

## Chapter 4

### Verb Classification and Verbal Derivations

This chapter discusses the classes of Amis verbs in terms of the following semantic and morphosyntactic properties: the morphological features (i.e. the affixation of different voice markers and the derived interpretation), case frames, and their performance in various tests related to their lexical aspects, which include the RRG-based Aktionsart tests and language-specific tests such as the occurrence with the aspectual markers *ho* and *tu* and the morphological marking in the ideophone-forming construction *X sa*. While the first two properties have been extensively discussed or exploited as major verb classification criteria in the previous studies of Amis, other properties, in particular the lexical aspect features (Aktionsart), have not received due attention in the past. Nevertheless, as we have seen in the discussion of the TAM system in Amis, different verb classes seem to induce various temporal readings when contextual information is not available. Such temporal inference indicates that lexical aspects are crucial in differentiating verb classes in Amis. Furthermore, it seems that the finer distinctions within a single verb class still remain unclear in the prior research. This is especially true regarding the state predicates in Amis, which are usually marked by *ma-* or appear unaffixed. For example, both of the verbs *lipahak* ‘happy’ and *ma-hemek* ‘happy’ denote a state of emotion, but while one of them is unaffixed, the other is marked by *ma-*. A natural inquiry thus arises about what distinctions there are between these two verbs. Hence, the purpose of this chapter is two-fold. First, I would like to classify Amis verbs from perspectives besides case frames and voice-related morphology; that is, the lexical aspect features will be incorporated as one classifying criterion, and I will

demonstrate that this criterion can shed a great deal of insight on the understanding of other components of the Amis grammar. Second, I would like to propose a decompositional analysis for the voice markers in Amis. As I will show later, such a decompositional analysis plays an important role in explaining the derivational processes initiated by these voice affixes that have not yet been thoroughly accounted for so far. Take the form *ma-*, which appears in the AV set and also the UV set, as an example. I will argue that this form can actually be further decomposed into different logical structures, and the distinctions among these logical structures provide a natural account for why various *ma-* verbs behave differently in some derivational processes (e.g. the prefixation of *sa-* in the ideophone-forming construction) and constructions (e.g. the co-occurrence with *ho* and *tu*).

This chapter is organized as follows. To begin with, I will present a preliminary classification of the root forms based on the structure of the *X* element in *Xsa* construction. This construction forms an ideophone or expressive in Amis. The *X* part in the frame can either be a root form (bare form or reduplicated) or co-occur with other affixes, as investigated quite extensively in Tsai and Tseng (1997) and Liu (2003). One of such co-occurring affixes with the root is the prefix *sa-*, of which the presence/absence and interpretations depend on the semantic categories of the roots that it attaches to. Therefore, this construction will be employed to make a preliminary classification of the roots in Amis. Based on this preliminary classification, I move on to discuss the verb classes in light of different perspectives. Section 4.2 offers a classification based on how voice markers interact with different verb classes morphologically and semantically. These voice markers will be decomposed and presented with logical structures. Such a

decompositional analysis will facilitate the identification of the subclasses in each Aktionsart type (e.g. result state vs. non-result state, agentive vs. non-agentive activity). Section 4.3 discusses the Aktionsart tests (RRG-based as well as language-specific) that help us classify the Amis verbs. Section 4.4 is dedicated to the discussion of two special verb classes: involuntary activities and psych-predicates. The behavioral properties of these two classes reveal significant information about the issue of agentivity in Amis. In Section 4.5, I look into different verbal derivational processes such as denominalization and causativization and postulate lexical rules for these derivations. Section 4.6 summarizes the discussion of this chapter.

#### **4.1 A Preliminary Classification of the Lexical Categories**

As mentioned in Chapter 3, the roots in Amis have been claimed to be syntactically nominal (Wang 1976), and there is a mismatch between the ontological classes and the grammatical classification.<sup>1</sup> Nevertheless, although the syntactic distinctions among the roots are neutralized, there are constructions of which the morphological structures can reflect the semantic categories of the root forms. One of such constructions is what I call an ideophone-forming construction,<sup>2</sup> or the *Xsa* construction, which will be discussed in the following section. In other words, I am arguing for a categorical status for the roots.<sup>3</sup> Although a clear and absolute demarcation among the categories might not be possible at the present moment, a general picture of the major classes of the roots can still be gained from the discussion, and the distinctions of these root classes are very important to the

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<sup>1</sup> Ontologically-based parts of speech systems have been presented in some Amis grammars or works such as Tsai and Tseng (1997) and Chu (2005), though these authors do not explicitly mention their criteria. Their classification, in spite of intuitional justification, is not well supported by morphological evidence.

<sup>2</sup> I will use the term ideophone to cover both ideophone and expressive, and things alike in the discussion. Although “ideophone” might suggest an onomatopoeic nature of these words, based on Doke’s (1935) definition, it should be general enough to cover both onomatopoeic words and non-onomatopoeic expressions.

verbal derivations discussed later.

#### 4.1.1 The Ideophone-Forming Construction and the Categories of the Roots

Consider the following sentences:<sup>4</sup>

(4.1) a. **Root *sa***

<i>Harakat</i>	<i>sa</i>	kisu	mi-nukay.
fast	say.so	2S.NOM	NEUT-return
'You return fast.'			

a'. ***sa-Root sa***

<i>Sa-harakat</i>	<i>sa</i>	kisu	mi-nukay.
INT-fast	say.so	2S.NOM	NEUT-return
'You return so fast.'			

b. **Reduplicated Root *sa***

<i>*Ha-raka-rakat</i>	<i>sa</i>	kisu	mi-nukay.
fast<RED>	say.so	2S.NOM	NEUT-return
'You return fast.'			

b'. ***sa-Reduplicated Root sa***

<i>Sa-ha-raka-rakat</i>	<i>sa</i>	cingra	k-um-a'en	t-u	hemay.
seem-fast<RED>	say.so	3S.NOM	eat<NEUT>	DAT-CN	rice.
'He is pretending to eat fast.'					

The construction exemplified in (4.1a-d) has received much discussion in Tsai and Tseng (1997) and Liu (2003), and the free morpheme *sa* 'say so' in (4.1) has been treated as a suffix (i.e. *-sa*) or part of a circumfix (i.e. *sa-...-sa*) in both studies. As indicated in the translation, this construction usually denotes an (intensified) manner for an activity, and it often occurs with onomatopoeic words (e.g. '*ek'ek sa* 'in the manner of giggling' ('*ek'ek* 'giggle'), from Tsai and Tseng 1997:24)). In fact, Liu (2003), based on the Neo-

<sup>3</sup> This is similar to the claim made by Himmelmann (in press) for the root forms in Tagalog.

<sup>4</sup> Notice that voice markers of the verb following the *X sa* construction are all glossed as "NEUT" in the examples. The sentences in (4.1) are a type of a serial verb construction, where the initial predicate (i.e. *sa* 'say so') controls the voice pattern of the sentence. As for the non-initial predicate, it has no voice marking function, and that is why *mi-* and *-um-* in (4.1) are glossed as "NEUT".

Davidsonion model, analyzes *sa-X-sa* and *X-sa* (*sa-X sa* and *X sa* in my discussion) as subordinate manner adverbials that modify the VP (Liu 2003:142), and *sa-...-sa* and *-sa* are analyzed as adverbial markers; implicitly, she seems to regard *sa-...-sa* and *-sa* as allomorphs.

As (4.1) shows, there is more than one way to construct the part before *sa*, and each way is labeled in the examples. These structural possibilities vary among themselves in terms of two features: the presence/absence of the prefix *sa-* and the possibility to reduplicate the root. In general, the following four structural variances can be found for the part before *sa* ‘say so’: only the bare root (i.e. “*Root sa*” in (4.1a)), the root with the prefix *sa-* (i.e. “*sa-Root sa*” as in (4.1a’)), the reduplicated root without the prefix *sa-* (i.e. “*Reduplicated Root sa*” as in (4.1b)), and the reduplicated root with the prefix *sa-* (i.e. “*sa-Reduplicated Root sa*” as in (4.1b’)). Notice that although the prefix *sa-* may show up with either a bare root (i.e. *sa-Root sa*) or a reduplicated one (i.e. *sa-Reduplicated Root sa*), the interpretations of this prefix are different in the two structures, as one may compare (4.1a’) and (4.1b’); the *sa-* in *sa-harakat sa* is rendered like an intensifier, while the *sa-* in *sa-harakarat sa* receives a reading of ‘seem; pretend’.

