

INTERACTIONS BETWEEN VIEWPOINT ASPECT AND SITUATION ASPECT: A CASE STUDY OF ALTERNATING INTRANSITIVE CONSTRUCTIONS IN THAI¹

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Abstract

*This paper aims at analyzing an internal temporal constituency of situations denoted by alternating intransitive constructions (AIC) in Thai in order to subclassify them, and investigating interactions between two viewpoint-aspect markers, namely *kamlaŋ* and *jùu*, and each subtype of AICs. According to the scope of a profile on the causal chain, the AICs in Thai are arranged into two main groups, i.e., the AICs denoting a simplex causal situation and the AICs denoting a complex causal situation. In each group, they are further subclassified according to the situation aspect of the denoted situations. In analyzing the interactions between viewpoint aspect and situation aspect, I*

*show that *kamlaŋ* and *jùu* both function as imperfective viewpoint-aspect markers because they interact with situation aspect at the phase of the situation without any reference to the boundaries. However, they are distinguished in terms of the semantics of the forms themselves and the semantics of the phase they profile. On the one hand, *kamlaŋ* functions as a dynamic imperfective viewpoint-aspect marker in that it profiles the dynamic phase of the situations and construes them as on-going processes. On the other hand, *jùu* functions as a stative imperfective aspect marker. Unlike *kamlaŋ*, *jùu* can profile either a static or a dynamic phase. If *jùu* co-occurs with a static situation, the situation will be construed as a persistent state. If *jùu* co-occurs with a dynamic one, it refers to the progressive situation, which is viewed as stative. Since the grammatical aspect marker *jùu* is grammaticalized from the lexical verb meaning 'to exist,' there is a remnant of that meaning when *jùu* functions as a grammatical aspect marker. Consequently, the grammaticalized viewpoint-aspect marker *jùu* conveys the meaning that there exists a static or dynamic situation on the time line at the reference time or the speech-act time.*

Introduction

This paper presents a semantic analysis of aspectual phenomena in Thai language within the frame work of Selection Theory (Bickel 1997; and Sasse 2002), primarily on the assumption that the aspectual meaning of a situation denoted by a linguistic expression is the result of interactions between two separate semantic layers, i.e., viewpoint aspect and situation aspect. I will pay special attention to interactions between viewpoint aspect expressed by two markers, i.e., *kamlaŋ* and *jùu* combined with alternating intransitive constructions. The present paper has the two-fold goal of (1) analyzing the situation

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aspect of situations denoted by alternating intransitive constructions in order to subclassify them and (2) analyzing the interactions between the two viewpoint aspect markers mentioned above and each subtype of the alternating intransitive constructions. The paper is structured as follows: Section 2 presents a background of aspect and the theoretical frameworks employed in this study. Section 3 presents a semantic analysis and subclassification of alternating intransitive constructions in Thai. Section 4 deals with the interactions between the two viewpoint-aspect markers *kamlan* and *jùu* and each subtype of alternating intransitive constructions.

Viewpoint aspect, situation aspect, and their interactions

The term *aspect* in this paper is defined, following Comrie (1976: 3), as “different ways of viewing the internal temporal constituency of a situation.” As mentioned above, this study adheres to the point of view of Selection Theory, according to which an aspectual construal of a situation codified by a linguistic expression is a result of systemic interactions between two separate semantic layers, i.e., viewpoint aspect, realized by viewpoint-aspect markers, and situation aspect (*Aktionsart*) realized by verbs and their arguments. “These two categories stand in an operator-operandum relationship, where the viewpoint-aspect markers select their matching elements in situation aspects, thereby highlighting specific boundaries or phases” (Bickel 1997: 115).

The notion *viewpoint aspect* continues the traditional viewpoint-aspectual distinction of perfective/imperfective types. It pertains to the point of view adopted by speakers with respect to a situation referred to. Other corresponding terms are *grammatical aspect*, *aspect proper*, *perspective point*, *aspect* and the like. A situation can be referred to from either external or internal points of view. In the

former case, the speakers can refer to the situation as one undivided whole with the focus on both its initial and terminal boundaries. The latter perspective is chosen when neither the initial nor the final phase is placed in focus; only the internal structure of the situation is highlighted. The selection of perfective or imperfective aspect is, to some extent, subjective, in that it depends on whether the speaker chooses to represent the situation as ongoing or as completed (Olsen 1997). Consider the following examples:

- (1) a. John built a house last year.
b. John was building a house last year.

Both (1a) and (1b) refer to the same building event, but they are presented from different viewpoints. In (1a), the building event is presented as completed, including its terminal point. Thus sentence (1a) entails completion that John finished building a house. In contrast, (1b) communicates only the internal structure of the building event, without regard to its initial and terminal points. Thus the meaning of the sentence is noncommittal with respect to whether or not John has finished building the house.

The notion *situation aspect* refers to the internal temporal constituency of a situation denoted by a predicate. It has also been known as *Aktionsart*, *actionality*, *lexical aspect*, *verbal character*, *aspectual character*, *verb classes*, *event type*, *situation type*, and the like. The most well-known classification of situation aspect has been proposed by Vendler (1957). He groups predicates into four subclasses, i.e., state, activity (ACT), accomplishment (ACC), and achievement (ACH). Examples of these are as follows:

- (2) a. Pat is a fool. (state)
b. The children ran. (activity)
c. The children ran to the park.

- (accomplishment)
- d. The window shattered.
- (achievement)

While (2a) refers to a static situation that is homogeneous at any moment, (2b) to (2d) conjure up a kind of dynamic situation, i.e., they refer to changes over time. (2c) and (2d) denote situations that involve a dynamic process leading to a well-defined terminal point, beyond which the process cannot be continued. In other words, as soon as the terminal point is reached, the situations of running to the park and shattering must end. In contrast, no terminal point is associated with (2a) or (2b). (2c) and (2d) differ in that the former and not the latter, allows for linguistic expressions that refer to intermediate phases of a situation. In (2c) there is a phase about which one can say ‘the children now are running to the park’, but no phase in (2d) can be associated with the corresponding ‘?the window is now shattering.’ As the majority of scholars agree, the meanings of (2a) to (2d) differ with respect to their situation-aspect, or Aktionsart types, which are state, activity, accomplishment, and achievement, respectively. (2a) contrasts with (2b) to (2d) in terms of dynamicity, (2a) and (2b) with (2c) and (2d) in terms of telicity, and (2c) with (2d) in terms of punctuality.

There are also a number of non-Vendlerian classes called semelfactive (SEML) (Smith 1991), individual-level state, and stage-level state (Carlson 1981). Semelfactives are punctual events like achievements but have no resulting states. Examples follow.

- (3) a. The light flashed.
- b. Chris coughed.

The lack of the resulting state of semelfactives can be seen in their inability to be used as adjectival modifiers indicating resulting state, e.g., *the shattered window* vs. **the flashed light* (Van Valin 2005).

Carlson (1981) bifurcates the Vendlerian class of state into stage-level state (SLS) and individual-level state (ILS). Stage-level state predicates denote transient or episodic stages of an individual, e.g., *be hungry*, *be sleeping*, *be awake* and *be available*. Thus they may vary over time or place. In contrast, individual-level predicates indicate inherent and permanent dispositions of an individual (such as *tall*, *fat*, and *obnoxious*) and thus remain unchanged irrespective of time and/or place (Xiao and McEnery 2004).

There are a number of syntactic and semantic tests for determining the type of situation aspect. A list of tests used in the study is given in table 1. The symbol ‘-’

Tests	SLS	ILS	ACT	ACC	ACH	SEML
1. Occurs with pace adverbs like <i>fast</i> , <i>slowly</i> , and <i>gradually</i>	NO	NO	YES	YES	*YES	*YES
2. Occurs with in-x-time time-span adverbials like <i>in ten minutes</i>	NO	NO	NO	YES	*YES	*YES
3. Occurs with for-x-time adverbials like <i>for ten minutes</i>	YES	YES	YES	NO	*NO	*NO
4. Occurs with point of time adverbials like <i>at nine o'clock</i>	YES	NO	*NO	*NO	YES	YES
5. Can denote state	-	-	-	-	YES	NO

Remarks: SLS means stage-level state; ILS means individual-level state; ACT means activity; ACC means accomplishment; ACH means achievement and SEML means semelfactive.

Table 1. Criteria for classification of situation aspect

means unnecessary and ‘*’ means that a certain complication arises with this test, which will be discussed below.

