

sentence to a previous discourse. Here, *léw*₃ is found to occur at the beginning of the sentence as shown in (31).

- (31) *léw*₃ *raw cà? paj nǎj kan dii*
 then we will go where together good
 'Then, where would it be good to go together?'

The word *léw*₃ is used to introduce an expression following on from what was said previously. For example, a couple of friends were hungry and agreed to go out for lunch. However, they could not decide yet where they would go. They might talk about something else while their decision was not yet made. They could say (31) to make a reference back to their previous conversation about going out for lunch.

3. *jùu*

Traditionally, the word *jùu* is classified into two types: a lexical word *jùu* 'be at, live, stay' and a grammatical marker *jùu*. As a lexical word, it occurs as a main verb, as exemplified in (32):

- (32) *piti jùu bâan*
 Piti stay home
 'Piti stayed home.'

As a grammaticalized item, *jùu* only occurs after a main verb or verb complex. Traditionally, this is considered as a postverb. To illustrate:

- (33) *piti wâat rûup jùu t^{hi} bâan*
 Piti draw picture stay at home
 'Piti drew a picture/pictures at home.'

Sentence (33) is an example of subordination where the *jùu*-clause is a subordinate clause. Syntactically, it functions as a modifier. The structure of (33) is given in Figure 12.

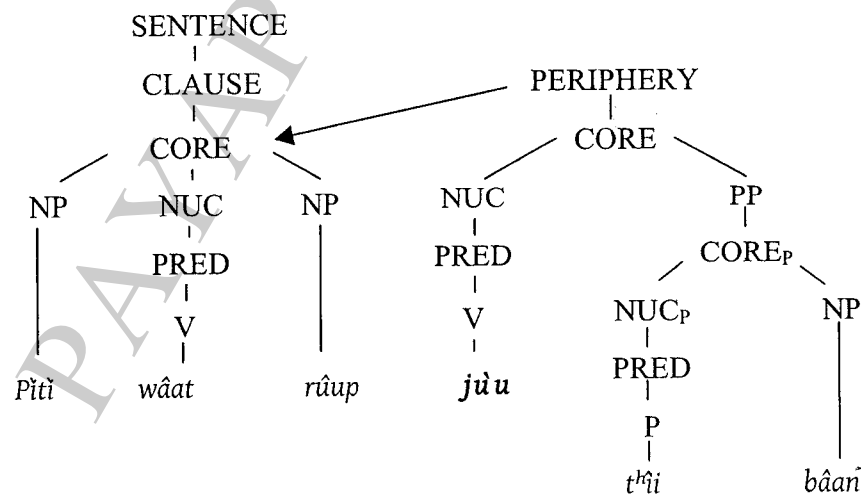


Figure 12. The syntactic structure of (33)

The *jùu*-clause modifies the matrix core and occurs in the periphery_{CORE}. In (33), it expresses the spatial setting. This syntactic structure is called **ad-core subordination**. (cf. Van Valin 2005: 183-198). It expresses the spatial or temporal setting of the event expressed by the core.

Semantically, the main verb *jùu* takes two arguments: a located entity and a location. The relation between the predicate and its argument is a 'locator relation', which can be formalized as LOCATOR (x, y). To be more specific, it is LOCATOR (locatum, location). The verb *jùu* serves the function of 'locator'. In (32), it denotes a relation between 'Piti' and 'house' such that 'Piti' is located in the house. This relation is sketched in Figure 13.

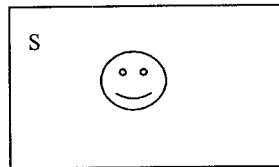


Figure 13. Entity in Physical Space

The box labeled S represents the space (i.e., location), while the face represents the locatum. The prototypical locatum of *jùu* is an entity, either animate or inanimate. In this paper, an animate entity will be referred to as a participant. In the event denoted by (32), the verb *jùu* expresses a physical relation that locates a particular participant, namely, Piti, in a location, the house.

The locatum can be semantically extended, from an entity to an event, as in (33), where the event is a 'drawing picture' kind of event, which is performed by Piti. What *jùu* does is to locate the event in a designated space (i.e., house), as shown in Figure 14. The circle labeled E represents the event.

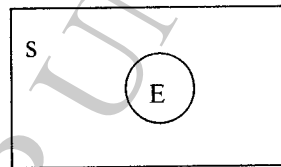


Figure 14. Event in Physical Space

In (33), the subordinate verb *jùu* is not semantically void. Although, there is some loss of meaning, mainly verbiness, the conceptualization of locating a locatum still remains. This use of *jùu* functions as a **spatial locator**. This is a case of a mismatch between semantics and syntax. Syntactically, the extended locatum and location are not treated as a core argument.

