S]

In the case of totally stative of affairs, if the situation does not specify reference time kamlaŋ is incompatible with totally stative states of affairs. Thus, example (43) and (44) are ungrammatical because they are generic statements and thus do not convey any specific reference time for kamlaŋ to operate on.

(42) paakat kamlaŋ rson.
    weather-ASP-hot
    ‘(At reference time)the weather is hot’

(43) *hin kamlaŋ khay
    stone-ASP-hard
    ‘*Stone is being hard (impossible because ‘Stone is hard.’ is a generic statement where no reference time is indicated.)’

(44) *khon thay kamlaŋ ruk ban kbot
    people-Thai-ASP-love-homeland
    ‘*Thai people are loving their homeland (impossible because ‘Thai people love their homeland’ is a generic statement where no reference time is indicated.)’
Inceptive-stative (ISTA) [CS₁ S]

The progressive marker *kamlag* is compatible with inceptive-stative states of affairs:

(45) \( ?\text{aakàat kamlag yen lön.} \)
weather-ASP-cool-down
‘(At reference time) the weather is in the process of getting cooler.’

Action (ACTI) [CS₁ S CS₂]

The progressive marker *kamlag* is compatible with action states of affairs:

(46) \( \text{khāw kamlag ?àan nàxsiù.} \)
he-ASP-read
‘He is reading a book (at reference time the action of reading is going on).’

Gradually terminative (GTER) [S CS₂]

The progressive marker *kamlag* is compatible with gradually terminative states of affairs:

(47) \( \text{khāw kamlag khôn} \)
phóp wayrás tua mây
he-ASP-discover-virus-Clf-new
‘They are discovering a new virus (at reference time the process of discovering a new virus is going on aiming at the terminal point).’

Totally terminative (TTER) [CS₂]

As the totally terminative has no [S], *kamlag* is incompatible.

(48) \( *\text{khāw kamlag taay} \)
he-ASP-die
‘He is dying (impossible because achievement verbs convey a situation at the point of time whereas *kamlag* conveys a situation in progress).’

For some Thai speakers, this sentence is acceptable but with the meaning ‘he is going to die,’ for which the more appropriate and more acceptable sentence is \( \text{khāw kamlag că? taay} \) (he-ASP-will-die).

5.2 Combination of aspect markers

Aspect markers can be used cumulatively. As we pointed out, this is remarkable because in aspect languages with a binary aspectual system (perfective vs. imperfective), aspect markers are complementary.

The compatibility of aspect markers depends on the type of states of affairs (totally stative, inceptive-stative, etc.) plus the semantics of the aspect markers involved. As for the mutual compatibility of aspect markers, there are three general rules:

(a) The two markers *kamlag* and *lééw* are mutually exclusive and thus incompatible if they operate on the same temporal unit because *lééw* refers to a point in time, while *kamlag* refers to a time span. To be more precise, *lééw* operates on time boundaries from a punctual perspective, while *kamlag* points out that a given state of affairs is in progress at reference time. (The reason why
**kamlag** and **léew** can co-occur with inceptive states of affairs is given in section 5.2.3., cf. example 51(d)).

(b) When the boundary marker **câ?** is introduced, it provides a very short span before the initial boundary marked by **léew**. **kamlag** and **câ?** interact with this short span towards the initial boundary marked by **léew**. Thus, incompatibilities among aspect markers can be cancelled.

(c) More than two aspect markers can occur only if the marker **câ?** is involved.

In the rest of this section, we look at the five types of states of affairs and patterns of multiple aspect marking.

**5.2.1 Combination of aspect markers with a totally stative state of affairs:**

(49) a. **náam róon**
water-hot
‘The water is hot.’
The sentence is said when one touches the cup of hot water.

b. Progressive + Continuative:
**náam kamlag róon yúu**
water-ASP-hot-ASP
‘The water is being hot (now, but may be not so later).’
The sentence conveys the same state of affairs as the one in sentence (42)

c. Continuative + **léew**:
**náam róon yúu léew**
water-hot-ASP-ASP

‘The water is hot.’
The sentence is said when someone tells the hearer to heat the water and s/he thinks it is already hot, i.e., no reheating is needed. **léew** sets a boundary and **yúu** marks that the state of hotness continues in that temporal boundary.

d. Progressive + **léew**:
* **náam kamlag róon léew**
water-ASP-hot-ASP
Incompatibility of the two markers; See Rule (a) above.

e. Progressive + Continuative + **léew**:
* **náam kamlag róon yúu léew**
water-ASP-hot-ASP-ASP
Incompatibility of the two markers; See Rule (a) above.

f. Progressive + marker **câ?** + Continuative + **léew**:
**náam kamlag câ? róon (yúu) léew**
water-ASP-câ?-hot-ASP-ASP
‘The water is about to become hot.’