Test 1 distinguishes dynamic from static situation. Pace adverbs like *fast* and *slow* can co-occur only with dynamic situations since they involve change over time; therefore, it is informative to say whether the change in question is happening fast or slow, e.g., *John is dancing very fast*. In contrast, stative situations like stage-level state and individual-level state are static and involve no change. They are, thus, incompatible with this type of adverbial, e.g., **John is a linguist very fast*. It should be noted that this type of adverbial can be applied to achievement and semelfactive situations only when they indicate very short temporal intervals, since both achievement and semelfactive situations are punctual, e.g., *the bomb exploded instantly/ *slowly/ *gradually*. Additionally, this test can be used to distinguish durative from punctual situation. Durative situations, like activity and accomplishment situations, can co-occur with adverbs like *slowly*, *quickly* and *rapidly*, while punctual situations, like achievements and semelfactives, are compatible only with adverbs indicating very short time periods, e.g., *instantly* and *quickly*, but are incompatible with the adverbs indicating a long time period, e.g., *slowly* and *gradually*.

Tests 2 and 3 distinguish telic situations, i.e., accomplishments, achievements, and semelfactives from atelic situations, i.e., states and activities. Only the former three can occur with in-*x*-time time-span adverbials since this type of adverbial focuses on terminal points. If something is done in an hour, then explicit reference is being made to the terminal point of the event. In other words, the event started at a certain time and ended an hour later. In contrast, if something is done for an hour, the same event could still be going on at a later time. All that the durative for-*x*-time temporal adverbials indicate is that an

event went on for a certain amount of time, without any information about when it began or when it ended. So in *he read the book in an hour*, the event began and finished within the space of one hour, whereas in *he read the book for an hour*, there is no indication of when the action began or ended, and the same event could still be going on at a later time. In general, states and activities readily take for-*x*-time phrases, while achievements, accomplishments, and semelfactives take in-*x*-time phrases. Because achievements and semelfactives are punctual, they are only compatible with in-*x*-time phrases indicating an exceedingly short period of time, e.g., *in the blink of an eye*, *in an instant*, *in a fraction of a second*. They are incompatible with in-*x*-time phrases referring to temporal periods longer than this, e.g., *in ten minutes* or *in an hour*, unless they have an iterative meaning (VanValin 2005), and they are accordingly marked ‘*’ in table 1.

Test 3 distinguishes stage-level state from individual-level state. For example:

- (4) a. ?At three o’clock, Boris was Russian.
b. At three o’clock, the socks lay under the bed.
(Filip 1999: 113)

Both (4a) and (4b) denote stative situations but differ in that the former is an inherent or permanent state of the individual Boris. The latter is just a transitory state which can vary over time/or place. The co-occurrence restrictions between the two types of state and point-of-time adverbials can be explained by pragmatic conditions as follows:

Point adverbials are odd with static state as they attribute (more or less) permanent properties to individuals.... Given the atemporal nature of static state, it is not surprising that it would be odd to assert that the properties

obtain at one particular moment within that interval... On the other hand with dynamic state predicates, it makes sense and it is informative to assert that the denoted property obtains at one particular moment.

(Filip 1999: 113)

Moreover, the point-of-time adverbial test can also distinguish dynamic and punctual situations, i.e., semelfactives and achievements, from dynamic durative situations, i.e., activities and accomplishments. For example:

- (5) a. At three o'clock, the light flashed.
 b. At three o'clock, he found his watch.
- (6) a. At three o'clock, Emily built a cabin.
 b. At three o'clock, the fly swam in the soup.

(Filip 1999: 113)

Since the semelfactive and the achievement situations are punctual, they therefore, when they occur with point-of-time adverbials, denote a situation that started and ended within the specified point in time. On the other hand, the activity and accomplishment situations are durative. When they co-occur with the same point-of-time adverbials, they convey an inceptive meaning, such that the situation of Emily building a cabin and that of the fly swimming in the soup started at three o'clock rather than that they both started and ended at three o'clock as in the case with semelfactives and the achievements.

In Van Valin (2005), the ability to be used as stative modifiers of verbs is used to distinguish the two types of punctual situations because it has been observed that semelfactives have no result state and thus cannot be used as stative modifiers, for example, **the tapped window*, **the flashed light*. Achievements, on the other

hand, do have result states and can therefore be used as stative modifiers, e.g., *the shattered window*, *the burst blood vessel*. Although this test is useful in a language with a class of adjectives, like English, one notes that, in Thai, the resulting states corresponding to the English achievements are expressed by the use of verbs, not stative modifiers. This test has, therefore, been modified to check the ability of verbs to denote a stative situation that is the resulting state of the dynamic situation, e.g., the verb *hàk* 'to break' in *kǐŋ máaj hàk* 'the twig broke/was broken.' Both the achievement situation, the twig breaking, and the stative situation, the twig being broken, are expressed by the same verb *hàk* 'to break'. However, verbs that denote semelfactive situations cannot be used to express the state situation since semelfactives lack a resulting state, e.g. *dam khó pràtuu* 'Dam knocked on the door' / **pràtuu khò* '*the door knocked.'

In order to establish a mapping relationship between viewpoint aspect and situation aspect, Sasse (2002) states that aspectual properties cannot be given in terms of holistic notions. They have to be decomposed in such a way that the matching phases to which aspect markers have access become clearly *visible*. Following Bickel (1997), two major semantic ingredients, τ and ϕ , are posited. The symbols τ_I and τ_T stand for situation boundaries, initial and terminal, respectively. The symbols ϕ_{DYN} and ϕ_{STATE} refer to the dynamic and static phase between the boundaries, respectively. ϕ_{STATE} is further subclassified into two subtypes, stage-level state and individual-level state, represented by $\phi_{SL-STATE}$ and $\phi_{IL-STATE}$, respectively. Situations of different situation-aspect types are said to possess different $\tau+\phi$ configurations, defining their potential phase structure. Some situations may be characterized by their situation aspect as $[\tau_I\phi\tau_T]$ (accomplishments). Some may be interpreted as $[\tau_I\phi_{DYN}]$ (activities),

[$\tau_1\phi_{SL-STATE}$] (stage-level states), [$\tau_1\phi_{IL-STATE}$] (individual-level states), or [$\tau_1\tau_T$] (achievements). Aspect markers are then said to select appropriate parts of the underlying phasal structure. A certain aspectual construal is said to be imperfective if the immediate phase of the situation in question is profiled, whereas, if the boundaries of the situation are profiled, the aspectual construal is labeled perfective.

The aspectual construals driven by the interactions between these two distinct conceptual layers are represented by the profile-base distinction in Langacker (1991: 5). According to him, the meaning of every linguistic expression is represented as profiling some parts of the base. The profile is a substructure that is elevated to a special level of prominence within the base. The base is the array of conceptual content evoked by an expression or information relevant for understanding the profiled concept.

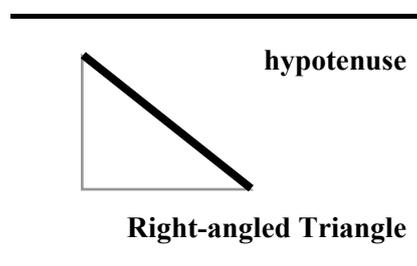


Figure 1. The meaning of the word *hypotenuse*

For example, in figure 1, the domain of the right-angled triangle constitutes the base which provides the context necessary for the description of the word *hypotenuse*, the profile. From this perspective, the situation aspect or the internal structure of a situation is therefore used as a base and a particular viewpoint aspect marker profiles certain parts of the base.

The interactions of certain *Aktionsart* configuration with the semantics of viewpoint-aspect markers result in different

readings of aspectual meanings. For example, the aspectual viewpoint of the sentence *John was building a house* is imperfective. The building event is ongoing. It is the result of interaction between the accomplishment situation [$\tau_1\phi_{DYN}\tau_T$] and the imperfective viewpoint aspect marker (*be+v_{ing}*) in which the dynamic phase [ϕ_{DYN}] is highlighted without any emphasis on boundaries. On the other hand, the building event codified by the sentence *John built a house* is presented as completed: The house was built to its completion. Initial boundary, dynamic phase, and terminal boundary are all highlighted; the aspectual viewpoint of this sentence is, therefore, perfective. The aspectual contrast between the sentences *John was building a house* and *John built a house* can be represented as different profiling of the same base or [$\tau_1\phi_{DYN}\tau_T$] vs. [$\tau_1\phi_{DYN}\tau_T$], respectively. The bold regions represent the element(s) of the base that are being highlighted.

