Chapter 4

Temporal Relations

The purpose of this chapter is to investigate the temporal relations denoted by the two subsidiary verbs <u>pay1</u> 'go' and <u>maa1</u> 'come'. First of all, some of the previous studies related to these two verbs with respect to temporal relations are reviewed. Then, some theoretical concepts concerning temporal relations are proposed. Finally, the semantic properties of <u>pay1</u> and <u>maa1</u> with respect to temporal relations are analyzed.

Temporal relations refer to relations between situations¹ and time. Just as in spatial relations in which an object is related to its spatial environment, in temporal relations an event is related to its temporal context.

¹Situation is a general term for a state, an event, or a process (see more detail in the section of theoretical concepts used in the analysis).

Previous studies

Many previous studies have shown that the equivalents of 'go' and 'come' in many languages are used to express temporal relations (see Chapter 2, Review of Literature). In this section I will give an overview of the investigation of the temporal relations denoted by the subsidiary verbs <u>pay1</u> 'go' and <u>maa1</u> 'come'.

Although there are not any past studies dealing directly with these two subsidiary verbs, those of Supanwanit (1972) and Thepkanjana (1984) provide relevant insights.

1. Supanwanit (1972)

1.1 Pay1 as a Past Tense Marker

Supanwanit (1972) has analyzed <u>pay1</u> as a past tense marker in the following example.

(1) din1soo5 chan5 haay5 pay1

ดินสอ ฉัน หาย <u>ไป</u> pencil I lose <u>go</u>

'My pencil was lost.'

1.2 Maa1 as a Past Tense Marker and a Present

Continuous Tense Marker

In the next example she analyzes <u>maa1</u> as a past tense marker.

(2)	deen1	pay1	chian1mai2	maa1	mia3	7aa1thit4	koon2
	แดง	ไป	เชียงใหม่	มา	เมือ	อาทิตย์	ก่อน
	Daeng	gO	Chiangmai	come	when	week	before
	'Daeng	went t	to Chiangmai	last wee	ek.'		

Then in example (3) <u>maa1</u> is analyzed as a present continuous tense marker:

(3)	deen1	yuu2	thii3nii3	maa1	tan3tee2	pii1	koon2
	แดง	ខ ខ្ព	ก็น	<u>มา</u>	ดังแต่	ปี	ก่อน
	Daeng	live	here	come	since	year	before
	'Daeng	has liv	ed here sin	ce last	year.'		

It is noteworthy that <u>maa1</u> in (3) is considered as representing present tense because at the time of speaking 'Daeng' is still living 'here'. However, the state of 'living', in fact, started at some time in the past and continues until the time of speaking.

However, Supanwanit (1972) does not provide any conditions on the temporal usage of <u>pay1</u> and <u>maa1</u> which would predict when to use <u>pay1</u> or <u>maa1</u>. Thus one does not know in what kind of context <u>maa1</u> will denote past tense or present continuous tense.

2. Thepkanjana (1986)

<u>Pay1</u> and <u>maa1</u> are analyzed by Thepkanjana (1986) as indicating aspectual value according to Comrie's classification of aspects. <u>Pay1</u> is said to denote both imperfective and perfective aspect, though in different contexts. <u>Maa1</u> is seen as problematic in that it denotes perfect, which concerns two categories--tense and aspect.

2.1 Pay1 as a Perfective and Imperfective Marker

As a perfective marker, <u>pay1</u> is used to indicate one's view of an action or event as a complete whole (thus phases in such actions or events are not separated). Verbs which can co-occur with perfective pay1 are destruction verbs as in (4) and

disappearance verbs as in (5).

(4) keew3 teek2 <u>pay1</u> แก้ว แตก <u>ไป</u> glass break <u>go</u> 'The glass broke.'

(5) nam4man1 mot2 pay1
น้ำมัน หมด <u>ไป</u>
oil be gone <u>go</u>
'The oil is all gone.'

The compatibility of destruction and disappearance verbs occurring with <u>pay1</u> is explained in terms of spatial implication. That is, such verbs imply changes in condition and <u>pay1</u> implies departure (Thepkanjana 1984: 171-172).

