



Why is it both an aspectual marker and a conjunction?

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Introduction

The particle $l\acute{a}e\acute{w}_4$ in Thai seems to have multiple functions, as it may function as a marker for completion of an action (Uppakitsinlapasarn, 1964) and also as a conjunction denoting a sequence of events (Phanthumetha, 1982), as illustrated in (1).

- (1) a $c\acute{o}n_1\ pay_1\ niw_1\ y\acute{o}k_2\ l\acute{a}e\acute{w}_4$
 John go New York $l\acute{a}e\acute{w}_4$
 “John has gone to New York.”
- b $c\acute{o}n_1\ pay_1\ niw_1\ y\acute{o}k_2\ l\acute{a}e\acute{w}_4\ pay_1\ b\acute{o}o\acute{s}_4\ tan_2$
 John go New York $l\acute{a}e\acute{w}_4$ go Boston
 “John went to New York and then went to Boston.”

In (1a) $l\acute{a}e\acute{w}_4$ indicates that the event of John going to New York is complete. In (1b) $l\acute{a}e\acute{w}_4$ indicates that the event of John going to Boston occurs after the event of John going to New York.¹ Therefore, $l\acute{a}e\acute{w}_4$ behaves in (1a) like an aspectual marker and in (1b) like a conjunction.

¹ There are cases when multiple events get ordered by themselves without the occurrence of $l\acute{a}e\acute{w}_4$, as illustrated below.

$chan_4\ pr\acute{a}e\eta_1\ fan_1\ pay_1\ n\acute{o}n_1\ l\acute{a}_4\ lap_2\ pay_1\ nay^l\ thii_3\ sut_2$
 I brush teethe go to bed and fall asleep finally
 “I brushed my teeth, went to bed, and finally fell asleep.”

However, in cases like (1b), $l\acute{a}e\acute{w}_4$ is required to conjoin and order the two events.

Since it seems that lææw_4 can play a role as an aspectual marker and as a conjunction, the question is whether this is a case of homophony or not. If there is only one lexical lææw_4 , we need to explain why it is possible for it to have the functions of both an aspectual marker and a conjunction. In this paper by investigating the semantics of lææw_4 I provide an explanation for how the lexical item lææw_4 can have these two functions without the need to postulate two different lexical entries. I will show that the lææw_4 that functions as an aspectual marker and the lææw_4 that functions as a conjunction have the same meaning. Since they have the same meaning, I argue that there is only one lexical entry for lææw_4 .²

This paper consists of 4 sections. In section (2), I summarize earlier analyses of lææw_4 . In section (3) by investigating the semantics of lææw_4 , I propose an explanation for lææw_4 as a lexical item with two apparently different functions. Section (4) is the conclusion of the paper.

Previous analyses of lææw_4

An analysis of lææw_4 appeared in earlier studies on Thai including Uppakitsinlapasarn (1964), Royal Institute (1982), Sookgasem (1990) and Visonyangoon (2000). As we will see lææw_4 has been glossed in different ways. In this section I will use each author's own glosses.

1. Uppakitsinlapasarn (1964)

Uppakitsinlapasarn (1964) considered lææw_4 to be either a main verb meaning “to be finished” or an auxiliary verb denoting the completion of an action. This is illustrated in the following examples.

² It should be noted that lexical entries are separated not only by semantic criteria but also by syntactic ones. Lææw_4 in (1a) and lææw_4 in (1b) not only have the same semantic property but also the same syntactic property. The syntax of lææw_4 , however, is beyond the scope of this paper.

- (2) a *ɣaən₁ khɔɔŋ₅ chan₅ lææw₄ tæ₂ wan₁*
 job of I finish since early morning
 “My job has been finished since this morning.”
 (Uppakitsinlapasarn, 1964 p. 86)
- b *khaw₅ tham₁ lææw₄*
 He do AUXILIARY VERB
 “He has done it.”
 (Uppakitsinlapasarn, 1964 p. 86)

In (2a), lææw₄ is a main verb and in (2b), lææw₄ is an auxiliary verb indicating that the action is complete.