Alternating intransitive constructions in Thai

The term *alternating intransitive construction* here refers to a construction which contains an intransitive variant of ambivalent verbs, or verbs that can be used both transitively and intransitively. Examples of Thai ambivalent verbs include: *pàət* ‘open’ in *pàət pràtuu /pràtuu pàət* ‘open gate/gate open’; *lên* ‘sail’ in *lên rīa/rīa lên* ‘sail boat/boat sail’; and *kràphríp* ‘flash’ in *kràphríp fai /fai kràphríp* ‘flash light/light flash.’ Ambivalent verbs are also characterized in terms of a change in an argument structure. Consider the following typical case of an English ambivalent verb.

- (7) a. John broke the vase.
b. The vase broke.

It may be observed that the syntactic object *vase* of the transitive verb *break* corre-

sponds to the syntactic subject of the intransitive verb. This type of configurational correlation characteristics of the ambivalent verb is referred to as causative alternation (Levin 1993). The transitive/intransitive constructions and the transitive/intransitive verbs of this type are referred to as alternating transitive construction, henceforth ATC/ alternating intransitive constructions, henceforth AIC, and alternating transitive/intransitive verbs, respectively (Thepkanjana 2000).

AICs in Thai are subclassified according to their profile on the causal chain. According to Croft (1991), the causal chain refers to a cognitive model of conceptualizing events in the world, which is based on the interactions between entities and the asymmetric transmission of force from the source (agent or causer) to the target (patient or causee). The causal chain is used to represent the prototypical causative situation. The example below illustrates a prototypical causative situation.

(8) John broke the window.

The internal structure of this breaking event is a series of three causally related events, namely, causing event, caused event, and resulting state. According to Croft (1990), the structure might be illustrated as in figure 2a. Figure 2b is my representation of the causal chain in terms of its internal temporal constituency.

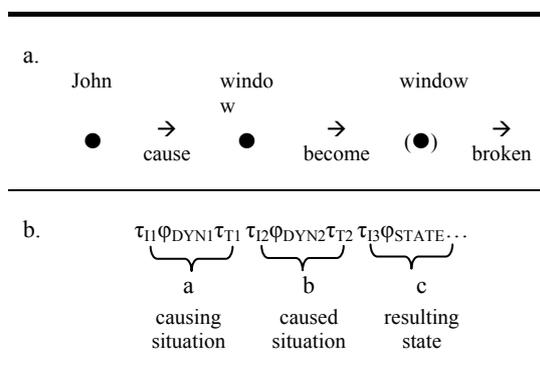


Figure 2. Causal chain

The causing event ($\tau_{I1}\Phi_{DYN1}\tau_{T1}$, or ‘a’) refers to the situation in which an agentive participant (causer) acts on a non-agentive participant (causee). The caused event ($\tau_{I2}\Phi_{DYN2}\tau_{T2}$, or ‘b’) is the situation in which the non-agentive participant acts out a change of state up to and including its culmination point, abstracting away from whatever causes the change in question. The resulting state ($\tau_{I3}\Phi_{STATE}\dots$, or ‘c’) is the state that sets in when the event has reached its culmination point (Thepkanjana 2000). In the causative situation of John breaking the window, the causing event corresponds to the situation of John acting on the window, which leads to the caused event of the window breaking. After that the window is in the state of being broken which is the resulting state. Croft (1991) states that segments of the causal chain can be realized linguistically by various types of verbs. Consider the hypothetical situation in which a man named John pushed the door and the door opened. Then, he left the door open for two hours after which he closed it. These situations can be expressed in Thai using the following constructions.

- (9) a. *cɔɔn phlâk pràtuu*
 John push door
 “John pushed the door.”
- b. *cɔɔn phlâk pràtuu pèət*
 John push door open
 “John pushed the door open.”
- c. *cɔɔn pèət pràtuu*
 John open door
 “John opened the door.”
- d. *pràtuu pèət ?òk cháa cháa*
 door open out slow slow
 “The door was opening slowly.”
- e. *pràtuu pèət jùu*
 door open ASP
 “The door was open.”

The transitive sentence (9a) denotes the causing situation, which is the causer acting on the causee. Sentences (9b) and (9c) designate both the causing and the caused situations, which are the causer's action and the causee's change of state but they differ in terms of the number of verbs. In (9b), the causing and the caused situations are realized by two separate verbs, namely the transitive verb *phlâk* 'push' and the intransitive verb *pàət* 'open.' On the other hand, (9c) uses only one verb, the transitive verb *pàət* 'open.' Examples (9d) and (9e) designate only one segment of the causal chain, the caused situation and the resulting state, respectively.

Using the profile-base distinction, it can be said that these five sentences have the same base, which is the causal chain, but they profile different segments of the causal chain. The meaning of these sentences can be represented by the following figures. The bold region indicates the profile that constitutes the meaning of the sentence.

Based on their profile on the causal chain, AICs in Thai may be subclassified into two main groups. AICs of the first group profile only a single subevent of the causal chain, which is either the caused event or the resulting state. The latter group comprises AICs that have a greater profile.

They cover two subevents of the causal chain, the caused event and the resulting state. Since AICs of the former group involve only a single portion while those of the latter type cover two subevents, they are, therefore, labeled AICs denoting simplex causal situations, and AICS denoting complex causal situations, respectively.

AICs of the first group can be further subclassified into four subtypes according to their profiling on the causal chain and the type of the situation they denote, namely (1) AICs denoting an activity, (2) AICs denoting a semelfactive, (3) AICs denoting a stage-level state, and (4) AICs denoting an individual-level state.

The AICs of the first two types profile the same part, the caused event of the causal chain, but they differ in terms of the internal temporal constituency of the denoted situations. The former depicts a situation which is dynamic, durative, and inherently temporally unbounded (atelic), whereas the latter denotes a situation which is dynamic, telic and punctual situation or the semelfactive situation type. AICs of the last two types both profile the resulting state, but they differ in that the former highlights a transitory state of the individual, while the latter depicts a permanent state of the individual.

AICs of the latter group can be subclassified into two main subtypes according to

3a. <i>cɔɔn phlâk pràtuu</i> "John pushed the door."	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$
3b. <i>cɔɔn phlâk pràtuu pàət</i> "John pushed the door open."	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$
3c. <i>cɔɔn pàət pràtuu</i> "John opened the door."	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$
3d. <i>pràtuu pàət ?àək cháa cháa</i> "The door opened slowly."	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$
3e. <i>pràtuu pàət jùu</i> "The door was open."	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$

Figure 3. Semantic representations of the situations denoted by (9a) – (9e)

the situation aspect of the caused situation; namely, AICs denoting an accomplishment followed by a state, henceforth accomplishment/state, and AICs denoting an achievement followed by a state, henceforth achievement/state. Then, each of these may be further subclassified according to the situation aspect of the state situation. There are, therefore, four subtypes: AICs denoting a complex causal situation composed of an accomplishment situation followed by a stage-level state situation, henceforth accomplishment/SL-state, or an individual-level state situation, henceforth accomplishment/IL-state, and AICs denoting a complex causal situation composed of an achievement situation followed by a stage-level state situation, henceforth achievement/SL-state, or an individual-level state situation, henceforth achievement/IL-state. Consider the following examples of Thai AICs.

(10) a. *dam lēn ria ?òk*
 Dam sail boat out
paj naj thalee
 go in sea
 “Dam sailed the boat into the sea.”

b. *ria lēn ?òk paj naj thalee*
 boat sail out go in sea
 “The boat sailed into the sea.”

(11) a. *dam kràphríp fajnâarót*
 Dam flash headlight
nĭŋ khráŋ
 one CLS
 “Dam flashed the headlight once.”

b. *fajnâarót kràphríp nĭŋ khráŋ*
 headlight flash one CLS
 “The headlight flashed once.”

c. *fajnâarót kràphríp*
 headlight flash
 “The headlight flashed.”

(12) a. *dam khwěen pháap*
 Dam hang picture

thĭi phanăŋ
 at wall
 “Dam hung the picture on the wall.”

b. *phâap khwěen jùu*
 picture hang exist.at/ASP
thĭi phanăŋ
 at wall
 “The picture was hanging on the wall.”

(13) a. *dam tham khanôm phûak níi*
 Dam make dessert CLS this
 “Dam made these desserts.”

b. *khanôm phûak níi tham càak*
 dessert CLS this make from
pêeŋ khâawphôot
 flour corn
 “These desserts were made of corn flour.”

(14) a. *dam pəət pràtuu*
 Dam open gate
 “Dam opened the door.”

b. *pràtuu pəət*
 gate open/be open
 “The gate opened (inchoative) /
 was open (stative).”