As an imperfective marker, <u>pay1</u> indicates one's viewing the internal structure of a situation as in (6).

(6)	su72rii1,	tham1	kaan1baan3	<u>pay1</u>
	สุรีย์,	ทำ	การบ้าน	<u>ไป</u>
	Surii,	do, make	homework	go

'Surii, keep doing your homework.'

The sequence of a verb followed by <u>pay1</u> in (6) implies that Suri is ordered to keep doing her homework, while time passes by or while someone else is doing something else (i.e. playing, working, etc.) (Thepkanjana 1984:175).

2.2 Maa1 as a Perfect Marker

Thepkanjana (1986) has analyzed <u>maa1</u> as a perfect marker. <u>Maa1</u> is used to suggest the temporal relationship of one state to a preceding situation (Thepkanjana 1984: 166). Sentence (7) illulstrates this analysis.

(7)

su?2rii1 tat2 phom5 <u>maa1</u> สุรีย์ ตัด ผม <u>มา</u> Suri cut hair <u>come</u> 'Suri has just cut her hair.'

The reason why <u>maa1</u> can be used in this kind of sequence is explained in terms of not only temporal but also directional implication. That is, a direction between the place of the prior action and the speaker's place at the time of speaking is recognized by the speaker.

To summarize, subsidiary verbs <u>pay1</u> and <u>maa1</u> were analyzed in previous studies as:

maa1:

1) a present continuous tense marker (Supanwanit 1972)

2) a past tense marker (Supanwanit 1972)

3) a perfect marker (Thepkanjana 1984)

pay1:

1) a past tense marker (Supanwanit 1972)

a perfective aspect - with destruction and disappearance
verbs (Thepkanjana 1986)

3) an imperfective aspect marker (Thepkanjana 1984)

This shows the range of disagreement in which one lexical item is claimed to be opposite tense-aspect markers. Therefore, the following analysis is aimed at distinguishing further what temporal information these two subsidiary verbs denote. However, it is necessary to provide an overview of some temporal concepts which will be used as a basis for the analysis.

Theoretical Concepts Used in the Analysis

The purpose of this section is to review some theoretical concepts concerning temporal relations. As mentioned earlier, temporal relations refer to relations between time and situations.

1. Time

In Chapter 2, some basic concepts concerning time were reviewed. In this section a particular temporal concept is introduced, namely, the notion of temporal reference.

Temporal reference means time referred to by linguistic elements which can be of two types: deictic and non-deictic elements. Temporal reference expressed by deictic elements is called deictic temporal reference whereas that expressed by non-deictic elements is called non-deictic temporal reference.

1.1 Deictic Temporal Reference

Deictic temporal reference is concerned with the relationship between the time of the situation denoted by the verb and the time of utterance. One linguistic category expressing deictic temporal reference is deictic temporal adverbial. These adverbials, such as 'yesterday', 'now', 'today' and 'tomorrow', must be semantically interpreted with respect to the time of utterance. <u>Now</u> refers to the time of utterance; <u>yesterday</u> refers to the day before the day of utterance; <u>tomorrow</u> refers to the day after the day of utterance. We need to be able to identify the actual time when the utterance is made in order to interpret these deictic adverbials. Grammatical tense in many languages including English is a kind of deictic temporal reference in that it grammaticalizes the relationship which holds between the time of the situation that is being described and the temporal zero-point of the deictic context (Lyons 1976: 678). The use of past tense in such a sentence as <u>He worked hard</u> locates the situation at a time earlier than the time of utterance. Other languages which do not have tense still have mechanisms to express deictic temporal reference (i.e. time phrases such as <u>last year</u> and <u>next month</u>).

1.2 Non-deictic Temporal Reference

Non-deictic temporal reference is the time referred to by linguistic elements whose the interpretation is independent of the time of utterance. Some examples of non-deictic temporal adverbials which are used to express non-deictic temporal reference are, 'at three o'clock', 'in March', 'in summer', etc. The interpretation of these expressions is not concerned with the time of utterance since it is independently referenced as the clock time, calendrical time and seasonal time respectively.