In accounting for the lææw₄ that occurs in a position between two phrases, Uppakitsinlapasarn claims that lææw₄ that occurs in a position between two phrases is an auxiliary verb that is required by conjunction *kɔɔ₃* “afterwards,” as in (3).

- (3) *khaw₅ kin₁ khaaw₃ lææw₄ khaw₅ kɔɔ₃ nɔɔn₁*
 he eat rice AUXILIARY VERB he afterwards sleep
 “He ate rice and then went to bed.”

Under Uppakitsinlapasarn’s analysis, *kɔɔ₃* “afterwards” is a conjunction that requires the occurrence of lææw₄ in the first conjunct. According to him, lææw₄ indicates that the event denoted by the second conjunct temporally follows the first.

However, there seems to be a problem with the claim that lææw₄ is an auxiliary verb required by a conjunction. In sentence (3), *kɔɔ₃* “afterwards” is optional. Without *kɔɔ₃* “afterwards,” the two phrases are still conjoined, and the event denoted by the second conjunct is understood as temporally following the first, as shown in (4).

- (4) *khaw₅ kin₁ khaaw₃ lææw₄ khaw₅ nɔɔn₁*
 He eat rice AUXILIARY VERB he sleep
 “He ate rice and then he went to bed.”

It seems that lææw₄ not only plays the role of an auxiliary but also of a conjunction conjoining two phrases by indicating that the event denoted by the second phrase is temporally following the first.³

2. Royal Institute (1982)

Differing from Uppakitsinlapasarn (1964), Royal Institute (1982) categorizes lææw₄ as an adverb denoting that an action has ended or that at a later time another action began. This can be illustrated in the examples below.

- (5) a *cɔɔn₁ khiian₅ cot₂ maay₅ lææw₄*
 John write letter completely
 “John has written a letter.”
- b *cɔɔn₁ khiian₅ cot₂ maay₅ lææw₄ pay₁ pray₁ sa₁ nii₁*
 John write letter at a later time go post office
 “John wrote a letter and then went to the post office.”

In (5a), lææw₄ modifies the VP *khiian₅ cot₂ maay₅* “write a letter” by indicating that the event denoted by the VP is complete. In (5b), lææw₄ modifies the VP *pay₁ pray₁ sa₁ nii₁* “go to post office” by indicating that the event denoted by that VP occurs at a later time than the first VP, *khiian₅ cot₂ maay₅*, “write a letter.”

Apparently Royal Institute (1982) has realized that lææw₄ has different meanings in different environments or that lææw₄ plays two different roles. However, Royal Institute does not attempt to connect the different roles.

3. Sookgasem (1990)

Sookgasem (1990) considered lææw₄ to be two separate aspectual words : a word for Perfect and a word for Perfective.

³ In cases like (4), if lææw₄ is part of the second conjunct rather than the first conjunct, it functions as a conjunction conjoining and ordering the two events.

Sookgasem shows that when occurring with a stative verb, $lææw_4$ indicates Perfect⁴ as shown in (6). When it occurs with an eventive verb, it indicates perfective. The differences between the two aspects are illustrated in the examples below.

- (6) a $cɔɔn_1$ $chɔɔp_3$ $mææ_1rii_3$ $saam_5$ $pīi_1$ $lææw_4$
 John like Mary three year PERFECT
 “John has liked Mary for three years.”
- b $cɔɔn_1$ pay_1 haa_5 $mɔɔ_5$ $lææw_4$ $mīi_3$ wan_1
 John go meet doctor PERFECTIVE yesterday
 “John went to see a doctor yesterday.”

Under her analysis, in (6a) $lææw_4$ occurs with the stative verb $chɔɔp_3$ “like,” and it denotes Perfect meaning by indicating that the state of liking started three years ago and it continues to the time of utterance. In (6b), $lææw_4$ occurs with the eventive verb pay_1 (haa_5 $mɔɔ_5$) “go (to see a doctor),” and it denotes perfective meaning by indicating that the event of going to see a doctor has ended.

Implicitly Sookgasem (1990) realizes that $lææw_4$ can indicate both the beginning and the end of a situation. However, under her analysis, the $lææw_4$ that indicates the beginning of a situation is considered to be a Perfect marker, and the $lææw_4$ that indicates the end of a situation is considered to be a perfective marker.