Time¹⁴ can be construed in terms of space. The spatial location word 'house' can be replaced by a temporal space word, for example, 'all day', as in (34). The *jùu*-clause in (34) expresses the temporal setting of the event.

¹⁴ In addition to TIME, it is possible to have other target domains to locate the event, for example DANGER.

(iii) k^haw tòk jùu naj ʔantaraaj
 he fall stay in danger
 'He is in danger.'

- (34) *pìtì wâat rûup jùu tʰán wan*
 Piti draw picture stay all day
 'Piti drew a picture/pictures for the whole day.'

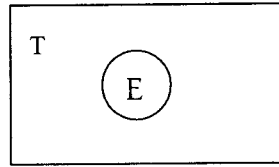


Figure 15. Event in Temporal Space

In Figure 15, the box labeled T represents a temporal space. The drawing event of (34) is located in a designated temporal location (i.e., *tʰánwan* 'all day'). This use of *jùu* functions as a **temporal locator**.

To assert (34) is to specify that the drawing event is anchored in time for the whole day. The word *jùu* indicates the continuity of the event. Omitting *jùu* is possible, but then (34) would simply mean Piti drew a picture/pictures all day. It does not put much emphasis on the continuity.

As mentioned, the concept *jùu* inherently involves a location. Even in (35), this facet of *jùu* is not lost. It is just extended to **temporal-discourse** use – the temporal location is contextually determined. Typically, it is the moment of speaking encoded by temporal deixis. It can also be the moment another event is taking place as encoded by another clause. The temporal location of (35) is the time of speaking, which can be explicitly encoded by 'now' as in (35b). The structure of (35) is given in Figure 16.

- (35a) *pìtì wâat rûup jùu*
 Piti draw picture stay
 'Piti is drawing a picture.'
- (35b) *pìtì wâat rûup jùu təənníi*
 Piti draw picture stay now
 'Piti is drawing a picture now.'

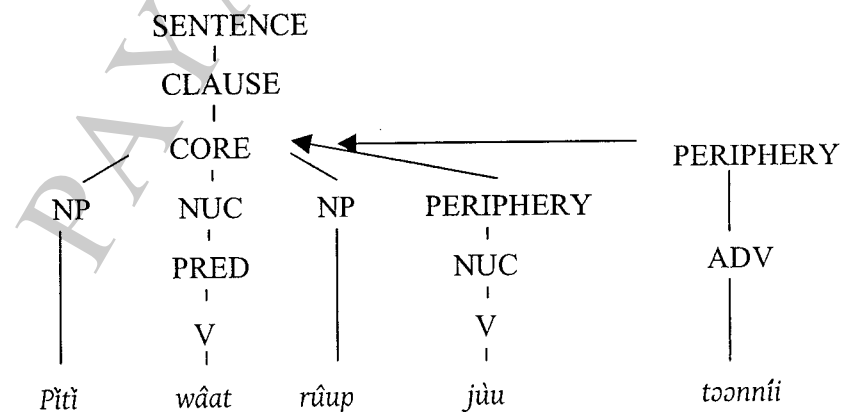


Figure 16. The syntactic structure of (35)

There is no PRED node in the subordinate nucleus because syntactically the verb *jùu* does not take a core argument within a sentence (the word *tə̀nnii* can be fronted). Rather, it is a temporal argument which functions as a modifier establishing the temporal setting of the event filled by an adverb (e.g. 'now') or a clause (e.g. 'when I arrived'). Semantically, it does take the argument *tə̀nnii*; it is where the event is temporally located.

These different senses of *jùu* can be summarized as follows.

	<i>jùu</i> ₁ [Ex. (31)]	<i>jùu</i> ₂ [Ex. (32)]	<i>jùu</i> ₃ [Ex. (33)]	<i>jùu</i> ₄ [Ex. (34)]
grammatical function	matrix verb	subordinate verb		
'locator' effect	locatum	entity	event	event
	location	space	space	time
syntactic construction	NP <i>jùu</i> LOC	Cl [<i>jùu</i> LOC]	Cl [<i>jùu</i> TIME]	Cl [<i>jùu</i> { ∅ 'now' Cl }]

Table 1. Different uses of *jùu*

Note that since space and time are logically side by side, it is not surprising to have a situation, as exemplified in (35a), where the same event is simultaneously located in time ('all day') and space ('house'). Here *jùu* does double duty as a locative-temporal locator. As such, it is possible to have *jùu*_{2,3} + LOC + TEMP as a frame where the order of location and temporal arguments cannot be switched, as shown in (36b).