Aspect also expresses non-deictic temporal reference. According to Comrie (1976), aspects are different ways of viewing the internal temporal constituency of a situation (Comrie 1976: 3). In other words, in talking about one event, one can view it from different aspects of temporal structure. Those aspects are based on the temporal notions of completion, duration, instantaneity, initiation, boundedness, etc. To illustrate, the difference between <u>he was singing</u> and <u>he sang</u>, both of which are located in the past, is the aspectual difference of progressive and non-progressive.

One of the aspectual distinctions is boundedness. Boundaries of the situation can be viewed as a beginning and an ending point. In addition to these two boundaries of a situation, we may refer to another point, i.e., an intermediate point of the situation.

2. Situation

The interpretation of expressions which denote aspectual meaning which is one kind of temporal reference also depends on the aspectual character of the verb. Aspectual character of the verb can be explained in terms of types of situations.

"Situation" is often used as a general term for an event, state, process, or action. Situation can be divided into two classes--static situation and dynamic situation (Lyons 1977: 483).

2.1 Static Situation

A static situation or state is one that is viewed as already existing (not happening) and as being homogeneous, continuous and unchanging throughout its duration (Lyons 1977: 483).

Verbs within this group² are, for example, สูง <u>suuŋ5</u> 'tall', เดี้ย <u>tia3</u> 'short', รู้ <u>ruu4</u> 'know', เข้าใจ <u>khaw3cay1</u> 'understand', มี <u>mii1</u> 'have', เป็น <u>pen1</u> 'be', ได้อิน <u>day3yin1</u> 'hear', เจ็บ <u>cep2</u> 'hurt', หิว hiw5 'hungry', etc.

2.2 Dynamic Situation

A dynamic situation is viewed as happening. When the dynamic situation is momentary, it is called an event. When it is enduring through time (or durative) it is called a process (Lyons 1976: 483). Examples of event verbs are av <u>thin5</u> 'reach', area <u>sa72dut2</u> 'trip over', which kho?4 'tap', etc.

Examples of process verbs are วิ่ง <u>wiŋ3</u> 'run', กิน <u>kin1</u> 'eat', ทำ <u>tham1</u> 'do', etc.

Temporal Relations Denoted by Pay1 and Maa1

In the following section we will investigate in more detail what kinds of temporal relations subsidiary verbs <u>pay1</u> and <u>maa1</u> denote.

It is found that <u>pay1</u> and <u>maa1</u> are used to denote a certain type of temporal relations. In this section we will explore them through situations modified by <u>pay1</u> and <u>maa1</u>. Those types of situations are process and state.

1. Process

1.1 Pay1 with Verbs of Process

Consider the following examples:

(8) khuyi kani payi koon2 na?4
AB ñu <u>iii</u> nau uz
talk together go before prt.
'Go on talking.'

²Examples in Thai given here are cited from Boonyapatipark (1983) which classifies Thai verbs through the classification of situations by Lyons (1977) and Vendler (1967).

(9)	thəə1	khoŋ	tham1	pay1	daay3	may3	ta72100t2
	ពេរ១	A 1	ทำ	<u>11</u>	ได้	ไม่	ดลอด
	she	nay	do	go	able	neg.	a 11
	'She m	ay not	be abl	e to d	o so un	til it	finishes.'
(10)	ruŋ4ru	72caa1	thaan	1 7aa	1haan5	pay1	riay3riay3
	รุ้งรุจา		ทาน	อาห	าร	<u>ไป</u>	เรื่อยๆ
	Rungru	caa	eat	foo	d	<u>g0</u>	continually
	Rungr	ucaa w	ent on	eating	food.'		

Sentences (8) can be interpreted to mean that the addressees are invited to continue talking to each other (or not to end a talk at the present time). Sentence (9) can be interpreted to mean that the agent 'she' is thought not to be able to continue 'doing so' through the whole course of some event, i.e., could not get to the end of the process. Sentence (10) can be interpreted to mean that the agent continued eating.

All the above sentences show that the time that the speakers refer to is concerned with the speaker focussing his point of reference at the intermediate point of the action. Thus, the ending point of the action cannot be seen. The way in which the speaker focuses his point of reference on the course of action can be illustrated by Figure 20.