4. Visonyanggoon (2000)

Visonyanggoon (2000) has pointed out that $lææw_4$ can convey several meanings, as illustrated in (7).

⁴ As the definition of perfective and perfect is not provided in Sookgasem (1990), I assume here the definition of perfective and perfect given by Comrie (1976). Based on Comrie (1976 : 52), perfective is to be distinguished from imperfective. While perfective refers to a situation as a single whole, imperfective refers to the internal structure of a situation.

- (7) *khaw*₅ *kin*₁ *ʔæp*₄ *pəən*₃ **lææw**₄
 He eat apple lææw₄
 i)“He ate the apples.”
 ii)“He has eaten the apples.”
 iii)“He has started eating the apples.”
 (Visonyanggoon 2000, p. 217)

The sentence (7) has three readings. In the first reading, lææw₄ indicates the termination of the event of eating the apples. In the second reading, lææw₄ indicates the result state of eating the apples; that is, the agent is now full. In the third reading, lææw₄ indicates the beginning of the event of eating the apples. So lææw₄ is used as a particle for Perfective (reading i), Perfect (reading ii), and inchoative meanings (reading iii).

So it seems that while the Perfect and Perfective meanings of lææw₄ have been widely discussed, the inchoative meaning of lææw₄ had not been explicitly discussed until Visonyanggoon (2000).

However, by focusing on the aspectual marker role of lææw₄, the studies by Sookgasem (1990) and Visonyanggoon (2000) seem to put aside lææw₄ as a conjunction and so leave the question of whether lææw₄ that plays a role of an aspectual marker and lææw₄ that plays the role of a conjunction are the same lexical item unanswered.

Investigating the semantic properties of lææw₄

In this section, I investigate the meaning of lææw₄ when it occurs in different environments. In particular, I investigate the role of lææw₄ when it appears to the right of a VP (the role of an aspectual marker) and the role of lææw₄ when it appears between two VPs (the role of a conjunction). It will be apparent that lææw₄ plays these two roles while keeping its meaning constant.

1. The role of an aspectual marker

I will investigate the role of the aspectual marker lææw₄ by considering the interaction of lææw₄ with different types of verbs

including individual-level predicates, which are considered to be aspectualless.

1.1 The interaction of lææw₄ with different types of verbs

Lææw₄ appearing to the right of a VP indicates that the event denoted by the VP has either completed or started, depending on the type of the verb. Lææw₄ occurring with verbs that lack culmination points (i.e., states and activities) indicates that the event/state denoted by the VP has started, as illustrated in (8).

- (8) a *cɔɔn₁ wiŋ₃ lææw₄*
 John run lææw₄
 “John has started running.”
- b *cɔɔn₁ chɔɔp₃ mææ₁rii₃ lææw₄*
 John like Mary lææw₄
 “John has started to like Mary.”

In (8a), lææw₄ indicates that the event of John running has started. Similarly, in (8b) lææw₄ indicates that the state of John liking Mary has started.⁵ Assuming that “x” stands for event/state and “⊃” the beginning, the semantics of (8a) and (8b) can be represented as (9).

- (9) ⊃ xxx

However, lææw₄, in indicating the beginning of an event/state, also implies a previous event/state. In (8a), lææw₄ also implies the

⁵ To say that “John has just run,” a lexical item *set₂* “finish” will be inserted at the position following the verb *wiŋ₃* “run”. And to say that “John has stopped liking Mary,” a lexical item *ləək₃* “stop” will be inserted at the position preceding the verb *chɔɔp₃* “like,” as illustrated by the following.