The marker **câ?** explicitly introduces a short temporal span before an initial boundary. The marker **léew** operate on the initial boundary, which it introduces in the case of stative states of affairs. **léew** expresses the imminent change of state at this initial temporal boundary after the very short span introduced by **câ?**. The other two markers **kamlag** and **yúu** also operate on this very short span.
5.2.2 Combination of aspect markers with an action state of affairs:

(a) \textit{yaay kamlag kin khåaw}
\textit{grandma-ASP-eat-rice}
\textit{‘Grandma is eating’}

(b) Progressive + Continuative:
\textit{yaay kamlag kin khåaw yuu}
\textit{grandma-ASP-eat-rice-ASP}
\textit{‘Grandma is eating [the action is progressing at reference time.]’}

c. Continuative + \textit{léew}:
\textit{yaay kin khåaw yuu léew}
\textit{grandma-eat-rice-ASP}
\textit{‘Grandma is eating now.’}

The doctor tells the speaker to make it possible to have grandma eat and s/he then tells the doctor that there is no need to worry because grandma is eating/has been eating. \textit{léew} refers to an initial boundary of \textit{kin} ‘to eat’ and the action continues from that time boundary.

d. Progressive + \textit{léew}:
\textit{*yaay kamlag kin khåaw léew}
\textit{grandma-ASP-eat-rice-ASP}

Incompatibility of the two markers; See Rule (a) above.

e. Progressive + Continuative + \textit{léew}:
\textit{*yaay kamlag kin khåaw yuu léew}
\textit{grandma-ASP-eat-rice-ASP-ASP}

Incompatibility of the two markers; see Rule (a) above.

f. Progressive + marker \textit{câ}? + Continuative + \textit{léew}
\textit{yaay kamlag câ? kin khåaw yuu léew}
\textit{grandma-ASP-câ?-eat-rice-ASP-ASP}
Grandma is going to eat rice right now.

Here again, the marker \textit{câ}? introduces an imminent temporal span before the initial boundary. \textit{léew} operates on the initial boundary. The other two markers \textit{kamlag} and \textit{yuu} also operate on the very short span before the initial boundary.

5.2.3 Combination with an inceptive-stative state of affairs

Combinations with \textit{yuu} plus inceptive-stative states of affairs are not possible (see section 5.1.2.). Thus sentences 51(b), (c) and (e) below are not possible. The combination of progressive plus \textit{léew} in 51(d) is possible. This is due to the fact that \textit{léew} and \textit{kamlag} do not refer to the same temporal unit. The progressive marker operates on the temporal phase introduced by the resultative verb \textit{khiin} ‘go up’, while the marker \textit{léew} expresses a change of state with the stative verb \textit{róon} ‘be hot’.

(51)a. \textit{náam róon khün}.
\textit{water-hot-up}
\textit{‘The water is becoming hot.’}

b. Progressive + Continuative:
\textit{*náam kamlag róon khün yuu}
c. Continuative + léew:
* nāam rōn khān yūu léew

(d. Progressive + léew:
 nāam kamlag rōn khān léew.
 water-ASP-hot-up-ASP
 ‘The water’s becoming hot already’

(e. Progressive + Continuative + léew:
* nāam kamlag rōn khān yūu léew
 water-ASP-hot-up-ASP-ASP
 In contrast to the following example, this sentence is not possible because of rule (c)

f. Progressive + marker căʔ +
Continuative + léew
 nāam kamlag căʔ
 rōn khān yūu léew
 water-ASP-căʔ-hot-up-ASP-ASP
 ‘The water is getting hot.’

5.2.4 Combination with a gradually terminative state of affairs

Since yūu is not compatible with gradually terminative states of affairs (cf. section 5.1.2), sentences 52(b), 52(c), and 52(e) are not possible. In contrast to 51(d), 52(d) is ungrammatical. This is due to the fact that resultative verbs like ḫok ‘move out’ combined with an action verb like khīt ‘think’ do not seem to introduce a new phase as is the case with khān ‘go up’ with stative verbs as in 51(d) but rather highlight the terminal boundary. Thus, there is only one temporal boundary in 52(d), i.e., the terminal boundary, which cannot be operated on by two mutually exclusive markers.