The plausibility to show up with each of the four structures in this construction varies among the roots. For example, the root *harakat* ‘fast’ cannot appear with the structure *Reduplicated Root sa*, as indicated by the ungrammaticality of (4.1b), but this root can show up with the rest of the three structures. However, for the root *rayaray* ‘row’ exemplified in (4.2), only the *sa-Root sa* structure is allowed:

(4.2) a. **Root *sa***

\*Rayaray sa kita pa-sasuluy t-u-ni  
row say.so 1P.INCL.NOM CAU-pass DAT-CN-this

a anengang i tiya<sup>5</sup> kalamkam.  
LNK chair PREP there fast

‘Let’s line up (and in this way) and we can pass this chair quickly.’

a’. ***sa-Root sa***

Sa-rayaray sa kita pa-sasuluy t-u-ni  
form-row say.so 1P.INCL.NOM CAU-pass DAT-CN-this

a anengang i tiya kalamkam.  
LNK chair PREP there fast

‘Let’s line up (and in this way) and we can pass this quickly.’

b. ***Reduplicated Root sa***

\*Ra-yara-yaray sa kita pa-sasuluy t-u-ni  
row<RED> say.so 1P.INCL.NOM CAU-pass DAT-CN-this

a anengang i tiya kalamkam.  
LNK chair PREP there fast

‘Let’s line up (and in this way) and we can pass this chair quickly.’

b’. ***sa-Reduplicated Root sa***

\*Sa-ra-yara-yaray sa kita pa-sasuluy t-u-ni  
seem-row<RED> say.so 1P.INCL.NOM CAU-pass DAT-CN-this

a anengang kalamkam.  
LNK chair fast

‘Let’s line up (and in this way) and we can pass this quickly.’

Unlike the root *harakat* ‘fast’, the root *rayaray* ‘row’ has to show up with the prefix *sa-* in this construction, as indicated by the ungrammaticality of (4.2a), and moreover, this root is not allowed to be reduplicated as we can see in (4.2b) and (4.2b’). In addition to the structural difference, the interpretation of the prefix *sa-* is also different for *rayaray* ‘row’; it is rendered as ‘form’ instead of an intensifier like the one for *harakat* ‘fast’.

Now let us examine three more roots: *patay* ‘dead’, *celiq* ‘shout’, and *tetek* ‘peck once’:

<sup>5</sup> This prepositional phrase *i tiya* is used in a colloquial manner in the examples. Its function is not clear to me at this moment.

(4.3) a. **Root sa**

Patay sa cingra.  
 dead say.so 3S.NOM  
 ‘He died that way.’

a’. **sa-Root sa**<sup>6</sup>

\*Sa-patay sa cingra.  
 SA-dead say.so 3S.NOM

b. **Reduplicated Root sa**

\*Pata-patay sa cingra.  
 RED-dead say.so 3S.NOM

b’. **sa-Reduplicated Root sa**

Sa-pata-patay sa cingra.  
 seem-RED-dead say.so 3S.NOM  
 ‘He is playing dead.’

c. **Root sa**

Celiq sa Ø-ci kacaw ci aki-an.<sup>7</sup>  
 shout say.so NOM-MCM Kacaw PPN Aki-DAT  
 ‘Kacaw is shouting to Aki with great effort.’

c’. **sa-Root sa**

\*Sa-celiq sa Ø-ci kacaw ci aki-an.  
 SA-shout say.so NOM-MCM Kacaw PPN Aki-DAT

d. **Reduplicated Root sa**

Celi-celiq sa Ø-ci kacaw ci aki-an.  
 RED-shout say.so NOM-MCM Kacaw PPN Aki-DAT  
 ‘Kacaw keeps on shouting to Aki with great effort’

d’. **sa-Reduplicated Root sa**

Sa-celi-celiq sa Ø-ci kacaw ci aki-an.  
 seem-RED-shout say.so NOM-MCM Kacaw PPN Aki-DAT  
 ‘Kacaw keeps on shouting to Aki with great efforts (for unknown reasons)’

e. **Root sa**

Tekek sa k-u qayam t-u panay.  
 peck.once say.so NOM-CN chicken DAT-CN rice  
 ‘The chicken is pecking the rice continuously.’

<sup>6</sup> As this structure is ungrammatical, I do not know which gloss that the prefix *sa-* takes in this example.

<sup>7</sup> This sentence is taken from Liu (2003:85), gloss mine, original translation.

e'. ***sa-Root sa***

<u>*Sa-tekek</u>	<u>sa</u>	k-u	qayam	t-u	panay.
SA-peck.once	say.so	NOM-CN	chicken	DAT-CN	rice

f. ***Reduplicated Root sa***

<u>Teke-tekek</u>	<u>sa</u>	k-u	qayam	t-u	panay.
RED-peck.once	say.so	NOM-CN	chicken	DAT-CN	rice

'The chicken seems to peck the rice continuously.'

f'. ***sa-Reduplicated Root sa***

<u>Sa-teke-tekek</u>	<u>sa</u>	k-u	qayam	t-u
seem-RED-peck.once	say.so	NOM-CN	chicken	DAT-CN

panay.

rice

'The chicken seems to peck the rice continuously.'

As shown in (4.3), these three roots display various co-occurring possibility with each of the four structures of the *X sa* construction. For the root *patay* 'dead', the co-occurrence with the prefix *sa-* is not allowed unless it is reduplicated. For both roots *celiq* 'shout' and *tekek* 'peck once', all but the *sa-Reduplicated Root sa* structure are allowed to co-occur with them, but their *Root sa* forms are interpreted with slight difference; *celiq sa* in (4.3c) is rendered like an on-going activity, but *tekek sa* in (4.3e) gets an iterative reading.

The structural possibilities of *X sa* construction with different roots are summarized in Table 4.1:

**Table 4.1 Different Roots and The Structures of the *X sa* Construction**

Form of the <i>X sa</i> Construction Example of the Root	Bare Root <i>sa</i>		Reduplicated Root <i>sa</i>	
	without <i>sa-</i>	with <i>sa-</i>	without <i>sa-</i>	with <i>sa-</i>
<i>rayaray</i> 'row'	No	Yes	No	No
<i>harakat</i> 'fast'	Yes	Yes	No	Yes
<i>patay</i> 'dead'	Yes	No	No	Yes
<i>celiq</i> 'shout'	Yes	No	Yes	Yes
<i>tekek</i> 'peck once'	Yes	No	Yes	Yes

In fact, the structural variation has been noted in both Tseng and Tasi (1997) and Liu (2003). However, none of these two studies have offered a satisfactory account for this



observation, though Liu (2003) does notice that the form of *X* in *X sa* varies according to the types of verb that appear in *X*.

In this section, I will reexamine this construction with an attempt to account for the structural complexities mentioned above.<sup>8</sup> To begin with, I propose that this construction functions as a frame that introduces ideophones or expressives, which are defined as words describing “a predicate, qualificative or adverb in respect to manner, colour, smell, action, state, or intensity” (Doke 1935:118). This proposal is made not only based on the observations reported in Tsai and Tseng (1997) and Liu (2003) concerning the functions of this construction, but also based on the fact that the verb *sa* (or *-sa* in the previous studies) actually originates from a verb meaning ‘say so’ that often introduces a direct quote (Wu 1995), as exemplified in (4.4). This conforms to the claim made by Childs (1994) that ideophones are often “introduced by a dummy verb with meanings such as ‘do’, ‘say’, ‘quote’, or ‘think’” (Childs 1994: 187).

- (4.4) a. **Sa/Saan**                      kaku                      cingraan  
              say.so/said.so              1S.NOM              3S.DAT  
              ‘I want to say/said to him.’
- b. S-um-uwal Ø-ci                      aki              ci              panay-an              ma-ulah  
              say<AV>    NOM-PPN              Aki              PPN              Panay-DAT              AV-like
- kaku              i              tisuwanan              **saan**                      cingra.  
              1S.NOM              PREP    2S.DAT              said.so                      3S.NOM  
              ‘Aki<sub>i</sub> said to Panay<sub>j</sub>, ‘I<sub>i</sub> like you<sub>j</sub>.’ So he<sub>i</sub> said.’