- (i) *cɔɔn₁ wiŋ₃ set₂ lææw₄*
 John run finish lææw₄
 “John has just run.”
- (ii) *cɔɔn₁ lək₃ chɔɔp₃ mææ₁rii₃ lææw₄*
 John stop like Mary lææw₄
 “John has stopped liking Mary.”

previous event of John not running. Similarly, in (8b), $l\grave{a}x\grave{a}w_4$ also implies the previous state of John not liking Mary. Assuming that “ $\neg x$ ” stands for the negation of “ x ,” and “ \supset ” the end, the semantics of (8a) and (8b) can be represented as (10) where the bold x characters indicate the part that is asserted and the normal characters indicates the part that is implied.⁶

(10) $\neg x \neg x \neg x \supset \mathbf{Cxxx}$

The $l\grave{a}x\grave{a}w_4$ that occurs with verbs that have culmination points (accomplishments and achievements) indicates that the event denoted by a VP has either started or been completed.⁷ This is illustrated in (11).

- (11) a $c\grave{o}n_1 kin_1 \text{ } \textit{l\grave{a}x\grave{a}p_4 p\grave{a}n_3} \text{ } \mathbf{l\grave{a}x\grave{a}w_4}$
 John eat apple $l\grave{a}x\grave{a}w_4$
 i) “John has started eating the apples.”
 ii) “John has eaten the apples.”
- b $c\grave{o}n_1 cha_1 na_1 \text{ } \mathbf{l\grave{a}x\grave{a}w_4}$
 John win $l\grave{a}x\grave{a}w_4$
 i) “John has started winning the game.”
 ii) “John has won the game.”

⁶ It is important to make clear that while the previous contrasting situation is implied, the transition between the two situations is asserted. So in (10), while $\neg x \neg x \neg x$ is implied \supset is asserted.

⁷ The behavior of $l\grave{a}x\grave{a}w_4$ is not peculiar. The particle *le* in Chinese behaves similarly. *Le* indicates change of state/status (Yang ,1985), as illustrated in (i).

- (i) *John chi pingguo le*
 John eat apple le
 “John has started eating the apples.”
 “John has eaten the apples.”

In the first reading *le* indicate the change from the earlier event of ‘not eating the apple’ to the present event of ‘eating the apple.’ In the second reading *le* indicates the change from the earlier event of ‘eating the apple’ to the present event of ‘not eating the apple.’

In the first reading of (11a) and (11b), $l\grave{a}e\grave{a}w_4$ indicates the start of the event⁸, and in the second reading, $l\grave{a}e\grave{a}w_4$ indicates the end of the event. Therefore, the first reading of (11a) and (11b) can be represented as (12a) and the second readings can be represented as (12b).

- (12) a \subset **xxx**
 b **xxx** \supset

However, in describing the start of the event, $l\grave{a}e\grave{a}w_4$ implies a previous event, and in describing the end of the event, $l\grave{a}e\grave{a}w_4$ implies a subsequent event.

To illustrate, consider (11a). In the first reading, $l\grave{a}e\grave{a}w_4$ describes the start of the present event and implies a previous event. In particular, $l\grave{a}e\grave{a}w_4$ describes that the event of “eating the apples” has started and implies a previous event of “not eating the apples.” In the second reading, $l\grave{a}e\grave{a}w_4$ asserts the end of the earlier event and implies the subsequent event. So $l\grave{a}e\grave{a}w_4$ describes that the event of “eating the apples” has ended and implies the subsequent event of “not eating the apples.”

Therefore, the first and second readings of the sentences (11a) and (11b) can be represented more precisely as (13a) and (13b), respectively, where the bold x characters indicate the part that is asserted and the normal characters indicates the part that is implied.⁹

⁸ Both accomplishments and achievements have culmination points. However, while achievements are instantaneous, accomplishments are not. Consequently, in the first reading of (11a), the action of eating has started, but in the first reading of (11b) the action of winning has not started. The first reading of (11b) is possible in the situational context that John was playing so well that apparently he would be the winner of the game.

⁹ Again, it is important to make clear that in (13a), while the previous contrasting situation is implied, the transition between the two situations is asserted. And in (13b), while the subsequent situation is implied, the transition between the two situations is asserted.