(52) a. yaay khīt ḫok léew
  grandma-think-out-ASP
  ‘Grandma found a solution.’

b. Progressive + Continuative:
* yaay kamlag khīt ḫok yūu
  Grandma-ASP-think-out-ASP

(c. Continuative + léew:
* yaay khīt ḫok yūu léew
  Grandma-think-out-ASP-ASP

(d. Progressive + léew:
* yaay kamlag khīt ḫok léew.
  grandma-ASP-think-out-ASP

  ‘Grandma was finding a solution [She was thinking].’
  This sentence is not possible although ḫok sets a terminative boundary for léew,
  but rule (a) cannot be violated.

e. Progressive + Continuative + léew:
* yaay kamlag khīt ḫok yūu léew
  Grandma-ASP-think-out-ASP

  ‘Grandma is close to finding a solution.’

f. Progressive + marker căʔ +
Continuative + léew
 yaay kamlag căʔ khīt ḫok
 yūu léew
 grandma-ASP-căʔ-think-out-ASP

  ‘Grandma is close to finding a solution.’
In example (f) the marker c̀? introduces a boundary before the terminative boundary l̀ew. This allows a possible span for kamlá and c̀? to interact with.

5.2.5 Combination with a totally
terminative state of affairs:

Since an achievement verb with a totally
terminative state of affairs does not co-
occur with kamlá and yùu, sentence
55(b), (c), (d), (e) and (f) are not acceptable.

(53) a. khàw taay l̀ew
   he-die-ASP
   ‘He died.’

b. Progressive + Continuative:
   *khàw kamlá taay yùu
   He-ASP-die-ASP

c. Continuative + l̀ew:
   *khàw taay yùu l̀ew
   He-die-ASP-ASP

d. Progressive + l̀ew:
   *khàw kamlá taay l̀ew
   He-ASP-die-ASP-ASP

e. Progressive + Continuative +
l̀ew:
   *khàw kamlá taay yùu
   l̀ew
   He-ASP-die-ASP-ASP

   This sentence is not possible
   because of rule (c).

f. Progressive + marker c̀? +
    Continuative
   *khàw kamlá c̀? taay

With achievement verbs like ràbòt ‘to
explode’ which allow the consecutive
occurrences of totally terminative states of
affairs, a combination of kamlá and yùu
may be possible:

(54) pàm nàmman kamlá ràbòt yùu
    filling station-ASP-explode
    ‘The filling station is exploding.’

The following table summarizes the
possible combinations of aspect markers
in different states of affairs presented
above:
Table 9. Summary of combinations of aspect markers

From the data presented in sections 5.2.1-5.2.5 and from Table 9 above we can draw out the following points:

1. If there are any two aspect markers involved, the following combinations are allowed:
   i) kamlaŋ + yùu
   ii) yùu + lëw

The combination of kamlaŋ and lëw is ungrammatical if only two aspect markers are involved. càʔ as a boundary marker must be introduced. Aspect markers must always occur in the order indicated in i) and ii). While kamlaŋ is preverbal yùu and lëw are postverbal.

2. The fact that yùu and lëw can co-occur while kamlaŋ and lëw are mutually exclusive points to an important difference between yùu and kamlaŋ. While both mark a time phase, kamlaŋ seems to convey progression at reference time (most naturally at the speech act moment), while yùu does not make any reference to a point in time. The marker yùu only conveys a continuous situation through time. Thus, kamlaŋ is not compatible with lëw which highlights or sets up temporal boundaries. On the other hand, yùu can be combined with lëw as well as with kamlaŋ.

3. kamlaŋ ______ lëw Example 51 (d) náam kamlaŋ rón khún lëw 'The water’s becoming hot already' seems to contradict the mutual exclusiveness of kamlaŋ and lëw as discussed in point 2 above. The sentence is possible because the two markers do not refer to the same temporal unit. The marker kamlaŋ operates on the phase introduced by khún ‘go up’, the marker lëw introduces an initial boundary and thus triggers an interpretation in terms of change of state.

4. When more than two aspect markers occur, càʔ must be brought in. In our data, kamlaŋ càʔ, kamlaŋ càʔ ______ yùu, and kamlaŋ càʔ ______ yùu lëw seem all possible although kamlaŋ càʔ ______ yùu without lëw is of doubtful acceptability. In all these combinations, we can generalize this phenomenon by the following rule:

When marker càʔ is used, temporal boundaries either initial or terminative, must be inferred. If lëw as the boundary marker co-occurs, the imminent aspect
as the beginning of the state of affairs or the terminative state of affairs depending on the verb class, is present. If léew does not co-occur, the boundary is not focused, although implied. Thus, the imminent aspect is not present. We may say that with the combination of kamlaŋ, yùu and léew with ca'? a preparation span of situation at the initial boundary or at the terminative boundary is introduced.