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<sup>8</sup> This construction is often discussed with another similar construction introduced by *han* (i.e. *sa*-Root **han** or Root **han**), in which *han* also originates from an utterance verb that introduces a direct quote (Wu 1995). Functionally speaking, the *han* construction seems to designate a certain manner of handling things for the co-occurring predicates or arguments. In addition to this semantic difference, it also exhibits the following two features different from the *sa* construction. First, the *sa* construction is treated as an AV construction, while the *han* construction, a UV one. Second, some roots that can appear with the *sa* construction cannot appear with the *han* construction. In this section, I will only focus on the discussion of the *sa* construction. Interested readers may refer to Liu (2003) for the discussion of the *han* construction.

c.	Ka-tayra	<b>sa/saan</b>	Ø-ci	sawmah	t-u
	KA-go.there	say.so/said.so	NOM-PPN	Sawmah	DAT-CN

wawa.

child.

‘Sawmah asked the child to go there.’

Lit. ‘Sawmah said, “Go there” to the child.’

Besides this analysis, the following two revisions are proposed concerning the analysis of this structure. First of all, as mentioned, *sa* in the *X sa* construction is treated as an independent morpheme instead of a suffix, which is the analysis postulated in Tsai and Tseng (1997) and Liu (2003). The independent status of this morpheme is supported by the fact that it is still used independently as an utterance verb that introduces a direct quote, as illustrated in (4.4). Moreover, it exhibits tense/aspect distinctions (i.e. *sa* and *saan*) even when it is used in the ideophone-forming construction. For example:<sup>9</sup>

- (4.4) d. Rara            **saan**            ma-fadi            k-u            hana.  
           slow            said.so            NEUT-wither    NOM-CN       flower  
           ‘The flower withered slowly.’

The second revision in my analysis is the multiple meanings of the prefix *sa-*. While previous studies seem to treat the prefix *sa-* as a single morpheme in this construction and view *sa-X sa* and *X sa* as allomorphs, I argue that there is more than one *sa-* found in this construction, and the interpretation and distribution of this prefix depend on the semantic categories of the root. As shown in the examples in (4.1-4.3), I propose that there are at least three meanings that go with *sa-*: the *sa-* serving as an intensifier as in *sa-harakat* in (4.1a), the *sa-* meaning ‘form; create’ as in *sa-rayaray* in (4.2a’), and the *sa-* meaning ‘seem; pretend’ as in *sa-harakarakat* in (4.1b’). While the first two readings can be found with the bare root, the third reading is only found with the reduplicated root. The

<sup>9</sup> This verb might have undergone some kind of grammaticalization as the argument following it does not have to be animate. This is incompatible with an utterance verb. I will leave this issue for future study.

three *sa*-s not only differ in their interpretations but also behave distinctively in this construction, as I have shown in Table 4.1. Moreover, the roots displayed in Table 4.1, can be roughly classified into three categories: object (e.g. *rayaray* ‘row’), state (e.g. *harakat* ‘fast’ and *patay* ‘dead’), and activity (e.g. *celiq* ‘shout’). The intensifier *sa*- only goes with the state roots. It is optional with an attribute state like *harakat* ‘fast’, but is not allowed with a result or transient state (e.g. *patay* ‘dead’). The *sa*- meaning ‘form’ or ‘create’ can only go with objects, and it is obligatory in this construction. As for the *sa*- meaning ‘seem’ or ‘pretend’, it obligatorily shows up with the reduplicated form of a state root (e.g. *patay* ‘dead’) but optionally appears with the reduplicated form of an activity root (e.g. *celiq* ‘shout’).

Furthermore, as seen in the above examples, the reading of *Root sa* is subject to the static/dynamic feature of the roots. The *Root sa* structure of state roots such as *harakat* ‘fast’ and *patay* ‘dead’ is either rendered as a plain state or the completion of a result state. For dynamic roots such as *celiq* ‘shout’ and *tekek* ‘peck once’, the same structure receives an on-going reading for the events designated by the roots. Notice that for the dynamic roots with a punctual feature (e.g. *tekek* ‘peck once’), this structure obtains an iterative reading. More examples are given below; the static roots are provided in (4.5), and the dynamic roots are given in (4.6).

- (4.5) a. Hemek        sa        cingra.  
           happy        say.so 3S.NOM  
           ‘He is very happy.’
- b. Palal        sa        cingra.  
           wake.up    say.so 3S.NOM  
           ‘He (then) woke up.’

- c. Iclang            sa                    k-u                    rikor.  
dry                say.so                NOM-CN            clothes  
'The clothes became dry (then).'  
'The clothes become so dry.'<sup>10</sup>
- (4.6) a. Tawa            sa            cingra.  
laugh            say.so 3S.NOM  
'He is laughing.'
- b. Tepoc                    sa            kaku                    t-u                    'aol.  
chop.down.at.once say.so 1S.NOM            DAT-CN            bamboo  
'I am chopping bamboo continuously.'
- c. Faha            sa                    k-u-ni                    a            wawa.  
cough            say.so                NOM-CN-this            LNK            child  
'The child is coughing continuously.'

Table 4.2 below summarizes the categories of the roots and the structures and interpretations of the ideophone-forming *X sa* construction in which each type of root appears.

**Table 4.2 Categories of the Roots and the Structures and Interpretations of *X sa***

Category of the Roots <sup>11</sup>	Examples of the Root	<i>Bare Root sa</i>		<i>Reduplicated Root sa</i>	
		<i>without sa-</i>	<i>with sa-</i>	<i>without sa-</i>	<i>with sa-</i>
<b>Object</b> [-dynamic] [-static]	<i>rayaray</i> 'row' <i>nanum</i> 'water'	No	Yes <i>sa-</i> : form; create	No	No
<b>State (attribute)</b> [-dynamic] [+static] [-telic]	<i>harakat</i> 'fast' <i>usuy</i> 'slow'	Yes (plain state)	Yes <i>sa-</i> : intensifier	No	Yes <i>sa-</i> : seem or pretend
<b>State (transient/result)</b> [-dynamic] [+static] [+telic]	<i>hemek</i> 'happy' <i>patay</i> 'dead'	Yes (result state)	No	No	Yes <i>sa-</i> : seem or pretend
<b>Activity</b> [+dynamic] [-static] [-telic]	<i>celiq</i> 'shout' <i>tawa</i> 'laugh'	Yes (oning activity)	No	Yes	Yes <i>sa-</i> : seem or pretend
<b>Achievement and Semelfactive</b> [+dynamic] [-static][±telic] [+punctual]	<i>tekek</i> 'peck once' <i>tepoc</i> 'chop once' <i>faha</i> 'cough'	Yes (iterative activity)	No	Yes	Yes <i>sa-</i> : seem or pretend

<sup>10</sup> This translation is cited from Liu (2003:85). Both (4.5b) and (4.5c) are uttered at the moment when the state is resulted. The past tense in the translation indicates the perfectiveness of the state.

<sup>11</sup> The terms for the categories are adopted from Janet Allen (p.c.) in her discussion of parts of speech in Kankanaey, a Philippine language.

As shown in Table 4.2, the roots are classified by incorporating the Aktionsart features introduced in Chapter 2, such as [ $\pm$ dynamic], [ $\pm$ static], [ $\pm$ punctual], and [ $\pm$ telic]. There are five root categories differentiated based on the structural features and the interpretations of the *Xsa* construction. As mentioned in Chapter 3, although some of the roots are ontologically verbal, except for a portion of state predicates and some motion verbs, most of the roots have to appear with a voice marker when serving as a predicate. This derived voice-marked predicate may then appear in different conjugations in various constructions (e.g. imperative or negative). It has also been pointed out that the voice markers, especially the actor voice set, also reflect the categories of the roots as there are some selectional restrictions between certain voice markers and certain root types. Furthermore, different root categories may get different interpretations even when they are attached by the same affix. These points will be further discussed in Section 4.2. Before that, let us first examine the unaffixed predicates, namely, predicates that are derived through zero derivation.