- (13) a $\neg X \neg X \neg X \supset C \mathbf{xxx}$
 b $\mathbf{xxx} \supset C \neg X \neg X \neg X$

From the representations in (10) and (13), it seems clear that lææw_4 marks the beginning or the end of situations or the boundaries between situations. As situations are located on a time line, the assumption for the role of lææw_4 is that lææw_4 creates temporal boundaries. More precisely, lææw_4 introduces a boundary that coincides with a boundary of the event described by the VP. Whether the left or the right boundary will be picked depends on the kind of eventualities denoted by the VP.¹⁰

1.2 The interaction of lææw_4 with individual-level predicates

It is the interaction of lææw_4 with individual-level predicates that supports the assumption that lææw_4 marks a boundary. Carlson (1977) distinguishes between two types of predicates, state-level predicates and individual-level predicates. Stage-level predicates refer to temporal states such as “being depressed” and “sitting on the floor.” Individual-level predicates refer to permanent states such as “being an American” and “having brown eyes.”

Crucially while the permanent state reading is available in (14), it is not available in (15), where individual-level predicates occur with lææw_4 .

- (14) a $c\omega n_1 \text{ pen}_1 \text{ khon}_1 \text{ } \lambda a_2 \text{ me}_1 \text{ ri}_4 \text{ kan}_1$
 John be person American
 “John is an American”.

¹⁰ The role marking a boundary is similar to English “suddenly.”

- i) a Mary ran.
 b **Suddenly** Mary ran.
 ii) a Mary was in the hallway.
 b **Suddenly** Mary was in the hallway.

In (ia), no boundary is marked but in (ib), the left boundary is marked. Similarly, in (iia), no boundary is marked, but in (iib) the left boundary is marked.

- b *mææ₁rii₃ mii₁ taa₁ sii₅ nam₄ taan₁*
 Mary have eyes color brown
 “Mary has brown eyes”
- (15) a *cɔɔn₁ pen₁ khon₁ ʔa₂ me₁ ri₄ kan₁ lææw₄*
 John be person American lææw₄
 “John has become an American (since he received
 American citizenship.)”
- b *mææ₁rii₃ mii₁ taa₁ sii₅ nam₄ tan₁ lææw₄*
 Mary have eyes color brown lææw₄
 “Mary’s eyes have become brown (since she started
 wearing brown contact lenses).”

While the reading of permanent state is available in (14), it is not available in (15). In (15), lææw₄ forces the reading of a temporal state by indicating a change of state. In (15a), lææw₄ indicates a change from the state of not being an American to the state of being an American. In (15b), lææw₄ is equated with the change from a state of not having brown eyes to a state of having brown eyes. By indicating changes, lææw₄ marks the end and the beginning of situations, confirming that lææw₄ has the property of creating temporal boundaries.

In conclusion, it seems clear that the role of lææw₄, which is consistent in all occurrences of lææw₄, is to mark the beginning or the end of a situation. Where there is none in the predicate, it coerces the event into an event with a boundary.

2. The role of a conjunction

In this section, I begin an investigation of the role of lææw₄ as a conjunction in a negative sentence. Then, I investigate the role of lææw₄ by considering its interaction with stative and activity verbs. Finally I investigate its interaction with individual-level predicates.

2.1 Negation facts

As shown in (1b), when lææw₄ occurs at a position between two phrases, it seems to play the role of a conjunction conjoining

the two phrases. A crucial piece of evidence supporting this role of $læw_4$ can be seen in a negative sentence.

Generally the form for negation in Thai is [may_3 (day_3) + VP].¹¹ This is illustrated in (16).

- (16) $cɔɔn_1 may_3 day_3 pay_1 niw_1 yɔɔk_2$
 John not get go New York
 “John did not go to New York.”

In (16), any piece can be focused and denied, as (16) can be continued with any of the sentences in (17).

- (17) a $mææ_1 ri_3 pay_1 niw_1 yɔɔk_2$
Mary go New York
 “**Mary** went to New York.”
 b $cɔɔn_1 phəŋ_3 klap_2 chaak_2 niw_1 yɔɔk_2$
 John just **back from** New York
 “John just **came back from** New York”
 c $cɔɔn_1 day_3 pay_1 paa_1 ri_3$
 Johh get go **Paris**
 “John went to **Paris**.”

If continued by (17a), the target of the negation in (17) must be $cɔɔn_1$ “John.” If continued by (17b), the target of the negation in (16) must be pay_1 “go.” And if continued by (17c), the target of the negation in (16) must be $niw_1 yɔɔk_2$ “New York.”