(15) a. *dam com ria khâasĭk*
 Dam sink ship enemy
 “Dam sank the enemy’s ship.”

b. *ria khâasĭk com*
 ship enemy sink/be sunk
 “The enemy’s ship sank
 (inchoative)/was sunk (stative).”

(16) a. *dam dâp faj naj hōŋ*
 Dam turn.off light in room
 “Dam turned off the light in the room.”

Tests	Activity AIC <i>ria lén ?ðək paj naj thalee</i> “The boat sailed into the sea.”
1. Occurs with pace adverbs	YES
2. Occurs with in- <i>x</i> -time time-span adverbials	NO
3. Occurs with for- <i>x</i> -time adverbials	YES
4. Occurs with point of time adverbials	*NO
5. Can denote state	-

Table 2. The AIC *ria lén ?ðək paj naj thalee* with classification criteria

- b. *fāj naj hōŋ dāp*
light in room go.off/be.off
“The light in the room went off/
was off.”
- (17) a. *dam hək kīŋmáj*
Dam break twig
“Dam broke the twig.”
- b. *kīŋmáj hək*
twig break/be.broken
“The twig broke (inchoative)/ was
broken (stative).”

The ATCs, represented by the ‘a’ sentences in the paired examples, all denote a complex causal situation consisting of two causally chained subevents, i.e., the causing and the caused situations of the causal chain. The causing situation is composed of the causer’s actions: Dam did something to the boat (10a), the headlight (11a), the picture (12a), the desserts (13a), the gate (14a), the ship (15a), the light (16a), and the twig (17a). The caused situations are the change of state that happened to the causees, which are the boat’s sailing, the headlight’s flashing, the picture’s being hung on the wall, the desserts’ coming into existence, the gate’s opening, the ship’s sinking, the light’s going off and the twig’s breaking, each, the result of an action on Dam’s part. The AICs, represented by the ‘b’ sentences in the examples, designate, in contrast, various types of situations with respect to the causal chain. The AICs denoting a simplex causal situation designate either the caused situation (10b, 11b) or the resulting state (12b, 13b). The

AICs denoting a complex causal situation designate both the caused situation and the resulting state (14b-17b).

In (10b) and (11b), the caused situation is realized as another dynamic situation acted out by the causee abstracted away from whatever causes the change in question since there is no linguistic element referring to it. In terms of situation aspect, they correspond to activity and semelfactive, respectively. The activity is an atelic dynamic durative situation. Its internal temporal shape is revealed by the semantic tests in table 2.

The AIC denoting this activity is compatible with pace adverbials and for-*x*-time adverbials but incompatible with in-*x*-time adverbials and point-of-time adverbials. It should be noted that the symbol “*” found in the test 4 in table 2 indicates that the co-occurrence of this AIC and point-of-time adverbials as in *?ria lén ?ðək paj naj thalee tɔɔn pèet mooŋ*, is acceptable only in the case where it conveys the ingressive meaning that the situation, the boat sailing, started at eight o’clock, rather than starting and ending within that point in time.

The semelfactive is a telic process which is punctual and has no resulting state. If the tests in table 1 are used, the following results obtain.

AICs denoting semelfactive situations are compatible with pace adverbs, in-*x*-time adverbials, and point-of-time adverbials

Tests	Semelfactive AIC <i>fajnâarót kràphríp n̄ng khráj</i> “The headlight flashed once.”
1. Occurs with pace adverbs	YES
2. Occurs with in- <i>x</i> -time time-span adverbials	*YES
3. Occurs with for- <i>x</i> -time adverbials	*NO
4. Occurs with point of time adverbials	YES
5. Can denote state	NO

Table 3. An AIC denoting a semelfactive situation with classification criteria

but incompatible with for-*x*-time adverbials. The symbol ‘*’ for test 2 indicates that AICs of this type are only compatible with in-*x*-time adverbials indicating a very short period of time. The symbol ‘*’ for test 3 indicates that this combination is acceptable in the case where the punctual situation has started and ended for half an hour. Moreover, this combination could also be acceptable if there were no phrase *n̄ng khráj* ‘once,’ since the semelfactive can also occur iteratively as in *fajnâarót kràphríp maa s̄ip nathii léew* ‘the headlight has been flashing for ten minutes.’

While the two subtypes of AIC denoting simplex causal situations above highlight the caused situation, the other two subtypes highlight the resulting state, which is the state that sets in when the causing and the caused situations have reached their culmination point.

In (12b) and (13b), the AICs designate the same part of the causal chain, i.e., the resulting state, but they are distinguished in terms of the situation-aspect type of the state situation. On the other hand, (12b) predicates a property which is construed as transitory or impermanent. Thus, it can vary over time and/or place. The picture’s state of hanging on the wall may last for a certain period of time. The owner of the picture can move it to another place. On the other hand, (13b) is predicating inherent or permanent properties of the dessert; thus, the dessert remains unchanged irrespective of time and/or place. The former is referred to as an AIC denoting a stage-level state situation, while the latter is labeled an AIC denoting an individual-level state situation. Their internal temporal characteristics are revealed using the semantic tests from table 1, as shown in table 4.

Tests	AIC denoting a stage-level state <i>phâap khwēen jùu th̄i phan̄ng</i> “The picture was hanging on the wall.”	AIC denoting an individual-level state <i>khanòm phûak níi tham càak p̄ēng khâawphôot</i> “These desserts were made of corn flour.”
1. Occurs with pace adverbs	NO	NO
2. Occurs with in- <i>x</i> -time time-span adverbials	YES	NO
3. Occurs with for- <i>x</i> -time adverbials	YES	NO
4. Occurs with point of time adverbials	YES	NO
5. Can denote state	-	-

Table 4. An AIC denoting state situations with classification criteria

Since both of these AICs denote static situations, they are incompatible with pace adverbs. The stage-level state situation is compatible with time-span adverbials indicating the period of time that the state lasts, the for-*x*-time adverbials, and point-of-time adverbials because the state of this type is construed as non-permanent property of an individual. It is, thus, informative to say that the specified state obtains only for a certain period of time, at one particular moment, or remains unchanged over time. In contrast, the individual-level state situation expresses a permanent property of an individual that cannot be changed anymore. Consequently, it cannot occur with time-span adverbials, the for-*x*-time adverbials, or point-of-time adverbials.

While AICs of the previous group profile a single part of the causal chain, the AICs denoting complex causal situations (14b-17b), have a greater profile covering both the caused situation and the resulting state. The AICs of this group have two readings, the dynamic situation and the static situation.

However, both situations are causally related in that the former corresponds to the caused event and the latter corresponds to the resulting state of the causal chain. Since both the caused situation and the resulting state are realized linguistically by the same AIC, it can, therefore, be said that AICs of this type span both the caused situation and the resulting state. In other words, they denote a complex causal situation composed of two sequential subevents, the caused situation followed by the resulting state. AICs of this type can be subclassified into two main groups according to the situation aspect of the caused situation; namely, AICs denoting an accomplishment followed by a state, henceforth accomplishment/state, and AICs denoting an achievement followed by a state, henceforth achievement/state. Then, each of them is further subclassified

according to the situation-aspect type of the state situation. There are, thus, four subtypes: AICs denoting a complex causal situation composed of an accomplishment situation followed by a stage-level state situation, henceforth accomplishment/SL-state, and an individual-level state situation, henceforth accomplishment/IL-state, and AICs denoting a complex causal situation composed of an achievement situation followed by a stage-level state situation, henceforth achievement/SL-state, or an individual-level state situation, henceforth achievement/IL-state.

In (14b) and (15b), the meanings of the AICs *pràtuu pàət* and *riá khâasìk com* are ambiguous in that they can be interpreted either as accomplishments, the gate opening and the enemy's ship sinking, or as states, the gate being open and the enemy's ship being sunk. However, they are causally related. The accomplishment situation corresponds to the caused situation, and the stage-level state situation corresponds to the resulting state of the causal chain. These two AICs are distinguished in terms of the situation aspect of the resulting states they denote. On the one hand, the resulting state of the door being open is construed as transitory or impermanent. It can last for a certain period of time; someone may close it. On the other hand, the resulting state of the ship being sunk is an inherent or permanent property of the ship; thus, it remains unchanged irrespective of time and/or place. The former is referred to as a stage-level state situation, while the latter is an individual-level state situation. The semantic properties of these AICs can be distinguished by the tests in table 5.