Following is the possible combination of ca'? with the three aspectual markers to illustrate the mentioned points:

(55) a. khāw ca'? khun ruabin
    he-ASP-ca'?-ascend-plane
    ‘He will board the plane.’

b. khāw ca'? khun ruabin léew
    he-ASP-ca'?-ascend-plane-ASP
    ‘He is about to board the plane.’

c. khāw kamlaŋ ca'? khun ruabin
    he-ASP-ca'?-ascend-plane
    ‘He is going to board the plane.’

d. khāw kamlaŋ ca'? khun ruabin
    léew
    he-ASP-ASP-ASC-ASP
    He is about to enter the plane.

e. khāw ca'? khun ruabin
    yùu léew
    he-ca'?-ascend-plane-ASP-ASP
    ‘He is about to enter the plane
    (he is closer to it than c.)’

f. khāw kamlaŋ ca'? khun ruabin
    yùu phoo dii
    he-ASP-ca'?-ascend-plane-ASP-the very moment
    ‘He is about to board the plane
    at the moment’

g. khāw kamlaŋ ca'? khun ruabin
    léew
    he-ASP-ca'?-ascend-plane-ASP
    ‘He is about to board the plane.’

h. khāw kamlaŋ ca'? khun ruabin
    yùu léew
    he-ASP-ca'?-ascend-plane-ASP-ASP
    ‘He is just about to board the plane.’

From the comparison of (55f) and (55g) and the unacceptable sentence

*khāw ca'? khun ruabin yùu
(he- ca'?-ascend-plane-yùu )

one can see that the grammaticality of the marker yùu depends on the presence of kamlaŋ. Once kamlaŋ and yùu are combined, the occurrence of these two markers together with léew is possible. The following schema visualizes the aspectual markers kamlaŋ, yùu, and léew.
5. It should be added that the sequence $yùu$ leew does not only have aspectual meaning. It also conveys pragmatic meaning against a wrong presupposition. The sentence 50(c) yaay kin khâaw $yùu$ leew [grandma eat rice $yùu$ leew] can also be interpreted as a reaction against the wrong presupposition that grandmother did not eat. In everyday conversation, $yùu$ leew is a slang word with the meaning of ‘of course, certainly’. If leew highlights the initial boundary of the action state of affairs ‘eat’ in 50(c) a pragmatic reanalysis of this fact in terms of a confirmation that the action actually took place, seems plausible. In addition, this pragmatic interpretation is further reinforced by the continuative marker $yùu$. The following is an example of the use of $yùu$ leew as a slang word:

(56) khun cã? pay chia?mây kâp raw mây? – $yùu$ leew
you-FUT-go-Chiangmai-with-we-Q-of course

‘Are you going to Chiangmai with us? – Of course!’

Conclusion

In the present paper, we have tried to analyse aspect in Thai in terms of a selection-theory approach to see whether it can give a clearer explanation of aspect. We found the following:

1. An analysis of aspect in Thai can be clearer explained if an account for the temporal boundaries is taken particularly, the initial one when inceptive-stative state of affairs is to be explained. The four state of affairs as discussed in Vendler (1967) and Dowty (1979) do not seem to fully account for aspect marking in Thai.

2. Aspect markers do not only interact with lexically determined temporal boundaries. It is necessary to look at the temporal structure of the entire state of affairs with temporal strategies some of which we have dealt with, and with aspect markers, three of which we have studied in the article. It is seen that the temporal strategies which add information on the temporal structure of a state of affairs beyond the inherent properties of the verbs merit further studies.

3. In Thai, aspect markers can be used cumulatively. This is unusual in aspect languages with a binary aspect system of the perfective vs. imperfective type, in which aspect markers are complementary.
If there is cumulative use of aspect markers, there is a hierarchy of dominance as explained in Figure 1 in section 5.2.5. Here, again a deeper research is needed especially with other aspect markers than *kamlam, yuu léew* and *câ?* treated in this article.

4. To finish with our outlook, we would like to point out that it is typologically remarkable that a marker like *câ?* can establish a temporal boundary on its own which then interacts with other aspectual markers. The occurrence of *câ?* with a boundary aspect marker *léew* shows that in Thai, boundaries of a state of affairs are highly focussed. We do not know of any other language in which this is possible. But this needs a lot more research.

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