#### 4.1.2 Unaffixed Predicates

Generally speaking, there are two types of unaffixed predicates in Amis: the one with the co-occurrence of a locative core argument and the one without. The former consists of motion verbs and existential/possessive/locative verbs, and the latter is mainly composed of state predicates that in general denote permanent properties.<sup>12</sup> In the following discussion, I will refer to the two major types of unaffixed predicates as unaffixed locative predicates and unaffixed non-locative state predicates.

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<sup>12</sup> As we can see later, the transient state and/or result states are mostly affixed with *ma-*.

#### 4.1.2.1 Unaffixed Locative Predicates

Unaffixed predicates that have a locative core argument in their semantics such as *ira* ‘exist; there is/are; be at’ and *maroq* ‘live’ are actually more like a combination of morephemes. For instance, the word *ira* can be regarded as a fossilized expression<sup>13</sup> of the preposition *i* plus the distal deictic *ra*, and it is highly possible that *maroq* is formed from the combination of the voice marker *ma-* plus *aroq* ‘seat’, though it is also used as a single morpheme now.<sup>14</sup> Examples follow:

- (4.7) a. Ira            k-u            ta-tulu            a            wawa (i            la-lumaq).  
           exist            NOM-CN            PL-three            LNK    child    PREP   RED-house  
           ‘There are three children (inside the house).’
- b. Ira            Ø-ci            aki    i            lumaq.  
           exist            NOM-PPN            Aki    PREP   house  
           ‘Aki is at home.’
- c. Ira            k-u            paysu    aku.  
           exist            NOM-CN            money 1S.GEN  
           ‘I have money.’  
           Lit. ‘My money exists.’
- d. Awa            Ø-ci            aki    i            lumaq.  
           not.exist            NOM-PPN            Aki    PREP   house  
           ‘Aki is not at home.’
- e. Awa            k-u            paysu    aku.  
           not.exist            NOM-CN            money 1S.GEN  
           ‘I have no money.’  
           Lit. ‘My money does not exist.’
- f. Maroq            kaku            i            taypak.  
           live            1S.NOM            PREP   Taipei  
           ‘I live in Taipei.’

As shown in the data, the predicate *ira* can express three concepts: existence, as in (4.7a),

<sup>13</sup> The combination of *i* and *ra* is conceived as a unit as it has a corresponding negator *awa*, which cannot be further decomposed.

<sup>14</sup> The imperative form for *maroq* is *ka-marōq*, not *\*ka-aroq*.

location, as in (4.7b), and possession, as in (4.7c). This is not something uncommon as cross-linguistically, existential, locative, and possessive predicates are often coded by the same lexicon (Clark 1978). This phenomenon is also found in Formosan languages other than Amis, as reported in Zeitoun et al. (1999). When *ira* serves as a pure locative predicate, the locative argument is obligatory; the locative argument is optional when *ira* denotes “existence”, as seen in (4.7a). When *ira* is used to express “possession”, the locative argument is expressed by a possessor that is marked by the genitive case. As shown in the logical structures of three readings of *ira* in (4.8), the locative arguments of *ira* all appear at the same position in the logical structures; that is, they all appear as a first argument of the **pred'** that is embedded in **exist'**. More discussion about these logical structures will be offered when I explore the issue of macrorole assignment and case marking in Chapter 5.

- (4.8) a. Ira            k-u            ta-tulu            a            wawa.  
           exist        NOM-CN      PL-three        LNK    child  
           ‘There are three children.’

a'. **exist'** ( ta-tulu a wawa)

- b. Ira            Ø-ci            aki    i            lumaq.  
           exist        NOM-PPN    Aki    PREP    house  
           ‘Aki is at home.’

b'. **exist'** ([**be-at'** (lumaq, aki)])

- c. Ira            k-u            paysu    aku.  
           exist        NOM-CN      money 1S.GEN  
           ‘I have money.’  
           Lit. ‘My money exists.’

c'. **exist'** ([**have'** (aku, money)])

Another major category of unaffixed locative predicates consists of motion verbs.

These verbs are composed of three elements: the verb *ta* ‘go or move’<sup>15</sup> or *tala-* ‘(move) toward’, the preposition *i*, and a deictic (i.e. *ni* ‘the proximal deictic’ or *ra* ‘the distal deictic’) or a directional word.<sup>16</sup> For example:

(4.9) Motion verbs

a. <i>tayra</i> > <i>ta-i-ra</i> ‘go (i.e. move there)’	b. <i>tayni</i> > <i>ta-i-ni</i> ‘come (i.e. move here)’
c. <i>tahira</i> ‘arrive there’	d. <i>tahini</i> ‘arrive here’
e. <i>ta-rikor</i> ‘move to the back’	f. <i>tala-cuwa</i> ‘go where?’

Notice that the motion verbs exemplified in (4.9) do not all belong to the same Aktionsart class. Some of these motion verbs are activities (e.g. *tayra* ‘go’) while others are more like accomplishments (e.g. *tahira* ‘arrive there’).

#### 4.1.2.2 Unaffixed Non-locative State Predicates

As mentioned in the discussion of the ideophone-forming construction, there is a distinction between the state predicates that designate a permanent property and those that depict a transient or result state. The former group mostly appears unaffixed in the predicate position while the latter is mostly coded by *ma-*. Commonly found examples are given below, with reference to the adjective types proposed by Dixon (1977):

(4.10) a. Examples of the unaffixed state predicates:

Dixon’s semantic types	Amis examples
1. dimension	<i>tata’ang</i> ‘big’; <i>miming</i> ‘small’; <i>puener</i> ‘short’
2. physical property	<i>kerteng</i> ‘heavy’; <i>’atekak</i> ‘hard’; <i>kumaying</i> ‘soft’
3. color	<i>kuhting</i> ‘black’; <i>kahemang</i> ‘red’; <i>kuhcal</i> ‘white’
4. human propensity	<i>fangcal</i> ‘good; kind’; <i>lipahak</i> ‘happy’
5. value	<i>nga’ay</i> ‘fine’; <i>ka’suq</i> ‘delicious’; <i>tati’ih</i> ‘bad’
6. speed	<i>harakat</i> ‘fast’

The forms in (4.10), which are listed based on Dixon’s (1977) classification, all appear without any affix in the predicate position. For a comparison, state predicates affixed

<sup>15</sup> This verb is seldom used alone; it often appears in a reduplicated manner (e.g. *ta-ta-ta* ‘go, go, go’ as an expression to urge somebody to move).

<sup>16</sup> While it is easy to break down some of the motion verbs such as *tayra* and *tayni*, it is not easy to come up with a morphemic analysis for others like *tahira* ‘arrive’.



with *ma-* are provided in (4.11):<sup>17</sup>

(4.11) b. Examples of the *ma-* state predicates:

Dixon's semantic types	Amis examples
1. physical property	<i>ma-talem</i> 'sharp'; <i>ma-su'su</i> 'fat'
2. human propensity	<i>ma-hemek</i> 'happy'; <i>ma-li'ang</i> 'mean'
3. age	<i>ma-tu'as</i> 'old'; <i>ma-kapah</i> 'young; pretty'
4. value	<i>ma-kapah</i> 'pretty'
5. speed	<i>ma-rarar</i> 'slow'
6. cognition	<i>ma-fanaq</i> 'know; able'; <i>ma-fukil</i> 'not know; unable'
7. emotion	<i>ma-ulah</i> 'like'; <i>ma-osi</i> 'hate'; <i>ma-keter</i> 'angry'
8. experiential verbs	<i>ma-talaw</i> 'afraid'

It seems that there is not much overlap between the semantic types designated by the unaffixed verbs and the *ma-* verbs. While the unaffixed state predicates seem to all fall in the verbs corresponding to Dixon's (1977) adjective types, *ma-* state verbs cover more varieties. I have demonstrated how attribute and result or transient states can be differentiated based on the *X sa* construction. There are two more differences between them. First, as seen in (4.11), two-place state predicates (e.g. *ma-fanaq* 'know' and *ma-ulah* 'like') all belong to the *ma-* group, while unaffixed states are one-place predicates. Second, in the derivation of nicknames, the unaffixed set is suffixed with *-an*, but such a structure is not allowed for the *ma-* set. The comparison is shown in the following table:

**Table 4.3 Different Structures in Nicknaming and Nominalization of State Predicates<sup>18</sup>**

State Predicates	Nicknaming with <i>-an</i>	Nominalization with <i>-ay</i>
<i>tata'ang</i> 'big'	<i>tata'ang-an</i> 'big guy; fatty'	<i>tata'ang-ay</i> 'something big'
<i>kuhting</i> 'black'	<i>kuhting-an</i> 'black guy'	<i>kuhting-ay</i> 'something or someone black'
<i>ma-su'su</i> 'fat'	* <i>su'su'-an</i>	<i>ma-su'su'-ay</i> 'someone fat'
<i>ma-lasang</i> 'drunk'	* <i>lasang-an</i> <i>ka-lasang-ay</i> 'drunkard'	<i>ma-lasang-ay</i> 'someone who is drunk'

As seen in Table 4.3, the root form of the *ma-* state predicates do not take the suffix *-an*

<sup>17</sup> The *ma-* prefix in (4.10) is the *ma-* in the AV voice set in Table 3.13.