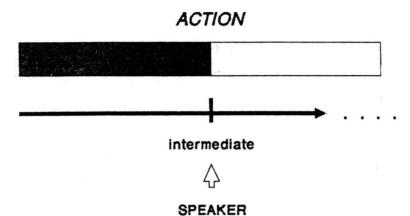


Figure 20

Pay1 with verbs of process

The black part in the figure above represents the part of action which has already been done; the white part represents the part of action which is not done yet. The speaker focuses his view of the situation on the intermediate point (or a non-terminal point) of the action so he uses <u>pay1</u> to denote this temporal relationship. The action proceeds through time in such a way of moving away from the speaker's point of reference.

1.2 Maa1 with Verbs of Process

Consider the following sentence:

(11)

khau5 lian4 kee1 maa1 tee2 khloot3 thuk4 khon1 ม เลยง แต่ 111 แก มา คลอด ຳກ คน he take care him come since born every people 'She has taken care of all of you since you were born.'

In sentence (11) the subsidiary verb <u>maa1</u> is used to modify the main verb <u>lian4</u> 'take care of'. It can be interpreted to mean that from the reference time 'since all of you were born' until the utterance time the subject 'she' has been taking care of 'you'. Thus, we can represent sentence (11) as in Figure 21.

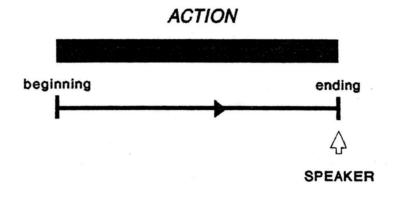


Figure 21

Maa1 with verbs of process

In Figure 21 the rectangular box in black represents that the whole course of action has already been done. The speaker's point of reference is located at the ending point of the action. It shows that the speaker focuses his view on the action at the ending point. The action proceeds from the reference time in the past up to the present time at which the speaker focuses his point of reference.

In short, <u>pay1</u> is used to denote temporal relations in such a way that the speaker focuses his view of the situation on the intermediate point; the situation proceeds onward in time from the speaker's reference point without the ending point in view. <u>Maa1</u> is used to denote temporal relations in such a way that the speaker focuses his view of the situation on the utterance time; the situation may either end at the utterance time or proceed further after the utterance time.

2. States

As reviewed in Section 2, a state exists through time. In this section we will examine the semantic property of <u>pay1</u> and maa1 in sentences expressing static situations.

2.1 Pay1 with Stative Verbs

Consider the following sentences:

(12)	raay1daay3	thii3	khəəy1	mii1	ca72	khaat2	pay1
	รายได้	ที่	198	รม	વર	<u>ขาด</u>	<u>ไป</u>
	earning	that	used to	have	fut.	be in short	<u>g0</u>
	'Those earn	ings wh:	ich (they) used	to ha	ve will becom	e in

short in supply.'

(13) \แกว่าข้าสิบค่า ข้าเถียงสามสิบ 'She scolded me with ten words. I
argued at her with thirty words.\

kee1	ləəy1	ŋiap2	pay1
แก	នេខ	เงียบ	<u>ไป</u>
she	then	be silent	<u>g0</u>
'She.	then,	became sile	nt.'

(14)	ŋən1	thii3	phii3		hay3	mia3waan1
	เงิน	ที่	3		ให้	เมื่อวาน
	money	that	brothe	er(you)	give	yesterday
	man1 1	naay5	pay1	leew4		
	มัน <u>เ</u>	มาย	<u>ไป</u> เ	เล้ว		
	it :	lost	go a	already		
	'The me	oney wh	ich yo	u gave m	e disa	ppeared.'
(15)	7aaw3	pen1	7a1ra	y1 <u>pay1</u>		
	อ้าว	<u>เป็น</u>	อะไร	<u>ไป</u>		
	excl.	be	what	go		

'My goodness! What's the matter?'