Tests	AIC denoting an accomplishment/SL-state	AIC denoting an accomplishment/IL-state
	<i>pràtuu pèət</i> “The gate’s opening/open.”	<i>ria khâasik com</i> “The enemy’s ship’s sinking/sunk.”
1. Occurs with pace adverbs	*YES	*YES
2. Occurs with in- <i>x</i> -time time-span adverbials	*YES	*YES
3. Occurs with for- <i>x</i> -time adverbials	*YES	*YES
4. Occurs with point of time adverbials	YES	*NO
5. Can denote state	YES	YES

Table 5. AICs denoting accomplishment/state situations with classification criteria

Given the accomplishment situation interpretation, the AICs can co-occur with pace adverbials and in-*x*-time adverbials but not with for-*x*-time or point-of-time adverbials. The symbol ‘*’ for test 3 indicates that these sentences are acceptable only in the case where they denote a static situation in which the door being open or the ship being sunk started at some time before and can continue at a later time, not a dynamic one. The symbol ‘*’ for test 4 indicates that these combinations are acceptable if they have an inceptive meaning, i.e., the accomplishment situation started at ten o’clock, rather than starting and ending within a point in time.

For the stage-level state situation reading, the AIC *pràtuu pèət* can co-occur with in-*x*-time adverbials, for-*x*-time adverbials, and point-of-time adverbials but not with pace adverbs. The symbol ‘*’ for test 1 and test 2 indicates that these co-occurrences are possible only in cases where the AIC denotes the accomplishment situation of the door opening.

For the individual-level state situation reading, the AIC *ria khâasik com* can co-occur with for-*x*-time adverbials but not with

pace adverbs or point-of-time adverbials. The symbol ‘*’ for test 1 and test 2 indicates that these combinations are grammatical only in cases where the AIC denotes the accomplishment situation. The symbol ‘*’ for test 4 indicates that this sentence is acceptable if it denotes an accomplishment situation which started at the specified time.

Like those in (14b) and (15b), the meanings of the AICs *faj naj hōη dāp* and *kīηmáaj hāk* are also ambiguous in the sense that they can be interpreted either as achievement situations or as state situations. However, they are causally related. The achievement situation corresponds to the caused situation and the state situation corresponds to the resulting state of the causal chain.

In (16b) and (17b), the state interpretations correspond to the same part of the causal chain, i.e., the resulting state, but they are distinguished in terms of the situation aspect of the state situation. On the one hand, the AIC (16b) predicates a property which is construed as transitory or impermanent; thus, it can vary over time and/or place. The state of being off can last for a limited period of time; someone may turn it on later. On the other hand, the AIC (17b) is predicating inherent or permanent properties of the twig; thus, it remains unchanged irrespective of

time and/or place. The former is referred to as a stage-level state situation, while the latter is an individual-level state situation. The semantic properties of these AICs can be distinguished using the tests in table 6.

adverbs, in-*x*-time adverbials or point-of-time adverbials. The symbol ‘*’ for test 1 indicates that this co-occurrence is grammatical only in the case where the AIC denotes an achievement situation. The

Tests	AIC denoting an achievement/SL-state <i>fāj naj hōj dāp</i> “The light in the room went out/was off.”	AIC denoting an achievement/IL-state <i>kīnmáaj hāk</i> “The twig broke/was broken.”
	1. Occurs with pace adverbs	*YES
2. Occurs with in- <i>x</i> -time time-span adverbials	*YES	*YES
3. Occurs with for- <i>x</i> -time adverbials	*YES	*YES
4. Occurs with point of time adverbials	YES	*NO
5. Can denote state	YES	YES

Table 6. AICs denoting achievement followed by state situations with classification criteria

Given the achievement situation interpretation, the AICs *fāj naj hōj dāp* and *kīnmáaj hāk* can co-occur with pace adverbials, in-*x*-time adverbials, and point-of-time adverbials but not with the for-*x*-time adverbials. The symbol ‘*’ for test 3 indicates that these sentences are acceptable only in the case where these combinations refer to a state situation of the light being off and the twig being broken which started at some point in time before and can continue at a later time or in the case where they denote an instantaneous situation that happened some time before.

For the stage-level state situation reading, the AIC *fāj naj hōj dāp* can co-occur with in-*x*-time adverbials, for-*x*-time adverbials, and point-of-time adverbials but not with pace adverbs. The symbol ‘*’ for test 1 indicates that this combination is acceptable only in the case that it denotes the achievement situation.

For the individual-level state situation reading, the AIC *kīnmáaj hāk* can co-occur with for-*x*-time adverbials but not with pace

symbol ‘*’ for test 4 indicates that this combination is acceptable if the AIC denotes an achievement situation which started and ended within the point in time.

The meanings of the AICs denoting a simplex causal situation and their ATC counterparts are represented in terms of profile-base distinction in figure 4. The meanings of the AICs denoting a complex causal situation and their ATC counterparts are represented in figure 5. The symbols ‘ τ_I ’ and ‘ τ_T ’ refer to the situation boundaries, i.e., the initial point and the terminal point, respectively. The symbols ‘ Φ_{DYN} ’, ‘ $\Phi_{SL-STATE}$ ’, and ‘ $\Phi_{IL-STATE}$ ’ refer to the phases between the boundaries, which are dynamic phase, stage-level state phase, and individual-level state phase, respectively. The symbol ‘...’ indicates that the situation in question can continue without a natural endpoint. The bold region shows the profile, and the grey region represents that part of the base which is not being profiled.

ATC and AIC		Semantic Representation
4.1 ATC and AIC denoting activity		
ATC:	a. <i>dam lên ría ?đòk paj naj thalee</i> “Dam sailed the boat into the sea.”	$\tau_{H1}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\dots$
AIC:	b. <i>ría lên ?đòk paj naj thalee</i> “The boat sailed into the sea.”	$\tau_{H1}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\dots$
4.2 ATC and AIC denoting semelfactive		
ATC:	a. <i>dam kràphríp faj nâarót nîj khráj</i> “Dam flashed the headlight once.”	$\tau_{H1}\tau_{T1}\tau_{I2}\tau_{T2}$
AIC:	b. <i>faj nâarót kràphríp nîj khráj</i> “The headlight flashed once.”	$\tau_{H1}\tau_{T1}\tau_{I2}\tau_{T2}$
4.3 ATC and AIC denoting SL-state		
ATC:	a. <i>dam khwěen phâap thîi phanăj</i> “Dam hung the picture on the wall.”	$\tau_{H1}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$
AIC:	b. <i>phâap khwěen jùu thîi phanăj</i> “The picture was hanging on the wall.”	$\tau_{H1}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$
4.4 ATC and AIC denoting IL-state		
ATC:	a. <i>dam tham khanôm phûak nîi càak pêej khâawphôot</i> “Dam made these desserts from corn flour.”	$\tau_{H1}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$
AIC:	b. <i>khanôm phûak nîi tham càak pêej khâawphôot</i> “These desserts were made of corn flour.”	$\tau_{H1}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{STATE}\dots$

Figure 4. Semantic representations of the AICs denoting a simplex causal situation and their ATC counterparts

	ATC and AIC	Semantic Representation
5.1 The ATC and the AIC denoting the accomplishment/SL-state		
ATC:	a. <i>dam pəət pràtuu</i> “Dam opened the door.”	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{SL-STATE}\dots$
AIC:	b. <i>pràtuu pəət</i> “The door opened/was open.”	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{SL-STATE}\dots$
	c. <i>pràtuu pəət</i> “The door opened.”	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{SL-STATE}\dots$
	d. <i>pràtuu pəət</i> “The door was open.”	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{SL-STATE}\dots$
5.2 ATC and AIC denoting accomplishment/IL-state		
ATC:	a. <i>dam com ría khâasĭk</i> “Dam sank the enemy’s ship.”	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{IL-STATE}\dots$
AIC:	b. <i>ría khâasĭk com</i> “The enemy’s ship sank/was sunk.”	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{IL-STATE}\dots$
	c. <i>ría khâasĭk com</i> “The enemy’s ship sank.”	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{IL-STATE}\dots$
	d. <i>ría khâasĭk com</i> “The enemy’s ship was sunk.”	$\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{I2}\Phi_{DYN2}\tau_{T2}\tau_{I3}\Phi_{IL-STATE}\dots$
5.3 ATC and AIC denoting achievement/SL-state		
ATC:	a. <i>dam dâp faj naj hŏŋ</i> “Dam turned off the light in the room.”	$\tau_{11}\tau_{T1}\tau_{I2}\tau_{T2}\tau_{I3}\Phi_{SL-STATE}\dots$
AIC:	b. <i>faj naj hŏŋ dâp</i> “The light in the room went off/was off.”	$\tau_{11}\tau_{T1}\tau_{I2}\tau_{T2}\tau_{I3}\Phi_{SL-STATE}\dots$
	c. <i>faj naj hŏŋ dâp</i> “The light in the room went off.”	$\tau_{11}\tau_{T1}\tau_{I2}\tau_{T2}\tau_{I3}\Phi_{SL-STATE}\dots$
	d. <i>faj naj hŏŋ dâp</i> “The light in the room was off.”	$\tau_{11}\tau_{T1}\tau_{I2}\tau_{T2}\tau_{I3}\Phi_{SL-STATE}\dots$
5.4 ATC and AIC denoting achievement/IL-state		
ATC:	a. <i>dam hâk kĭŋmâaj</i> “Dam broke the twig.”	$\tau_{11}\tau_{T1}\tau_{I2}\tau_{T2}\tau_{I3}\Phi_{IL-STATE}\dots$
AIC:	b. <i>kĭŋmâaj hâk</i> “The twig broke/was broken.”	$\tau_{11}\tau_{T1}\tau_{I2}\tau_{T2}\tau_{I3}\Phi_{IL-STATE}\dots$
	c. <i>kĭŋmâaj hâk</i> “The twig broke.”	$\tau_{11}\tau_{T1}\tau_{I2}\tau_{T2}\tau_{I3}\Phi_{IL-STATE}\dots$
	d. <i>kĭŋmâaj hâk</i> “The twig was broken.”	$\tau_{11}\tau_{T1}\tau_{I2}\tau_{T2}\tau_{I3}\Phi_{IL-STATE}\dots$