¹¹ With respect to the difference between may_3 and $may_3 day_3$, Eknaiyom (1979) claims that may_3 denotes irrealis negation whereas $may_3 day_3$, realis, as illustrated in the examples below.

- (i) a $khaw_5 may_3 pen_1 khruu_1 nææ_3 nææ_3$
 he not be teacher certainly
 “He certainly will not be a teacher.”
 b $khaw_5 may_3 day_3 pen_1 khruu_1 nææ_3 nææ_3$
 He not be teacher certainly
 “He certainly is/was not a teacher.”

Now consider a negative version of a sentence in which lææw₄ plays a role of a conjunction.

- (18) *cɔɔn₁ may₃ day₃ riian_{jop}₂ lææw₄ tham₁ɲan₁ hay₃
rat₃ tha₁baan₁*
John not get graduate lææw₄ work for government
“John didn’t graduate and then work for the
government.”

Sentence (18) can be continued with any of the sentences in (19),

- (19) a *biw₁ riian_{jop}₂ lææw₄ tham₁ɲan₁hay₃ rat₃ tha₁baan₁*
Bill graduate lææw₄ work for government
“**Bill** graduated and then worked for the government.”
- b *cɔɔn₁ pit₂ ran₄ʔaa₁haan₅ lææw₄tham₁ɲan₁hay₃rat₃
tha₁baan₁*
John **close restaurant** lææw₄ worked for
government.
John **closed the restaurant** and then work for the
government.
- c *cɔɔn₁ riian_{jop}₂ lææw₄ pəət₂ ran₂ʔaa₁haan₅*
John graduate lææw₄ **open restaurant**
“John graduated and then **opened a restaurant.**”

If continued by (19a), what is focused and denied in (18) has to be the NP subject *cɔɔn₁* “John.” If continued by (19b), what is focused and denied in (18) has to be the first VP *riian_{jop}₂* “graduate.” And if continued by (19c), what is focused and denied in (18) has to be the second VP *tham₁ɲan₁ hay₃ rat₃ tha₁baan₁* “work for government.”

What is crucial is that in addition to the sentences in (19), (18) can be continued by any of the sentences in (20) as well.

- (20) a *cɔɔn₁ tham₁ɣaan₁ hay₃ rat₃ tha₁baan₁ nay₁ kha₂na₂ thii₃ khaw₅*
 John work for government **in time** that he
kam₁lay₁ ja₂ riian₁jop₂
 PROCESS graduate
 “He worked for the government **at the same time** that he was graduating.”
- b *cɔɔn₁ tham₁ɣan₁ hay₃ rat₃ tha₁baan₁ khɔɔn₂ khaw₅ riian₁jop₂*
 John work for government **before** he graduate
 “John worked for the government **before** he graduated.”

In (20a) and (20b) what is focused and negated is the ordering of the two events. Therefore, there must be a word which orders the two events in such a way that the second event starts after the first event ends. Obviously, that word is *lææw₄*.

2.2. The interaction of *lææw₄* with states and activities

As shown in (1b), repeated as (21) below, *lææw₄* conjoining two phrases indicates a sequence of the events denoted by the two phrases. More precisely, *lææw₄* seems to require the event denoted by the first conjunct to be completed before the beginning of the event denoted by the second conjunct.

- (21) *cɔɔn₁ pay₁ niw₁ yɔɔk₂ lææw₄ pay₁ bɔɔs₄ tan₂*
 John go New York lææw₄ go Boston
 “John went to New York and then went to Boston.”

The first piece of evidence supporting this is the behavior of *lææw₄* when the conjoined VPs are state verbs and activity verbs. While accomplishment verbs such as *kin₁ ɽææp₄ pəən₃* “eat an apple,” and achievement verbs such as *cha₁na₄* “win” have a culmination point, state verbs such as *chɔɔp₃* “like,” *ruu₄* “know,” etc. and activity verbs such as *dəən₁* “walk,” *wiŋ₃* “run”, etc. lack a culmination point.

Crucially, when state verbs and activity verbs are conjoined by lææw_4 , the states and activities denoted by these verbs are ordered. This is illustrated in (22).