Sentence (12) to (15) can be interpreted as follows:

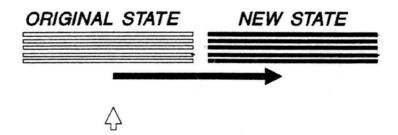
In sentence (12) the speaker refers to two states. One state is the present state which is expressed by the main verb 'be in short in supply'; the other state is the prior state of 'having a lot of earnings'. The speaker focuses his view of the situation on the prior state so that the present state is viewed as departing from his focused state.

In sentence (13) the preceding context lets us know that the speaker emphasizes the prior state of 'loud, long argumentation'. That is to say, the speaker focused his view of the situation on the state which is prior to the state he is referring to. Thus the later state (being silent) is a departure from the prior state (argumenting).

In sentence (14) the speaker is talking about the situation in which yesterday the money still existed (the prior state) and now it is gone (the present state). The present state of 'being gone' is viewed as a departure from his focused state.

In sentence (15) there is an exclamation expressing the speaker's surprise. To the speaker's knowledge, the omitted subject was in a prior state of 'not having anything wrong' and now there is something that happens at the time of speaking (present state). Thus the present state (of something wrong) is a departure from the prior state (of nothing wrong).

In short, with stative verbs <u>pay1</u> is used to denote a change from one state to another state in such a way that the speaker focuses his view of the situation on the prior state. This can be illustrated by Figure 22.



SPEAKER

Figure 22

Pay1 with stative verbs

In Figure 22 the band represents the state. An arrow represents a departure from a prior state to a later state. It shows that the speaker focuses his view on the prior state.

2.2 Maa1 with Stative Verbs

Consider these sentences with the subsidiary verbmaa1.(16)cum5thon1kee1daay3maa1tan3tee2reek3

- จุ๋ม <u>ทน</u> แก ได้ <u>มา</u> ตั้งแต่ แรก Cum (I) <u>bear</u> you able <u>come</u> since beginning 'I have been able to bear her from the beginning.'
- phian3 chan5 (17)naay1 pen1 maa1 naan1 เพื่อน เป็น ฉัน มา นาน นาย friend be Ι come long time you 'You have been my friend for a long time.'
- dooy1may3phuut3may3caa1 yiin1 maa1 naan1 (18)khaw5 โดยไม่พูดไม่จา อน 111 มา นาน long time without saying anything he come stand 'He has stood for a long time without saying anything.'

Sentences (16) to (18) can be interpreted to mean that the state of 'bearing' (16), 'being friends' (17) and 'standing' (18) began in the past. They imply that until the time of speaking those states still exist.

These sentences show that speaker's view is focused on a point of the state which is the same as the utterance time. It is possible that the state may proceed or end at the utterance time. The way in which the speaker focuses his view on the course of this state can be illustrated by Figure 23.

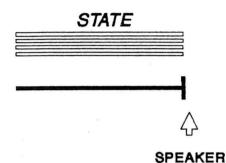


Figure 23

Maa1 with stative verbs

In Figure 23 the band above represents the whole course of the state. The bar below represents the ending point of state. The speaker focuses his point of reference on the ending point of the state so he uses maa1 to denote this temporal relationship.

As mentioned above, these sentences also imply that those states extend from the past up to the present (the time of speaking). Thus, we can map the whole course of the state onto a time line as in Figure 24.

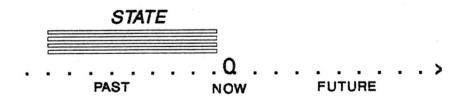


Figure 24

Stative situation (modified by maa1) located on the time line

In Figure 24 the band representing the whole course of the state is mapped on the time line to show the relation between the ending point of the state and the time of speaking. It shows that the speaker is at the "now" point and that the state continues from the past to "now".

3. Maa1 with Event Verb "Pay1"

It is also found that <u>maa1</u> as in the following example can be used to modify the main verb <u>pay1</u>. Consider the following sentence:

(19)pay1 thin5 paa2chaa4chaan4 maa1 1a72 si? ป่าช้าช้าง ถึง ไป ลิ มา ละ reach elephant graveyard come prt. prt. go 'You must have gone to the elephant graveyard.'

In sentence (19) <u>maa1</u> is used to modify the main verb 'go' which is an event verb. It can be interpreted that the event of 'going' happened in the past. It implies that the situation of 'going' is already completed in the past and the person who has has already been to some place comes to appear in the presence of the addressee. This can be seen as an extension of a situation that has happened in the past. We can represent sentence (19) as in Figure 25.