Figure 5. Semantic representations of the AICs denoting a complex causal situation and their ATC counterparts

In summary, AICs in Thai may be subclassified into two main classes according to their profile on the causal chain; namely, (1) AICs denoting a simplex causal situation and (2) AICs denoting a complex causal situation. AICs of the first class may be further subclassified into four subtypes according to the situation aspect of the situation they denote, namely (1.1) AICs denoting an activity, (1.2) AICs denoting a semelfactive, (1.3) AICs denoting a stage-level state, and (1.4) AICs denoting an individual-level state situation.

AICs denoting a complex causal situation may likewise be divided into four subtypes according to the situation aspect of the situation they denote, namely, (2.1) AICs denoting a complex causal situation composed of an accomplishment followed by a stage-level state, (2.2) AICs denoting a complex causal situation composed of an accomplishment followed by an individual-level state, (2.3) AICs denoting a complex causal situation composed of an achievement followed by a stage-level state, and (2.4) AICs denoting a complex causal situation composed of an accomplishment followed by an individual-level state. In the next section, I will analyze interactions between two viewpoint aspect markers, *kamlaj* and *jùu*, and each subtype of AIC established in this section.

Interactions between *kamlaj* and *jùu* and each AIC subtype

As mentioned in the introduction, this analysis adheres to the Selection Theory as developed by Bickel (1997). To recapitulate, according to him, the aspectual meaning conveyed by a sentence results from interactions between two semantic layers, situation aspect and viewpoint aspect. The situation aspect represents an internal temporal constituency of a situation denoted by verb and its arguments and a viewpoint-aspect marker selects its matching elements in the

situation aspect, thereby highlighting specific boundaries or phases. The imperfective aspect marker highlights only the phase without any reference to the boundaries while the perfective aspect marker profiles the boundaries. This idea is, to some extent, analogous to the idea of profile-base distinction of Langacker (1991: 5) which is that every linguistic expression's meaning is represented as profiling some parts of the base. Consequently, the situation aspect is used as the base, and viewpoint-aspect markers profile some elements of the base.

This section deals with interactions between two viewpoint-aspect markers, *kamlaj* and *jùu*, and each subtype of AIC. The discussion in this section begins with a brief review of previous analyses of these two viewpoint-aspect markers, followed by an analysis of interactions between the two and each subtype of AIC. It will be pointed out in this section that, even though *kamlaj* and *jùu* are both imperfective aspect markers, they may be distinguished in terms of the semantic properties of the markers, themselves, and those of the elements in the situation aspect they profile.

In comparison with other forms considered as carrying viewpoint-aspect meaning, *kamlaj* and *jùu* have been quite extensively studied. There has been unanimous agreement regarding the imperfectivity of the forms; however, there is controversy over the aspectual meaning conveyed by these two markers and their relationships. To begin with the form *kamlaj*, it has often been referred to as a progressive marker indicating the progressivity of the situation. The speakers focus on the immediate phase of the situation regardless of its boundaries, either initial or final. (Hass 1955; Scovel 1970; Warotamasikkhadit 1972, 1976; Boonyapatipark 1983; Sookgasem 1990; Meepoe 1998; Bisang 2003; Kullavanijaya and Bisang 2004). While *kamlaj* has been treated consistently in the literature, the as-

pectual meanings conveyed by *jùu* vary. *jùu* has been considered as a semantic doublet of *kamlaŋ* in the deep structure that gets transformed differently in the surface structure (Warotamasikkhadit 1976); a continuative aspect marker indicating the continuation of the situation (Filbeck 1975; Boonyapatipark 1983; Bisang 2003, and Kullavanijaya and Bisang 2004); and a general imperfective aspect marker signifying both progressive and stative meanings (Meepoe 1998).

Despite the many important contributions to the functions and meanings of *kamlaŋ* and *jùu* made by the aforementioned linguists, it seems that some important aspects of the functions and meanings of these two forms still remain poorly accounted for, specifically when and why *kamlaŋ* and *jùu* in a given construction should be interpreted one way rather than another. For instance, many linguists have claimed that *kamlaŋ* and *jùu* in examples like (18a) and (18b) have nearly identical interpretations, which are on-going processes, but differ in that the former puts more emphasis on the dynamic on-goingness of the process, while the latter communicates more the continuance of the process. However, if the two forms have been contrasted in terms of progressiveness and continuance, it seems quite difficult to explain why (19a) and (19b) conjure up two distinct aspectual meanings, i.e., on-going process and persistent state, respectively. Given that *jùu* can be used to describe the continuance of a dynamic action as in (18a), it is challenging to find out why (19b) cannot receive the dynamic interpretation of the action of the gate opening.

- (18) a. *ria kamlaŋ lèn*
 boat ASP sail
 “The boat was sailing.”
 b. *ria lèn jùu*
 boat sail ASP
 “The boat was sailing.”
 (19) a. *pràtuu kamlaŋ pèət*

- gate ASP open/be.open
 “The gate was opening.”
 b. *pràtuu pèət jùu*
 gate open/be.open ASP
 “The gate was open”

I would argue that the form *kamlaŋ* should be considered a *dynamic imperfective* aspect marker because it functions to profile only the dynamic phase of the situation and construes it as an on-going process. On this basis, it can be said that *kamlaŋ* has dynamicity as an important component of its meaning. It is, therefore, compatible with dynamic durative situations but incompatible with highly static or punctual ones. The form *jùu* should be considered a *stative imperfective* aspect marker. Unlike *kamlaŋ*, *jùu* can profile either a static or a dynamic phase. If *jùu* profiles a static phase, the situation will be construed as a state persisting at the reference time or the speech-act time. If it profiles a dynamic one, it construes the situation as a progressive situation that is being viewed as static. I suggest that the differences between the two markers result from their different co-occurrence restrictions and from the grammaticalization of *jùu*. The aspect marker *jùu* is grammaticalized from the lexical verb meaning ‘to exist at,’ and there is a remnant of that meaning when *jùu* functions as a viewpoint-aspect marker. Consequently, the grammaticalized aspect marker *jùu* conveys the meaning that there exists a static or dynamic situation on the timeline at the reference time or the speech-act time.