<sup>18</sup> There are other ways of nicknaming. Another common way is to prefix *ka-* to the root form (e.g. *ka-mata* 'Big Eye' (from *mata* 'eye'), *ka-tangic* 'Cry Baby' (from *tangic* 'cry'), *ka-su'su* 'Fatty' (from *su'su*)). For this process, there does not seem to be categorical distinctions involved, as *mata*, *tangic* and *su'su* belong to different root categories.

to form a nickname. The suffix *-an*, which makes the state root it attaches to become a generic noun, can also affix to the object roots and derive a generic expression. Some examples are given in (4.12):

- (4.12) a. *futing* ‘fish’ → *futing-an* ‘fish kind’  
 b. *fafahi* ‘wife’ → *fafahiyan* (> *fafahi-an*) ‘woman’  
 c. *fa’inay* ‘husband’ → *fa’inay-an* ‘man’

In this regard, the attribute states behave more like object roots. The distinction between the two types of state predicates seems to be the distinction between individual-level predicates and stage-level predicates. Individual-level predicates usually depict inherent properties of a noun, and this semantic feature might make it easier to the source for the derivation of a generic noun than a stage-level predicate, which usually denotes the episodic properties of an object. In RRG, this distinction is expressed by the following logical structures (VVLP 1997:103; VV 2005:48-49):

- (4.13) a. for non-episodic states or individual-level states: **be’** (x, [**pred’**])  
 b. for transient, episodic, result state or stage-level states: **pred’** (x, (y))<sup>19</sup>

The only difference between the two lies in the metalinguistic operator **be’**, which indicates the attribute nature of this predicate.<sup>20</sup> I will return for more discussion of state predicates later in this chapter.

## 4.2 Voice Affixes and Verb Classes

In the previous section, I have shown that the categories of roots in Amis can be defined in terms of lexical aspect features. In this and the following sections, I will go further to discuss the interaction between these root classes and the voice markers when

<sup>19</sup> However, in the later analysis, further differentiation between the transient states and the result states will be made. For the former, I will use **pred’** (x, (y)); for the latter, I will use (INGR/BECOME) **pred’** (x, (y)).

<sup>20</sup> The distinction between attribute and non-attribute state predicates is also reported in Tsukida’s (2005b) paper, as reviewed in Chapter 1.

they form a predicate, and how these derived predicates can be classified morpho-syntactically and semantically. This section discusses the compatibility of the roots with various voice markers and their derived interpretations. The significance of these two criteria is revealed in the following two facts. First, there are some co-occurrence restrictions between the roots and the voice affixes, especially the AV set;<sup>21</sup> that is, some roots only or more easily appear with certain (actor) voice affixes but not others. Furthermore, the roots tend to have a default choice among the AV affixes. For example, some roots tend to appear with *mi-* by default, while others may have *ma-* or *-um-* as their unmarked choice, though these roots may also appear with other voice affixes in the AV group. The co-occurrence restriction and the default association between the roots and the voice markers have been the research interest of some previous studies reviewed in Chapter 1 (e.g. Huang 1988 and Yan 1992), and this issue will be further discussed in this section. Second, even if the root forms can be attached to by the same affix, the derived verb types will not be the same. Consider the following two examples that are both derived by affixing the AV marker *mi-* to the roots:

(4.14)a. *mi-palu* ‘beat’ (from *palu* ‘beat’)

b. *mi-kuhcal* ‘whiten; cause to become white’ (from *kuhcal* ‘white’)

As illustrated in (4.14), while there is a causative reading in the *mi-* verb in (4.14b), there is no such reading in the *mi-* verb (4.14a) even though both roots are affixed by *mi-*. This difference is semantically motivated as the root *palu* designates an activity while the form *kuhcal* refers to an attribute, and such a semantic distinction accounts for why they get

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<sup>21</sup> As I have mentioned in Chapter 3, sometimes the “AV” markers do not have any voice marking functions, and they will be glossed as “NEUT” in the examples. However, in the discussion, I will simply refer to this set of voice markers as “AV” markers without any specification.

different interpretations when being affixed with *mi-*.

The discussion in Chapter 3 has clearly shown the crucial status of the voice markers, especially the actor voice set, in the verbal morphology of Amis. In spite of the recognition of the importance of these markers in many of the previous studies, their internal semantics and derivational functions still call for more research. Among these voice markers, the AV marker *mi-*, *ma-* (both the AV form and the UV form),<sup>22</sup> and the UV suffix *-en* are especially important due to their high productivity and their great influence on the verbal semantics. Such influence is clearly manifested from the following observations, repeated from the discussion in Chapter 3. First, these affixes, especially the AV marker *mi-* and the form *ma-* (in both the AV and UV sets), have been treated as the major verb class differentiators in a couple of the previous studies (e.g. Huang 1988 and Yan 1992). Second, these affixes often affect the semantics of the verbs they attach to. For example, the UV suffix *-en* has been claimed to signal the rising possibility of the happening of an event and the intention of the actor (Tsukida 1993). Third, these voice affixes usually carry inferable TAM information for the attached predicates (Tsukida 1993; Zeitoun et al. 1996). Such inferred TAM information, however, will be overridden once when the temporal context in the sentence is made explicit.

In this section, I will focus on how different verb classes can be identified based on their interactions with the following affixes: the AV marker *mi-*, the form *ma-* that appears in the AV and UV sets, and the UV marker *-en*. Although previous studies have pointed out the importance of these affixes in categorizing Amis verbs, few of these

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<sup>22</sup> The discussion here actually includes the *ma-* that has no voice function; that is, the *ma-* that appears with intransitive verbs such as *ma-hemek* 'happy'. It is glossed as "neutral" in such examples.

studies make finer distinctions among the verbs marked by the same affix. For example, Yan (1992) places all the verbs prefixed by *mi-* in one class without further sub-categorization. But, as we have seen from (4.14), there are at least two classes of *mi-* verbs: causative and non-causative, and thus further distinctions should be made among the *mi-* verbs. Moreover, equal attention has not been paid to every voice affix in the discussion of verb classification. An instance like this is the suffix *-en*, which, in spite of being extensively discussed in Tsukida (1993) regarding its semantics, has not received much discussion on its function as a verb class differentiator. Furthermore, Tsukida (2005b) regards *-en* as an inflectional morpheme in the conjugation (similar to Chen 1987). Her analysis does not seem very appropriate since *-en* does change the meaning of the derived verb in addition to marking the voice opposition, as shown in (3.39). In this section, the properties of the voice markers will be further explored in order to fill in the gaps that have been missed in the previous research. In particular, a compositional analysis for these voice affixes will be proposed. As I will show later, the derivation and interaction among verb classes can be better understood through such decomposition. Let us begin with the AV marker *mi-*.

#### 4.2.1 The Meaning and Functions of the AV Marker *Mi-*

The prefix *mi-* is found most frequently in the following two types of derivation:

- (4.15)a. Mi-nanum Ø-ci aki t-u nanum.<sup>23</sup>  
 AV-water NOM-PPN Aki DAT-CN water  
 ‘Aki is going to drink water.’  
 ‘Aki is drinking water.’

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<sup>23</sup> According to Yan (1992), the *mi-* affix (equivalent to *mi-* in his paper) can be omitted in his dialect (one of the Southern dialects). However, as remarked by my informants, such kinds of sentences, though understandable, sound very childish.