(36a) *piti tʰamɲaan jùu*_{2,3} *bâan tʰán wan*
Piti work stay house all day
'Piti worked at home for the whole day.'

(36b) **piti tʰamɲaan jùu*_{2,3} *tʰán wan bâan*
Piti work stay all day house
'Piti worked at home for the whole day.'

We have discussed the locator property of *jùu*. But does it have a continuity value? How can the continuity property of *jùu* be accounted for? Let us recapitulate the semantic notion of *jùu*. The verb *jùu* has the semantic effect of locating a participant in space. This conveys the concept of remaining in the same location. At successive points in time, t_1, t_2, \dots, t_n , p (participant) occupies a particular location (l). Using $[p/l]t_i$ to designate the dwelling of p at t_i , the staying of p through time can be expressed as follows.

$$[p/l]t_1 > [p/l]t_2 > \dots [p/l]t_n$$

If there is a t_x such that $t_x > t_1$ and $t_x < t_n$ then $[p/l]t_x$ must be true. By this definition, it has the semantic value of 'unchanging'. Temporal location, or time frame, can thus be defined as a set of consecutive time values.

To assert (31) is to state that Piti continued to be at home through time without moving away. In this way, the experience of remaining in the same place through time provides the input for the emergence of the notion of continuity. It is *jùu*₃ and *jùu*₄ which are the focus of this paper since they express temporal continuity

(see (33)-(34) above). Note that although the different uses of the subordinate verb *jùu* are found, they are by no means clearly distinguished from each other. They are distinguished for the sake of this linguistic investigation and explanation. Semantic or syntactic overlapping between them can be expected. As such, the distinction between *jùu*₃ and *jùu*₄ will only be made when necessary.

Indeed it looks as though *jùu* has become partially grammaticalized. What is important here is that *jùu* is still a predicate of location – either spatial or temporal, or both. It is not yet fully grammaticalized to being only an aspect operator¹⁵ (following RRG's term). The aspectual meaning of continuity is just a logical consequence of our experience of remaining at one place. The crucial role of *jùu* is as a locator, especially when *jùu* occurs with *kamlaj*.

Even though, *jùu* is not analyzed here as an aspect operator, its continuity aspectual sense does play an important role in motivating its grammatical behaviors.

Continuity is the unbroken or consistent existence of an event over a period of time. That is, it has an 'unchanging' nature. This nature has an influence on *jùu*'s grammatical behaviors making it different from *kamlaj*.

(37a) *kʰít jùu, tʰáŋkʰiin / táŋnaan*
 think stay all night for a long time
 '(I) thought (about it) all night/ for a long time.'

(37b) * *kamlaj kʰít tʰáŋkʰiin / táŋnaan*
 PROG think all night for a long time
 '(I) am/was thinking (about it) all night/ for a long time.'

Notice that the subordinate verb *jùu*₃ can take an adverb of time such as *tʰáŋkʰiin* 'all night', and *táŋnaan* 'for a long time', whereas *kamlaj* cannot. This is not surprising since the adverbs are adverbs of duration, which convey the semantic concept of 'continuity'. Therefore, they are conceptually compatible with *jùu*₃, while they are not with *kamlaj*, which has the dynamic effect of changing value (See Section 4). The continuity of *jùu* entails that an event keeps going on, and there is no change. This 'unchanging' effect motivates what words can co-occur with *jùu*.

Prototypically, the time frame of *jùu* is an interval. A set of consecutive time values can be construed as a whole, which can be linguistically encoded by, for example, *tʰáŋ (pii)* 'all (year)', and *naj (pàttəuban)* 'in (the present)'

The time frame conceptualization is flexible depending on what type of temporal words occur with *jùu*₃. We can construe time frame as a series of consecutive time values. This produces a habitual interpretation. Examples of temporal words bringing out this reading include *pàttəam* 'regularly', *saməə* 'always', *bəj bəj* 'often', and *túk (wan)* 'every (day)'. Example (38) illustrates a habitual reading.

(38) *kʰít jùu, tʰúkwan*
 think stay everyday
 '(I) think (about it) everyday.'

Note that this habitual reading is distinct from generic habituality (we can say *kʰít tʰúkwan* 'think everyday' without *jùu*₃). Sentence (38) means something like 'I keep thinking about it', where persistence over a time period is implied. It specifies

¹⁵ An aspect operator is a grammatical category which is treated as an operator modifying at the nuclear level.

that the thought rests on the mind every day. The word *jùu*, puts a spotlight on the continuity of the event.

Because of this persistence value, *jùu*, can take a manner adverbial such as *jàan̄n̄i* 'like this'. To illustrate:

- (39a) *róŋhâj jùu jàan̄ n̄i*
 cry **stay** like this
man tsà dâj ʔàraj kʰɛn̄ maa
 it will get what up come
 '(You) continue to cry like this. What will you get?'