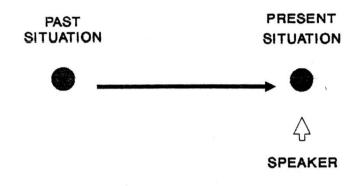


Figure 25

Maal modifying the situation of 'going'

In Figure 25 the circle represents an event. The arrow represents the extension of an event happening in the past to the present (or the time of speaking). The speaker focuses his view of the situation on the present situation so he uses maa1.

When using <u>pay1</u> as a main verb, the speaker views that the subject moves in the direction away from him. When using <u>maa1</u>, the speaker views that the subject moves in the direction toward him. The use of <u>pay1</u> as a main verb and <u>maa1</u> as a subsidiary verb as in the example (19) has shown that the speaker specifies his location as a point of reference, i.e., the subject went away from him and then came toward him.

To summarize, <u>maa1</u> is used to modify the main verb <u>pay1</u> to denote both spatial and temporal relations.

The temporal use of <u>pay1</u> and <u>maa1</u> as such has led many linguists to define them as tense and aspect markers as reviewed in the beginning of this chapter. Thus three is disagreement between some of these analyses. In a process, <u>pay1</u> is analyzed by Thepkanjana 1984) as an imperfective marker. According to Comrie (1976), imperfectivity is a reference to the internal temporal structure of a situation, viewing a situation from within (Comrie 1976: 24). In fact, the speaker focuses his view of the situation on the intermediate point (or non-terminal point) of the whole situation.

Thus, when <u>pay1</u> is used with a stative situation, it is also analyzed by Thepkanjana (1984) as a perfective marker because it denotes the inception (the beginning) of the situation (not a completion). According to Comrie (1976), the perfective forms of some verbs, in particular of some stative verbs, can in fact be used to indicate the beginning of a situation (Comrie 1976: 19). Thus, <u>pay1</u> modifying some stative verbs can be treated as a perfective marker since the speaker focuses on the non-terminal point of the situation which in this case is the beginning point per se. That is to say, the speaker views only the inception of of the state.

In a process, <u>maal</u> is analyzed by Supanwanit (1972) as a present continuous tense marker and a past tense marker. In a durative situation including a process and a state, <u>maal</u> is used to denote a continuity of the situation from the past to the speaking time (or utterance time). In a construction where <u>pay1</u> is a main verb with <u>maa1</u> as a subsidiary verb, the situation of 'going' happened in the past but the speaker extends it to the present.

We conclude that <u>pay1</u> and <u>maa1</u> can denote temporal relations as follows:

1) Pay1

When using <u>pay1</u> as a subsidiary verb to denote the temporal relations of the situation, the speaker focuses his point of reference on any points of the situation other than the ending point.

Thus in a process situation, the speaker views the situation proceeding away from his temporal point of reference.

In a stative situation, the speaker views that it is a change from a prior state into another state which is far away from his point of reference (which is at the prior state).

2) Maa1

When using <u>maa1</u> as a subsidiary verb to denote the temporal relations of the situation, the speaker focuses his point of reference on the utterance time which tends to be the ending point.

Thus, in a process, the speaker views that the situation as has proceeded toward his temporal point of reference, and in a state the speaker views that the state has existed through time toward his temporal point of reference.

Chapter 5

Conclusion

This study is aimed at investigating the meaning of the subsidiary verbs <u>pay1</u> 'go' and <u>maa1</u> 'come' in Thai.

It is found that <u>pay1</u> are <u>maa1</u> denote two kinds of relations: spatial relations and temporal relations.

Spatial Relations

The subsidiary verbs <u>pay1</u> and <u>maa1</u> are found to express the dynamic relations between a moving thing and a path. The dynamic relations indicated by these two verbs are dependent on the the choice of verbs. <u>Pay1</u> is used when the speaker is not at the goal of the path; <u>maa1</u> is used when the speaker is at the goal of the path. Thus, <u>pay1</u> denotes a motion away from the speaker's point of reference; <u>maa1</u> denotes a motion toward the speaker's point of reference. The point of reference can be either the place where the speaker is currently located at or some other place at which the speaker fixes his point of reference.