- b. Mi-palu    Ø-ci                    sawmah    ci           mayaw-an.  
 AV-beat    NOM-PPN    Sawmah    PPN    Mayaw-DAT  
 ‘Sawmah is going to beat Mayaw.’  
 ‘Sawmah is beating Mayaw.’

As seen in (4.15a), this prefix attaches to a root denoting an object and derives a verb expressing an activity with the object denoted by the root as its generic object. It can also attach to a root expressing an activity and derive a verb expressing that activity (e.g. (4.15b)). Notice that the *mi-* verbs in (4.15) can have a progressive reading or a motional/purposive reading. This has been pointed out in Zeitoun et al. (1996).<sup>24</sup>

An activity verb in Amis is not necessarily derived from the affixation of *mi-*; other affixes such as *ma-* (AV) or *-um-* can also derive an activity verb. Unlike *mi-* activity verbs, *ma-* and *-um-* activity verbs only get the progressive reading, as reported in Zeitoun et al. (1996). While most roots tend to occur with only one of them to form an activity verb, some roots can have more than one possibility. However, the *mi-* form for roots that take either *-um-* or *ma-* by default to form an activity predicate only gets a motional/purposive reading,<sup>25</sup> and the goal is preferably specified in the sentence.

Consider:

- (4.16)a. Ma-ranam                                    kaku.  
 NEUT-have.breakfast                    1S.NOM  
 ‘I am having my breakfast.’
- a’. Mi-ka-ranam<sup>26</sup>                                    kaku                    i            ci            kaka-an  
 AV-KA-have.breakfast                    1S.NOM                    PREP    PPN    older.sibling-DAT  
 ‘I am going to Brother’s place to have (a special) breakfast.’
- b. K-um-a’en kaku                                    t-u                                    pawli.  
 eat<AV>    1S.NOM                    DAT-CN                                    banana  
 ‘I am eating a banana.’

<sup>24</sup> The same feature is also found in motion verbs such as *tayra* ‘go (there)’ and *tayni* ‘come (here)’.

<sup>25</sup> This purposive reading is also obtained for some *ma-* predicates (e.g. *mi-ulah*, *mi-liyang*).

<sup>26</sup> As remarked by the informant, such *mi-* forms are used in a relatively restricted way. For example, it is difficult to elicit the progressive expression of verbs like *mi-ka-ranam* and *mi-ka’en*.

- b'. Mi-ka'en kaku i ci panay-an  
 AV-eat 1S.NOM PREP PPN Panay-DAT  
 'I am going to Panay's place to have a banquet.'
- c. Ma-tayal kaku.  
 NEUT-work 1S.NOM  
 'I am working.'
- c'. Mi-tayal kaku t-u demak n-i panay.  
 AV-work 1S.NOM DAT-CN matter GEN-PPN Panay  
 'I am going to do Panay's work.'

As we can see in (4.16), the *mi-* form adds a specific goal for the verb (e.g. *k-um-a'en* 'eat' → *mi-ka'en* 'go for a banquet at someone's place'). This also explains why only the *mi-* form can co-occur with the (goal) applicative marker *-an*, but not *-um-* and *ma-* verbs.<sup>27</sup> This contrast is illustrated in (4.17):

- (4.17)a. Mi-tayal-an/\*ma-tayal-an n-i aki k-u-ni.  
 MI-work-LA/MA-work-LA GEN-PPN Aki NOM-CN-this  
 'Aki did this.'  
 'This is what Aki did.' (Locative Applicative, UV)
- b. Mi-cikay-an/?c-um-ikay-an aku tayra i lumaq  
 MI-run-LA/run<UM>-LA 1S.GEN go PREP house
- n-i panay k-u-ni qayam.  
 GEN-PPN Panay NOM-CN-this chicken  
 'I ran to Panay's place to get this chicken.'  
 'This chicken is what I ran to Panay's place to get.' (Locative Applicative, UV)

Based on the above observations, I propose the following logical structure for *mi-*:

- (4.18) The Logical Structure of *mi-*:  
*mi-*: (**do'** (x, [**go'** (x)]) & INGR **be-at'** (z, x) PURP) **do'** (x, [**pred'** (x, y)])

The LS in (4.18) is composed of two parts. The first part captures the motional/ purposive reading that *mi-* activity verbs almost always get, while the second part

<sup>27</sup> In fact, the *-an* form for *ma-* and *-um-* verbs are *ka-...-an* and *ka-...-um-...an*, both of which contain a location argument, not a goal. The locative applicative form of *mi-* verbs is *pi-...-an*. These *-an* applicative constructions will be further explored in Chapter 6.

represents the plain activity reading that can be found in some of the *mi-* verbs. Notice that the motional/purposive part is placed in parentheses to indicate the fact that for some *mi-* verbs that allow two readings, the motional/purposive part is optional. However, the second part is indispensable for all the *mi-* verbs. The examples in (4.19) illustrate the application of the LS of *mi-*:

- (4.19) a. Mi-palu    Ø-ci            sawmah        ci        mayaw-an.  
               AV-beat    NOM-PPN   Sawmah        PPN    Mayaw-DAT  
               ‘Sawmah is going to beat Mayaw.’  
               ‘Sawmah is beating Mayaw.’

a’. **do’** (sawmah, [**go’** (sawmah)]) & INGR **be-at’** (y, sawmah) PURP **do’** (sawmah, [**beat’** (sawmah, mayaw)])

a’’. **do’** (Sawmah, [**beat’** (Sawmah, Mayaw)])

- b. Mi-ka’en    kaku            i        ci        panay-an  
               AV-eat    1S.NOM        PREP PPN    Panay-DAT  
               ‘I am going to Panay’s place to have a banquet.’

b’ **do’** (kaku, [**go’** (kaku)]) & INGR **be-at’** (ci panay-an, kaku) PURP **do’** (kaku, [**eat’** (kaku, y)])

- c. Mi-tayal    kaku            i        ci        panay-an  
               AV-work    1S.NOM        PREP NOM    Panay-DAT  
               ‘I am going to do the work at Panay’s place.’  
               (i.e. I am going to do the work for Panay’s family.)

c’. **do’** (kaku, [**go’** (kaku)]) & INGR **be-at’** (ci panay-an, kaku) PURP **do’** (kaku, [**do.work’** (kaku, y)])

Now at least two verb classes can be identified in terms of the temporal readings of the *mi-* forms. The first class can have two possible readings with *mi-* (i.e. the motional/purposive and the progressive) (e.g. *mi-palu* > *palu* ‘beat’, *mi-nanum* > *nanum* ‘water’), while the second class only allows the motional/purposive reading (e.g. *mi-tayal* > *tayal* ‘work’ and *mi-ka’en* > *ka’en* ‘eat’). As one may notice in (4.16), the second class usually appears with actor voice affixes other than *mi-* (e.g. *-um-* and *ma-*). When they show up



with *ma-* or *-um-*, they will get the progressive reading. The second class can be further categorized into two sub-classes based on the attachment of *{paka-}*. This phonological string has at least three interpretations: ‘be able to; happen to’, ‘cause to become’, and ‘through; by means of’. For the sake of the main concern, I only discuss the first two interpretations of *{paka-}*. The first meaning is similar to the “agency canceller” discussed in Walton (1986)<sup>28</sup> for the verbs in Sama, a Philippine language, as this prefix cancels the agentive implicature carried the verbs. The second meaning of *{paka-}* is derived from *pa-ka-*, which contains the causative morpheme *pa-* and the prefix *ka-*.<sup>29</sup> The *mi-* verbs that only allow the motional/purposive reading behave differently when being prefixed with *{paka-}*. As illustrated in (4.20), for verbs that usually appear with *-um-*, their *{paka-}* form gets the agency canceling reading, glossed ABLT for ‘abilitative’, while for verbs that usually co-occur with *ma-* (AV or neutral voice), *{paka-}* is rendered as *pa-ka-*, the form with the causative reading, by default:

- (4.20)a. **mi-nengneng**  
 AV-watch  
 ‘(go to) watch’
- a’. **{paka-}nengneng**  
 paka-nengneng  
 ABLT-watch  
 ‘happen to see; able to see’

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<sup>28</sup> Walton (1986: 83-86) calls them “DO Cancellers”. There are two such markers in Sama; one is *ka-* and the other one is *-um-*, with the latter occurring in a very limited class of verbs. In fact, the forms *maka-/paka-* or their phonological variants are quite wide spread in the Philippine languages (Hsiu-chuan Liao, p.c.). These forms are also called potitives, as seen in Himmelmann (2005a). As remarked by Himmelmann (2005a), these forms may refer to accidental actions, involuntary actions, and they may convey an abilitative meaning. The existence of such markers in Amis indicates the possibility that Amis is closer to the Philippine languages in terms of sub-grouping, though it is not clear to me if such markers also exist in other Formosan languages. However, as the issue of sub-grouping is not the main concern of this dissertation, I will leave it for further research.