- (22) a $c\text{ɔ}n_1 \text{ } ch\text{ɔ}p_3 \text{ } m\text{æ}æ_1 rii_3 \text{ } \text{lææw}_4 \text{ } ch\text{ɔ}p_3 \text{ } suu_1 \text{ } san_1$
 John like Mary lææw_4 like Susan
 “John liked Mary and then liked Susan.”
- b $c\text{ɔ}n_1 \text{ } d\text{ə}n_1 \text{ } \text{lææw}_4 \text{ } wiŋ_3$
 John walk lææw_4 run
 “John walked and then ran.”

As the two states in (22a) and the two activities in (22b) get ordered, this suggests that lææw_4 requires the end of the first state or activity before the beginning of the second state or activity. As the state and activity verbs lack a culmination point, the completion of the first state or activity cannot be attributed to the property of the verbs themselves. So this suggests that it is lææw_4 that marks the end of the first state or activity.

Lææw_4 simultaneously marks the end of the first state or activity and denotes the beginning of the second state or activity, supporting the argument that the role of lææw_4 is to mark the end and the beginning of situations or to create temporal boundaries.

3. The unified property of lææw_4

Having investigated the two roles of lææw_4 , the property of marking a temporal boundary between situations unifies the two roles of lææw_4 . Subsequently, the boundary indicates the end of the earlier situation and the beginning of the subsequent situation, where the subsequent situation starts at the moment the earlier situation ends.

The property of creating a temporal boundary has been associated to phasal adverbials (i.e., *still*, *no longer*, *not yet*, *already*), but also is a notion which has been used and defined in

Discourse Representation Theory terms (Kamp and Reyle, 1993) to deal with the Perfect and defined as a relation between times, more specifically, an abutment relation.

According to Kamp and Schiehlen (1998 : 5) an important relation between periods is that of “abutment”. The definition of abutment is provided below :

“An important relation between periods is that of “abutment”: p2 abuts p1 iff (i) p1 is entirely before p2, but at the same time (ii) p1 and p2 “touch”, i.e. there is no p3 such that p1 is entirely before p3 and p3 and p3 is entirely before p2. (In this case we also say that “p2 abuts p1 on the right” and that “p1 abuts p2 on the left”.)”

Consistent with Kamp and Reyle (1993)’s proposal, is the property of lææw_4 . More precisely, the notion of abutment, represented as $\supset\subset$, accounts for the behavior of lææw_4 as well, since lææw_4 marks a temporal boundary between situations. The boundary indicates the end of an earlier situation and the beginning of the subsequent situation, where the subsequent situation starts at the moment the earlier situation ends. So lææw_4 can be considered to be a lexical item standing for the notion of abutment.

The manifestations of lææw_4 ’s property of abutment can be considered in terms of the subcategorization of lææw_4 . To illustrate, lææw_4 can be subcategorized as both a transitive and an intransitive adverb.¹² As a transitive adverb lææw_4 takes a VP as its complement. The consequence is that it orders two events, with the second event starting immediately after the first event ends, as in (23).

- (23) *cɔɔn₁ dɔɔn₁ lææw₄ wiŋ₃*
 John walk lææw_4 run
 “John walked and then ran.”

¹² The notion of transitivity here is not different from that used to categorized verbs. Specifically, a transitive verb takes an object complement while an intransitive verbs takes no object complement.

As an intransitive adverb, lææw₄ also orders two contrasting events. It either picks the beginning of an event and leaves implicit the previous event, or it picks the end of an event and leaves implicit the subsequent event, as in the first and the second reading of (24).

- (24) cɔɔn₁ kin₁ ʔæp₄ pəən₃ lææw₄
 John eat apple lææw₄
 i) “John has started eating the apples.”
 ii) “John has eaten the apples.”

In conclusion, the fine examination of the properties of lææw₄ reveals that there is a unified semantic representation of lææw₄. Consistent with the framework proposed by Kamp and Reyle (1993), lææw₄ seems to be a lexical item standing for the relation between periods of time, referred to as abutment.