Interactions between *kamlaŋ* and the alternating intransitive constructions

The form *kamlaŋ* functions to profile the dynamic phase and construes it as an on-going situation regardless of its boundaries. Thus, it can co-occur with AICs denoting dynamic durative situations, e.g., activities (20a) and accomplishments (20e,

20f), but cannot co-occur with AICs denoting stative situations, e.g., stage-level states (20c), individual-level states (20d), and AICs denoting punctual situations, e.g., semelfactives (20b) and achievements (20g, 20h). For example:

- (20) a. *ria kamlaj lèn ?òək*
 boat ASP sail out
paj naj thalee
 go in sea
 “The boat was sailing into the sea.”
- b. *fajnâarót kamlaj*
 headlight ASP
krâphríp/?nĭj khráj*
 flash one time
 “*?The headlight was flashing once.”
- c. **phâap kamlaj khwěen*
 picture ASP hang
thĭi phanăj
 at wall
- d. **khanǒm phûak níi*
 dessert CLS this
kamlaj tham càak
 ASP make from
pêej khâawphôot
 flour corn
- e. *pràtuu kamlaj pèət*
 gate ASP open
 “The gate opened.”
- f. *ria khâasĭk kamlaj com*
 ship enemy ASP sink
 “The enemy’s ship sank.”
- g. **?faj naj hōj*
 light in room
kamlaj dâp
 ASP turn.off/go.off

- h. **?kĭj máaj kamlaj hàk*
 twig ASP break

The symbol ‘*?’ at the sentence denoting the semelfactive situation (20b) indicates that this sentence is grammatical without the phrase *nĭj khráj* ‘once.’ The semelfactive, *krâphríp* ‘flash’, can refer to a single flash or a series of flashes. But when it takes *kamlaj*, only the latter meaning is plausible. The symbol ‘*?’ appearing with (20b) with the *nĭj khráj* ‘once’ phrase, with (20g), and with (20h), indicates that *kamlaj* typically cannot occur with these sentences, since all of them denote a punctual situation. Their initial and terminal boundaries are in nearly the same position, so they lack the dynamic phase between the boundaries. However, in certain contexts, a slow-motion picture for instance, *kamlaj* can be used with punctual situations. In these cases, the punctual situations are reconstrued as having duration. In a normal context, the situations of the headlight flashing, the light going off, and the twig breaking may happen instantly or take only a second, but in the slow-motion film, these situations are represented as occurring more slowly than usual. So, there is a noticeable time span between the situation boundaries. Then *kamlaj* can occur and force the construal of these situations as on-going processes.

Before leaving this subsection, it is worth noting here that co-occurrences of *kamlaj* with AICs denoting semelfactives and AICs denoting complex causal situations reveal an important characteristic of the form *kamlaj*. In the case of the AICs denoting semelfactives and achievement/IL-states, *kamlaj*, in certain contexts, can coerce punctual situations into being read as durative situations. In the case of AICs denoting accomplishment/states, there are two types of phase in their situation aspects, (1) the dynamic phase of the

accomplishment or the caused situation and (2) the stative phase of the state situation or the resulting state, as choices for *kamlaj* to profile. *kamlaj* profiles the former not the latter and causes them to be construed as the on-going processes, e.g., *the gate was opening* and *the enemy's ship was sinking*. On this basis, it can be said that *kamlaj* carries dynamicity as an important component of its meaning.

Interactions between *jùu* and the alternating intransitive constructions

Like *kamlaj*, *jùu* selects the phase between boundaries, but they differ in that, while *kamlaj* can select only the dynamic phase, *jùu* can profile either the stative phase or the dynamic phase of an atelic situation. If *jùu* profiles a static phase, the situation will be construed as a state persisting at the reference time or the speech-act time. If it profiles a dynamic one, the situation will be construed as a progressive situation, viewed as static. However, *jùu* cannot select the stative phase of the individual-level state. It can co-occur with AICs denoting activities (21a), stage-level states (21c), accomplishment/SL-states (21e), and achievement/SL-states (21g), but not with AICs denoting semelfactives (21b), individual-level states (21d), accomplishment/IL-states (21f) or achievement/IL-states (21h). For example:

- (21) a. *ria lèn ?òòk paj*
 boat sail out go
naj thalee jùu
 in sea ASP
 “The boat was sailing into the sea.”
- b. *fainâarót kràphríp*
 headlight flash
 /*?*něj khráj jùu*
 one time ASP
- c. *phâap khwěen jùu*
 picture hang exist.at

thîi phanăj
 at wall
 “The picture was hanging on the wall.”

- d. **khanǒm phûak níi*
 dessert CLS this
tham càak pēeŋ
 make from flour
khâawphôot jùu
 corn ASP

- e. *pràtuu pèət jùu*
 gate open ASP
 “The gate was open.”

- f. **?ria khâasik com jùu*
 ship enemy sink ASP

- g. *faj naj hōŋ*
 light in room
dâp jùu
 go.off, be.off ASP
 “The light in the room was off.”

- h. **?kěj máaj hâk jùu*
 twig break ASP

The symbol ‘*?’ preceding the sentence denoting the semelfactive situation (21b) indicates that this sentence would be grammatical without the phrase *něj khráj* ‘once’. The semelfactive *kràphríp* ‘flash’ can refer to a single flash, which is a telic process, or a series of telic situations which behaves like an atelic process. But when it takes *jùu*, only the latter meaning is plausible. The symbol ‘*?’ preceding the AICs denoting the accomplishment/IL-state (21f), and the achievement/IL-state (21h) indicates that these sentences may be acceptable in the context where the speaker wants to emphasize that the subject argument is really in the specified state. In other words, the speaker wants to emphasize that the specified state really exists.

The co-occurrence of *jùu* with the AIC denoting accomplishment/SL-state (21e) reveals an important characteristic of *jùu*. In this case, there are also two types of phase, dynamic and static, for *jùu* to select, and it selects the static rather than the dynamic one. The aspectual meaning of this co-occurrence is, thus, the

persistent state rather than the on-going process that was profiled when this AIC occurred with *kamlaŋ*.

Interactions between *kamlaŋ* and *jùu* and each subtype of AIC together with their aspectual meanings are presented in figure 6 and 7. The grey boxes represent the profile.

Types of AICs	Viewpoint-Aspect Marker	
	/kamlaŋ/	/jùu/
6.1 Activity	A1 <i>ria kamlaŋ lèn ?ðok paj naj thalee</i> boat ASP sail out go in sea The boat was sailing into the sea. $\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{12}\Phi_{DYN2}\dots$ On-going process	B1 <i>ria lèn ?ðok paj naj thalee jùu</i> boat sail out go in sea ASP The boat was sailing into the sea. $\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{12}\Phi_{DYN2}\dots$ On-going process
6.2 Semelfactive		
A. Once	A2a <i>?fainâarót kamlaŋ kràphríp nìŋ khráŋ</i> headlight ASP flash one CLS ?The headlight was flashing once. $\tau_{11}\tau_{T1}\tau_{12}\tau_{T2}$ On-going process: The punctual situation (semelfactive) is reconstrued as durative situation (accomplishment).	B2a <i>*fainâarót kràphríp nìŋ khráŋ jùu</i> headlight flash one time ASP $\tau_{11}\tau_{T1}\tau_{12}\tau_{T2}$
B. Series	A2b <i>fajnáarót kamlaŋ kràphríp</i> headlight ASP flash The headlight was flashing. $\tau_{11}\tau_{T1}\tau_{12}\tau_{T2}\tau_{13}\tau_{T3}\dots \tau_{1n}\tau_{Tn}$ On-going process	B2b <i>fajnáarót kràphríp jùu</i> headlight flash ASP The headlight was flashing. $\tau_{11}\tau_{T1}\tau_{12}\tau_{T2}\tau_{13}\tau_{T3}\dots \tau_{1n}\tau_{Tn}$ On-going process
6.3 SL-state	A3 <i>*phâap kamlaŋ khwěen thîi phànăŋ</i> picture ASP hang at wall $\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{12}\Phi_{DYN2}\tau_{T2}\tau_{13}\Phi_{SL-STATE}\dots$	B3 <i>phâap khwěen jùu thîi phànăŋ</i> picture hang exist.at/ASP at wall The picture was hanging on the wall. $\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{12}\Phi_{DYN2}\tau_{T2}\tau_{13}\Phi_{SL-STATE}\dots$ Persistent state
6.4 IL-state	A4 <i>*khanôm phuâk níi kamlaŋ tham</i> dessert CLS this ASP made <i>càak pēeŋ khâawphôot</i> from flour corn $\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{12}\Phi_{DYN2}\tau_{T2}\tau_{13}\Phi_{IL-STATE}\dots$	B4 <i>*khanôm phuâk níi tham</i> dessert CLS this made <i>càak pēeŋ khâawphôot jùu</i> from flour corn ASP $\tau_{11}\Phi_{DYN1}\tau_{T1}\tau_{12}\Phi_{DYN2}\tau_{T2}\tau_{13}\Phi_{IL-STATE}\dots$

Figure 6. Semantic representations of interactions between *kamlaŋ* and *jùu* and AICs denoting a simplex causal situation