<sup>29</sup> As discussed in Chapter 3, *ka-* is found in many syntactic constructions (e.g. *ca’ay* negative sentences and imperative sentences) related to verbs that take prefixes other than *mi-*. More discussion is given later in this chapter.

- b. **k-um-a**'en  
eat<AV>  
'eat'
- b'. {paka-}ka'en  
paka-ka'en  
ABLT-eat  
'able to eat; dare to eat'
- c. **ma**-tayal  
NEUT-work  
'work'
- c'. {paka-}tayal  
pa-ka-tayal  
CAU-KA-work  
'cause to do something'

The comparison in (4.20) shows that the activity verbs in Amis can be further sub-categorized into two classes: the one with potential agentivity (i.e. the *mi*- and *-um*-classes in (4.20a-b)) and the one without (i.e. the *ma*- class in (4.20c)). The reason why the term “potential” is used here is because such agentivity is cancelable with the attachment of *paka*- and an expression such as *ca'ay ku patudaan* ‘unintentionally (or not the intention)’, while true agentivity marked by the UV marker *-en* cannot be cancelled by the two contexts. I will have more discussion of *-en* in a later section. Notice that not every *-um*- verb inherently contains the inducible agentivity. The agency-canceling reading has to be in a construable occasion. It is also possible to get the causative reading for *-um*- verbs if the agency-canceling reading is not so conceivable. For example, for the verb *t-um-angic* ‘cry’, the form {*paka*-}*tangic* is more likely to be interpreted as ‘cause to cry’ than ‘able to cry’, as the latter is used under very limited contexts.<sup>30</sup> By the same token, it is also possible for the {*paka*-} form of *ma*- activity verbs to get an

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<sup>30</sup> In fact, forms like *pa-ka-palu* ‘cause to beat thoroughly’ are also attested in Amis, but they more often appear with *-en* (i.e. *pa-ka-palu-en*) than occurring alone. More discussion of *pa-ka*- can be found later.

agency-canceling reading if the patient-argument is also provided in a sentence, like (4.21) below. However, the causative reading of {*paka-*}*tayal* is the unmarked one.

- (4.21) {*Paka-*}*tayal*    *kaku*                    *t-u-ya*                    *demak*.  
                   ABLT-work    1S.NOM            DAT-CN-that            thing  
                   ‘I am able to do that work.’ (Abilitative, AV)

A tentative conclusion that can be drawn here is that the activity verbs in Amis vary in degrees of agentivity. Those which take *mi-* by default have the highest degree of inducible agency, those which appear with *-um-* have the second highest, and those which tend to show up with *ma-* exhibit the lowest degree of agency. This observation conforms to the scale of transitivity postulated in Yan (1992), as mentioned Chapter 1.

The prefix *mi-* not only derives the activity verbs examined above; it can also derive a causative accomplishment verb when attached to a root denoting a state. For instance:

- (4.22)a. *Ma-patay*                    *tu*                    *k-u-ni*                    *oner*.  
                   NEUT-dead                    ASP                    NOM-CN                    snake.  
                   ‘The snake is dead.’
- a’. *Mi-patay*                    *k-u*                    *matu’asay*                    *t-u*                    *oner*  
                   AV-dead                    NOM-CN                    old.man                    DAT-CN                    snake  
                   ‘The old man is going to kill a snake.’  
                   ‘The old man is killing a snake.’
- b. *Ma-tunig*                    *k-u*                    *ti’ti’*.  
                   NEUT-soft                    NOM-CN                    meat  
                   ‘The meat is soft.’
- b’. *Mi-tunig*                    *k-u*                    *kuwaq*                    *t-u*                    *ti’ti’*.  
                   AV-soft                    NOM-CN                    papaya                    DAT-CN                    meat  
                   ‘The papaya will tenderize meat.’
- c. *Kuhcah*                    *k-u*                    *hana*.  
                   white                    NOM-CN                    flower  
                   ‘The flower is white.’
- c’. *Mi-kuhcah*                    *k-u*                    *safun*                    *t-u*                    *pising*                    *isu*.  
                   AV-white                    NOM-CN                    soap                    DAT-CN                    face                    2S.GEN  
                   ‘The soap will whiten your face.’

As shown in (4.22), when prefixing to a root expressing a state (either attribute or transitory/result states), *mi-* creates a causative accomplishment verb (i.e. cause to become) in which an inanimate causer brings about the existence of the state. This seems to be a natural interpretation for such a combination, as an inanimate causer is incompatible with the motional/purposive part in *mi-*, and consequently only the activity component (i.e. **do'** (x, [(**pred'**)]) in the LS of *mi-* is retained in the derivation of *mi-* + state. For an activity to be able to co-occur with a state, the desired result will be the activity bringing about the state (hence, causative accomplishment). Moreover, as illustrated in (4.22), most *mi-* causative verbs have inanimate effectors, and this indicates that the actor argument of *mi-* verbs is not necessarily a true agent. In other words, the agentivity of *mi-* predicates is construed through the context, which includes the animacy of co-occurring NPs. As I will present later, the agentive accomplishment marker *-en*, which is also a UV marker, also derives causative accomplishments when attaching to state roots. However, unlike *mi-*, the causer in *-en* causative accomplishment verbs has to be human, which, as I will argue in this dissertation, has to be attributed to the agentivity pertaining to *-en*.

The following table summarizes the classes of verbs that have been identified based on the attachment of *mi-* and the derived interpretation:

**Table 4.4 Verb Types Differentiated by *mi-***

Default marking <sup>31</sup>	Verb types	<i>Mi-</i> form reading	Induced agency (the <i>paka-</i> test)	Unmarked temporal reading	Attachment with applicative marker <i>-an</i>
<i>mi-</i>	transitive activity, very productive	progressive, or motional/purposive	yes	motional/purposive progressive	yes
<i>-um-</i>	spontaneous and mostly activity verbs (e.g. eat, run, stand, walk,...), limited in number	motional/purposive	yes/no	progressive	no
<i>ma-</i>	intransitive activity (state-like) (e.g. work, sleep ...)	motional/purposive	yes/no	progressive	no
<i>ma-</i> or unaffixed	state	causative accomplishment	DNA	stative	no

These classes of *mi-* verbs will be even more distinctive based on their readings when they appear with the aspectual markers *ho* and *tu*. This issue will be discussed later.

#### 4.2.2 The Meaning and Functions of the UV Marker *-En*

The UV suffix *-en* is also found with a variety of roots; it can derive a verb from roots denoting an object, an activity, and a state. Observe:

- (4.23) a. Nanum-en aku k-u-ra sayta.  
 water-UV 1S.GEN NOM-CN-that soda  
 ‘I will drink (up) that soda (for sure).’
- b. Palu-en n-i aki Ø-ci panay.  
 beat-UV GEN-PPN Aki NOM-PPN Panay  
 ‘Aki will beat Panay (for sure).’
- c. Fa’det-en aku k-u-ya dateng.  
 hot-UV 1S.GEN NOM-CN-that vegetable  
 ‘I will heat up that dish (for sure).’