4. The semantics of lææw₄ and of phasal adverbials

Now that it is clear that lææw₄ denotes an abutment relation, we can elucidate the differences between the semantics of lææw₄ and the semantics of phasal adverbials.

Van der Auwera (1995) points out that there are adverbials that have the property of indicating phases of continuation or the lack of continuation. In English, an adverbial that indicates that a state continues is *still*. An adverbial that indicates that a state does not continue is *no longer*. An adverbial that indicates that a state has come into existence is *already*. And an adverbial that indicates that a state has not come into existence is *not yet*. The semantics of *already*, *no longer*, *still*, and *not yet* are given here as (25a) to (25d), respectively.

(25) a

Time	1	2
State	-	+

b

Time	1	2
State	+	-

c	Time	1	2
	State	+	+

d	Time	1	2
	State	-	-

In (25a), (25b), (25c) and (25d), time progression from left to right is divisible into two periods. + and – stands for positive and negative state respectively. Time 2 is the time referred to by *already*, *no longer*, *still*, and *not yet*. The state of affairs held at the periods of time before the time picked by the adverbs is, therefore, the component without which what the adverbials denote would not be conceivable. Given that these phasal adverbials assert the state of affairs at Time 2, the state at Time 1 is presupposed.

For the case of lææw_4 , however, we have seen that lææw_4 denotes an abutment relation (i.e., $\supset\subset$), and as a consequence it may pick the beginning of an event and leaves the previous event implicit or it may pick the end of an event and leaves the subsequent event implicit. This is illustrated in (26).

- (26) $c\text{ɔ}\text{ɔ}n_1 \text{ kin}_1 \text{ ʔææp}_4 \text{ pə}\text{ə}n_3 \text{ lææw}_4$
 John eat apple lææw_4
 i) “John has started eating the apples.”
 ii) “John has eaten the apples.”

In (26), lææw_4 may pick the beginning of the event John eating the apples and leaves the previous event John not eating the apples implicit, resulting in the first reading. Or lææw_4 may also pick the end of the event John eating the apples and leaves the subsequent event John not eating the apples implicit, resulting in the second reading. The first and the second readings of (26), therefore, can be represented as (27a) and (27b) where **xxx** stands for the event of John eating the apples and $\neg x \neg x \neg x$ stands for the event of John not eating the apples.

- (27) a $\neg x \neg x \neg x \supset \subset \mathbf{xxx}$
 IMPLIED ASSERTED
- b $\mathbf{xxx} \supset \subset \neg x \neg x \neg x$
 ASSERTED IMPLIED

In the case of lææw_4 , therefore, the abutment relation (i.e., $\supset \subset$) between the two events is asserted, and the part that is not asserted (i.e., $\neg x \neg x \neg x$) is implied, not presupposed. In summary, lææw_4 denote an abutment function that orders two eventualities.

Conclusion

Having investigated the semantic properties of lææw_4 , it is clear that lææw_4 has only one meaning. More precisely, lææw_4 denotes an abutment relation. Lææw_4 either behaves like a transitive adverb taking another phrase as its argument or a transitive adverb that takes an implicit eventuality as its complement. When it behaves like a transitive adverb, the consequence is that the situations denoted by the VPs preceding and following lææw_4 get temporally ordered. When lææw_4 takes a null event as its complement, the consequence is that the beginning or the end of the situation is described and the subsequent or the previous situation is implied. More generally, the unified treatment can explain why certain meanings are available in certain contexts and can predict these specific meaning and their occurrences.

Data Transcription Guide

1. Consonants

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Stops						
Vd. VI.Unasp VI. Asp	b p ph		d t th	c ch	k kh	ʔ
Fricative		f	s			h
Lateral			l			
Trill			r			
Nasal	m		n		ŋ	
Glide	w			y		

2. Vowels

	Front		Central		Back	
High	i	ii	ɨ	ɨɨ	u	uu
Mid	e	ee	ə	əə	o	oo
Low	æ	ææ	a	aa	ɔ	ɔɔ

Six diphthongs : /ia, iia, ia, iia, ua, uua/

Tones

Tones are represented as subscripted number after each syllable.

1	2	3	4	5
mid	low	falling	high	rising

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