Types of AICs	Viewpoint-Aspect Marker	
	/kamlaj/	/jùu/
7.1 Accomplishment/ SL-state	A5 <i>pràtuu kamlaj pàət</i> door ASP open The door was opening.	B5 <i>pràtuu pàət jùu</i> door open ASP The door was open.
	$\tau_{11}\Phi_{DYN1}\tau_{11}\tau_{12}\Phi_{DYN2}\tau_{12}\tau_{13}\Phi_{SL-STATE}\dots$ On-going process	$\tau_{11}\Phi_{DYN1}\tau_{11}\tau_{12}\Phi_{DYN2}\tau_{12}\tau_{13}\Phi_{SL-STATE}\dots$ Persistent state
7.2 Accomplishment/ IL-state	A6 <i>ria khâasik kamlaj com</i> ship enemy ASP sink The enemy's ship was sinking.	B6 <i>ria khâasik com jùu</i> ship enemy sink ASP The enemy's ship was actually sunk. (stative reading)
	$\tau_{11}\Phi_{DYN1}\tau_{11}\tau_{12}\Phi_{DYN2}\tau_{12}\tau_{13}\Phi_{IL-STATE}\dots$ On-going process	$\tau_{11}\Phi_{DYN1}\tau_{11}\tau_{12}\Phi_{DYN2}\tau_{12}\tau_{13}\Phi_{IL-STATE}\dots$ Persistent state: The speaker wants to emphasize that the participant actually has the specified state.
7.3 Achievement/ SL-state	A7 <i>?faj naj høn kamlaj dáp</i> light in room ASP go.off The light in the room was going off.	B7 <i>faj naj høn dáp jùu</i> light in room go.off ASP The light in the room was off.
	$\tau_{11}\tau_{11}\tau_{12}\tau_{12}\tau_{13}\Phi_{SL-STATE}\dots$ On-going process: The punctual situation (achievement) is reconstrued as durative situation (accomplishment).	$\tau_{11}\tau_{11}\tau_{12}\tau_{12}\tau_{13}\Phi_{SL-STATE}\dots$ Persistent state
7.4 Achievement/ IL-state	A8 <i>kijmáaj kamlaj hæk</i> twig ASP break The twig was breaking.	B8 <i>?kijmáaj hæk jùu</i> twig break ASP The twig was actually broken. (stative reading)
	$\tau_{11}\tau_{11}\tau_{12}\tau_{12}\tau_{13}\Phi_{IL-STATE}\dots$ On-going process: The punctual situation (achievement) is reconstrued as durative situation (accomplishment).	$\tau_{11}\tau_{11}\tau_{12}\tau_{12}\tau_{13}\Phi_{IL-STATE}\dots$ Persisting state: The speaker wants to emphasize that the participant actually has the specified state.

Figure 7. Semantic representations of interactions between kamlaj and jùu and AICs denoting a complex causal situation

Two types of imperfective viewpoint aspect in Thai: Dynamic imperfective vs. stative imperfective

In the previous section, I showed that *kamlaŋ* should be as a dynamic imperfective aspect marker because it functions to profile the dynamic phase of the situation and construes it as an on-going process. On this basis, it can be said that *kamlaŋ* has dynamicity as a component of its meaning. It is, therefore, compatible with dynamic durative situations but incompatible with static or punctual ones. *jùu*, in contrast, is considered a stative imperfective aspect marker. Unlike *kamlaŋ*, *jùu* can profile either a static or a dynamic phase. If *jùu* profiles a static phase, the situation will be construed as a state persisting at the reference time or the speech-act time. If it profiles a dynamic phase, the situation will be construed as a progressive situation, which is being viewed as static. In order to explain why speakers conceptualize *jùu* as more static, or less dynamic, than *kamlaŋ*, I would like to draw attention to the grammaticalization of the form *jùu*. Consider the following examples;

(22) a. *dam jùu naj bâan*
 Dam exist.at inside house
 “Dam’s inside the house.”

b. *dam jùu naj*
 Dam exist.at inside
bâan thamŋaan
 house work
 “Dam’s inside the house and working.”

c. *dam thamŋaan jùu*
 Dam work exist.at/ASP
naj bâan
 inside house
 “Dam was working inside the house.”

d. *dam thamŋaan jùu*
 Dam work exist.at/ASP
 “Dam was working.”

In examples (22a) and (22b), *jùu* appears as a main verb, meaning that there exists a concrete trajector³ at the position in relation to a concrete landmark in the spatial domain. In this relational structure, the trajector is Dam and the landmark is the house. In terms of situation aspect, the presence of Dam is conceived of as a stage-level state in that it is transitory. Dam can move to other positions with respect to the house. Moreover, *jùu* can also denote the existence of an abstract trajector with respect to a concrete landmark, as in example (22c). In this sentence, *jùu* follows another verb, *thamŋaan* ‘work’, and precedes the prepositional phrase *naj bâan* ‘inside the house.’ *jùu* conveys the meaning that at the reference time or the speech-act time, there exists a situation of working inside the house. In this position, *jùu* expresses the relational structure between the abstract trajector, the working situation, and the concrete landmark, the house.

³ The terms *trajector* and *landmark* are used in cognitive linguistics following a proposal by Langacker (1991). They are used to refer to a figure and ground according to the figure-ground segregation found in Gestalt psychology. The figure has form or shape whereas the ground is formless. The figure is, therefore, more salient than the ground. In cognitive linguistics, “trajector stands for the figure or most prominent element in any relational structure, where as landmark refers to another entity in a relation” (Ungerer and Schmid 1996), as in the sentence: *the balloon is flying over the house*. This sentence denotes the situation of the balloon’s flying. In this situation, the balloon is conceived of as figure and the house as ground because the balloon is conceived of as a moving object. The balloon seems much more prominent than the house.

When *jùu* appears as a viewpoint-aspect marker, it conveys the meaning that an abstract trajector, the situation, exists at the same position as the landmark, the reference time or the speech-act time in the temporal domain.

The meanings of *jùu* in (22a)-(22d) can be represented by the image schemas in the figure 8.

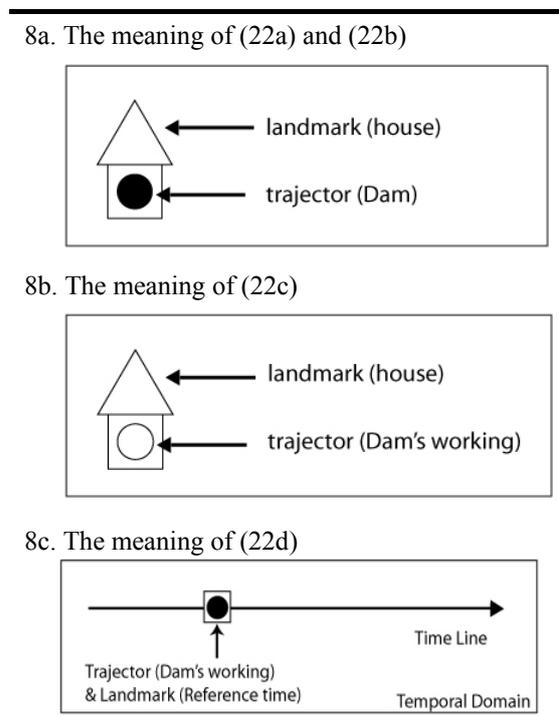


Figure 8: Image schemas for examples (22a)-(22d)

Conclusion

Alternating intransitive constructions (AICs) in Thai can be subclassified into two major types: (1) AICs denoting simplex causal situations and (2) AICs denoting complex causal situations composed of two subevents occurring sequentially. The former type comprises four subtypes, namely, AICs denoting activities, semelfactives, stage-level states, and individual-level states. The latter major type likewise comprises four subtypes, namely, AICs denoting complex causal

situations consisting of an accomplishment followed by a stage-level state, an accomplishment followed by an individual-level state, an achievement followed by a stage-level state, and an achievement followed by an individual-level state.

kamlaj is a dynamic imperfective aspect marker because it profiles the dynamic phase of the situation and causes it to be construed as an on-going process. *kamlaj* is, therefore, compatible with dynamic durative situations but incompatible with static and punctual ones. *jùu* is a stative imperfective aspect marker because it profiles only the intermediate phase of a situation without referring to that situation's boundaries. Unlike *kamlaj*, *jùu* can profile either a static or a dynamic phase. Therefore, *jùu* can co-occur with either dynamic or static situations that are durative. If *jùu* co-occurs with a static situation, the situation will be construed as a state persisting at the reference time or the speech-act time. If *jùu* co-occurs with a dynamic situation, it refers to a progressive situation, which is being viewed as static. Since the grammatical aspect marker *jùu* is grammaticalized from the lexical verb meaning 'to exist,' there is a remnant of that meaning when *jùu* functions as a grammatical aspect marker. Consequently, the grammaticalized aspect marker *jùu* conveys the meaning that *there exists a static or dynamic situation on the time line at the reference time or the speech-act time.*

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