It is also found that <u>pay1</u> and <u>maa1</u> can be used to modify various classes of verbs to denote spatial relations. Those verbs can be classified into two main groups--motion verbs and evaluation verbs. Motion verbs can be classified as follows:

1. Verbs of translation

1.1 Verbs of displacement

1.1.1 Causative verbs

1.1.1.1 Verbs indicating agent initiating motion

1.1.1.2 Verbs indicating agent participating motion

1.1.2 Non-causative verbs

1.2 Verbs of possession

1.3 Verbs of communication

2. Verbs of rotation

2.1 Verbs of direct bodily action

2.2 Verbs of vision

A third class of verbs, evaluation verbs, can be modified only by <u>pay1</u>. With this group of verbs, <u>pay1</u> denotes a point of excessive degree, which is considered to be far away from the speaker's "appropriate (non-excessive)" point.

Temporal Relations

In addition to spatial relations, subsidiary verbs <u>pay1</u> and <u>maa1</u> denote temporal relations. <u>Pay1</u> is used to denote that the speaker focuses his view on a point other than the ending point of a situation. <u>Maa1</u> is used to denote that the speaker focuses his view on the ending point of a situation.

In a situation of the process kind which endures through time, the speaker uses <u>pay1</u> to denote that the process began and continued but does not end yet. As for maa1, it is used to denote that the process began, continued and ended at the time of speaking.

<u>Maa1</u> which modifies a verb indicating a stative situation express a similar meaning as <u>maa1</u> which modifies a verb indicating a process, that is, it denotes that the state began and proceeds until the time of speaking (it does not change into another state).

<u>Pay1</u> which modifies a stative verb implies that there are two different states which occur consecutively. The speaker focuses his view on the original state and the new state reflects a change away from the speaker's point of reference.

In short, <u>pay1</u> is used to denote that the speaker focuses his view of space and time on a point different from the endpoint of a situation; <u>maa1</u> is used to denote that the speaker focuses his view of space and time on the ending point of a situation. Thus, <u>pay1</u> denotes a motion away from the speaker's point of reference; <u>maa1</u> denotes a motion toward the speaker's point of reference.

Further Studies

It is found that in many sentences <u>pay1</u> and <u>maa1</u> are used to modify other directional verbs than the main verb. For example,

(1) 7un1 piin1 khin3 pay1
อวล ป็น ชื้น ไป
Uan climb ascend go
'Uan climbed upward.'

(2)	khaw5	sut4	loŋ1	pay1	thii3	phiin4
	เขา	ทรุด	ลง	ไป	ท	ม พน
	he	sink	descend	go	at	floor
	'He si	nked d	own to th	e floo	r.'	
(3)	khaw5	khaay	1 kha1no	m5 70	ok2 ma	aa1
	เขา	คาฮ	ชนม	D D	ก มา	ı

emit

he

(4)

'He let the dessert out of (his mouth).' khaw5 kliin1 met4 som3 khaw3 pay1 เขา กลื่น เม็ด สัม เข้า ไป

dessert

exit

come

he swallow seed orange enter go 'He swallowed an orange seed inside.'

We can see that these directional verbs, <u>khin3</u> 'ascend', <u>log1</u> 'descend', <u>khaw3</u> 'enter' and <u>700k2</u> 'exit', are also used to describe the reference path in that <u>khin3</u> and <u>log1</u> involve the vertical dimension of the reference object and <u>khaw3</u> and <u>700k2</u> involve the containment or enclosure of the reference object.

It is interesting whether <u>pay1</u> and <u>maa1</u> in these sentences modify the main verb or the preceding directional verbs. Also, it is possible that these directional verbs denote spatial relations between a moving thing and a reference place in such a way that the reference place must have semantic properties of vertical dimension (for <u>khin3</u> and <u>loy1</u>) and enclosure (for <u>khaw3</u> and <u>700k2</u>). Thus, we may use these verbs to classify things according to our perception of their dimension and boundary.