However, *kamlan̄* cannot be used in this context.

- (39b) **kamlan̄ róŋhâj jàan̄ n̄i*
PROG cry like this
man tsà dâj ʔàraj kʰɛn̄ maa
 it will get what up come
 '(You) are crying like this. What will you get?'

Two more sentences provide more evidence on this semantic value of *jùu*.

- (40a) # *raw kʰâw sùu kʰèet kòsâan̄ jùu*₄
 we enter toward area construct **stay**
 'We continue approaching the construction site.'

- (40b) *raw kamlan̄ kʰâw sùu kʰèet kòsâan̄*
 we **PROG** enter toward area construct
 'We are approaching the construction site.'

The event in (40) is a kind of 'travel' event - i.e., travel/move from one place to another. This is involved with changing (i.e., changing from one place to another), contradicting the 'unchanging' effect of *jùu*.

One might ask why verbs like *dæn̄* 'walk' or *w̄ŋ* 'run' can occur with *jùu*. Verbs like *dæn̄* 'walk' or *w̄ŋ* 'run', although they are motion verbs, do not inherently convey a path-goal direction. When we run, for example, we move fast on foot, but it is not necessary that we have a destination. In other words, the verb *w̄ŋ* 'run' intrinsically designates a manner of moving feet but not a path-goal direction. Therefore, we can say (41a), but not (41b):

- (41a) *p̄t̄i w̄ŋ jùu*₄
 Piti run **stay**
 'Piti is/was running.'

- (41b) # *p̄t̄i w̄ŋ tron̄ paj talàat jùu*₄
 Piti run straight go market **stay**
 'Piti is/was running toward the market.'

- (41c) *p̄t̄i kamlan̄ w̄ŋ*
 Piti **PROG** run
 'Piti is/was running.'

- (41d) *pìtì kamlaj wîŋ paj talàat*
 Piti **PROG** run go market
 'Piti is/was running to the market.'

Example (41b) is not acceptable due to the word *troŋ paj* 'straight go'. The lexical item 'straight go' adds the meaning of path-goal direction to the running event, which includes a change in location. This meaning is conceptually incompatible with the semantic value of *jùu*.

Because of the semantic value of continuity, *jùu* takes on a stative characteristic, and as such, it can readily occur in a stative process, as shown in (42).

- (42a) *dii jùu*
 good **stay**
 'It has been good.'

- (42b) *dii jùu*
 good **stay**
 'It is good enough.'

To assert (42a) is not just to state that it is good at the moment of speaking, but that it began in the past and still obtains at the present. Sentence (42a) often occurs with adverbs like *jaŋ* 'still', and *talàət* 'all the time'.

It should be noted here that this *dii jùu* clause has another interpretation 'it is good enough', in (42b). As suggested by Kullavanijaya and Bisang (2007: 76), this alternative meaning is pragmatically determined. Here, the state of goodness is not located in time, but on the scale of goodness itself – at the level of discourse expectation. For example, if the entity in (42b) is a particular book, to assert the sentence is to say the book meets discourse expectations for that property. It implies that the book is not especially good but adequate. The level of goodness can vary depending on the tone of the speaker.

The fundamental characteristic of *jùu*₃ and *jùu*₄ is that they locate an event in a time frame which involves a consequence of continuity. It should be noted that this time frame is not the same as the notion of temporal boundedness. This time frame is related to a particular period of time where a process continuously happens. It is a set of consecutive time values. The idea of a beginning point and end-point is not entailed by the concept.

Before we go further, let us recapitulate the nature of *jùu*: LOCATOR (locatum, location). The concept *jùu* needs a spatial or temporal location either explicitly or implicitly mentioned. Phrases like *tâŋnaan* 'for a long time', and *t'hàŋk'hiiin* 'all night' are examples of temporal locations of *jùu*₃. What are the temporal locations of *jùu*₄, then? They are contextually determined. The moment of speech is such an example. Even though *jùu*₄ concerns contextual properties, it does so intrinsically. In spite of having discourse force, *jùu*₄ is not external to semantics; it also has the semantic nature of 'location' in that it requires a place for an event to be located. This is taken as the frame of reference. As such, *jùu*₄ is deictic. It makes essential reference to the temporal context of the speech event. Examples of adverbs of time occurring with *jùu*₄ include temporal deixis expressions like *tànnii* 'now', and *tànnán* 'then'. Like *kamlaj*, *jùu*₄ is a **temporal linker**. This function of *jùu*₄ is inherited from its 'locator' nature. In the previous discussion, this function is referred to as a time-discourse locator.