As shown in the above examples, like the prefix *mi-* discussed in the previous section, *-en*

<sup>31</sup> “Default marking” refers to the voice form that the verb appears with by default; this form usually is the form that one tends to get during the elicitation of the data. The default marking is crucially related to the types of the verb that they derive, and that is why this marking has been frequently employed as a verb class index by quite a few earlier studies (e.g. Yan 1992, Wu 1995, and Liu 1999, etc.).

also derives an activity-like predicate from a root denoting an object (e.g. *nanum* in (4.23a)), or from a root designating an activity (e.g. *palu* in (4.23b)). This suffix can also derive a causative accomplishment verb from a root designating a state (e.g. *fa'det* in (4.23c)). These similarities seem to suggest that *-en* and *mi-* share the same meaning and function but differ in voice.<sup>32</sup>

However, there are some crucial differences between *mi-* and *-en* verbs. First, there is no “motion” component implied in the *-en* verbs; while there is often a distance implied between the actor and the patient arguments of the *mi-* verbs, the patient argument is either close to or right in front of the actor when *-en* verbs are used. This difference of implied distance is illustrated in their corresponding imperative sentences in (4.24):

- (4.24)a. Pi-patay    t-u-ra                    'oner!  
 PI-dead      DAT-CN-that           snake  
 ‘(Go to) kill that snake!’ (The snake is far away from the speaker and the addressee.) (Imperative, AV)
- b. Patay-en    k-u-ra                    'oner!  
 dead-UV      NOM-CN-that           snake  
 ‘Kill that snake (for sure)!’ (The snake is near the speaker and the addressee.)

Second, *-en* only occurs with a human actor (Tsukida 1993), but such a restriction is not found with *mi-* verbs. Compare:

- (4.25)a. Mi-tuniq    k-u                    kuwaq            t-u                    ti'ti'.  
 AV-soft      NOM-CN          papaya           DAT-CN           meat  
 ‘The papaya will tenderize the meat.’
- b. Tuniq-en    aku/\*n-u                    kuwaq            k-u                    ti'ti'    aca.  
 soft-UV      1S.GEN/GEN-CN          papaya           NOM-CN           meat    a.little  
 ‘I/\*The papaya will tenderize the meat a little.’

<sup>32</sup> This is the analysis proposed by Tsukida (2005b) as she treats *-en* as an inflectional GV (goal voice) morpheme for *mi-* and other actor voice verbs. A similar analysis is also found in Chen (1987), where *-en* is regarded as a passive marker.

As shown in (4.25), while *mi-* verbs are allowed to appear with an inanimate, non-human causer, *-en* verbs have to appear with a human causer. Third, while *mi-* is accompanied with a motional/purposive reading, *-en* emphasizes more on the intention of the actor.

This feature of *-en* has been pointed out in Tsukida (1993):

In conclusion, when an *-en* form expresses an event, it gives an impression that the probability for the event to occur had risen or is rising higher during the situation, and that it occurred or will occur at a particular point in time, at that very time at last...If that point in time comes after the time of utterance, the probability is already rising at the time of the utterance, and gives an impression that the event will positively occur in the immediate future...When the probability rises, a rise of the motivation on the side of the agent must accompany it. The agent does the action intentionally. (Tsukida 1993: 137-38)

In fact, while *mi-* verbs are allowed to co-occur with the expression ‘unintentionally; not the intention’, *-en* verbs are banned in such contexts. Examine:

- (4.26)a. 

Ca'ay	k-u	pataduan	n-i	aki	<b>mi-curah</b>
NEG	NOM-CN	intention	GEN-PPN	Aki	AV-burn
- t-u            lumaq.  
DAT-CN    house  
'It is not Aki's intention to burn the house.'
- b. 

*Ca'ay	k-u	pataduan	n-i	aki	<b>curah-en</b>
NEG	NOM-CN	intention	GEN-PPN	Aki	burn-UV
- k-u            lumaq.<sup>33</sup>  
NOM-CN       house

Also, when attached with {*paka-*}, *-en* verbs never get the abilitative reading. Compare the following examples with (4.20).<sup>34</sup>

<sup>33</sup> Another possible explanation for this construction may be due to the voice restriction following the “unintentionally” expression. However, as discussed in Wu (1995), in a purposive construction with two predicates, the second predicate is allowed to appear in the UV *-en* form, which indicates a less tight linkage between the two predicates compared with the one with the second predicate as an AV form.

<sup>34</sup> The analysis of {*paka-*} in (4.27) is not very clear to me at this moment. The reading of this form indicates that it seems to be a combination of the causative prefix *pa-* and the prefix *ka-*. However, the forms in (4.27) are frequently used in the imperative sentences in which there is no clear involvement of any causer. Although I tentatively gloss *pa-* as the causative prefix, this construction requires further research.

- (4.27)a. {paka-}palu-en  
 pa-ka-palu-en  
 CAU-KA-beat-UV  
 ‘let someone be beaten severely’  
 \*‘able to beat somebody or happen to beat somebody’
- b. {paka-}nengneng-en  
 pa-ka-nengneng-en  
 CAU-KA-watch-UV  
 ‘let someone be see watched carefully’  
 \*‘able to watch or happen to see’

Finally, when appearing with the incomplete aspectual marker *ho*, *-en* verbs often refer to the state that has not yet resulted (i.e. the anticipatory telic point) or obtain an iterative reading. *Mi-* verbs can either get the progressive reading or the anticipatory telic reading but not the iterative one. Consider:

- (4.28)a. Pa-ka-pi-nanum-**en**      ho      kaku,      ta      l-um-uwad.  
 CAU-KA-PI-water-UV      ASP      1S.NOM      then      set.off-UM  
 ‘Let me yet drink some water, and then (we) will set off.’
- b. Ranam-**en**      ho!  
 breakfast-UV      ASP  
 ‘Eat the same thing for the breakfast again!’
- c. **Mi**-nanum ho      Ø-ci      panay t-u      sayta.  
 AV-water      ASP      NOM-PPN      Panay      DAT-CN      soda  
 ‘Panay is still drinking soda.’  
 ‘Panay went to drink some soda first.’

I will have more discussion concerning the co-occurrence of different verb types with the aspectual marker *ho* later in this chapter.

Based on the above-discussed features, the logical structure is postulated for *-en* in

(4.29) and an example is given in (4.30) to illustrate the LS:

- (4.29) The Logical Structure of the UV Marker *-en*:  
*-en*: DO (x, [**do**’ (x, [**pred**’ (x, y))]) ....INGR/BECOME (**pred**’ (y))



- (4.30)a. Palu-en      n-i              aki      Ø-ci              panay  
               beat-UV      GEN-PPN      Aki      NOM-PPN      Panay  
               ‘Aki will beat Panay (for sure).’

b. DO (aki, [**do**’ (aki, [**beat**’ (aki, panay))]) ... BECOME (**beaten**’ (panay))

The logical structure stated in (4.29) captures the two essential features of *-en*: [+agentive] and [+telic]. When suffixed to an activity verb, it derives an agentive active accomplishment. The agentive component DO explains why this suffix can only appear with [+human] effector, and why it cannot appear with expressions such as “unintentionally” and the agency canceling prefix *paka-*. The accomplishment component is there because *-en* verbs always have a strong implicature of the completion of the action, and it accounts for why when the *-en* verbs appear with the aspectual marker *ho*, they never refer to the progressive aspect of an activity. The properties of accomplishment verbs will be further discussed later.

Recall that in reference to (4.23), I mentioned that *-en* can derive an agentive causative accomplishment from a state verb, just like the prefix *mi-*. The only difference is that while the causer added by *mi-* can be an inanimate one, the causer added by *-en* has to be human. This contrast was shown in (4.25). As a matter of fact, compared with the causative prefix *pa-*, *-en* is a more frequently attested causative morpheme for state predicates; some state predicates can only be causativized by *-en*, but not *pa-*. This property of triggering causation must be related to the agentivity carried by *-en*.

In addition to serving as UV marker with lexicalized agency, the form *-en* also performs a rather different function in the following examples:

- (4.31)a. Fa'det-**en** kaku t-u-ya nanum.  
hot-EN2 1S.NOM DAT-CN-that water  
'I feel that that water is very hot.'<sup>35</sup> (Neutral Voice)
- b. Karteng-**en** cingra (mi-tatuy) t-u flac.  
heavy-EN2 3S.NOM NEUT-carry DAT-CN rice  
'He feels that (the rice is) very heavy when (carrying) the rice.' (Neutral Voice)
- c. Ma-ulah-**en** cingra<sub>i</sub> t-u nguah nira,  
AV-like-EN2 3S.NOM DAT-CN lover 3S.GEN  
sa-pi-kadafu-an tu cingra<sub>i</sub>.  
InA-PI-marry-MOOD.AV ASP 3S.NOM  
'She likes her lover very much, so (she) wants to marry (him).'
- d. Ma-kaker-**en** cingra<sub>i</sub> t-u wawa nira,  
AV-angry-EN2 3S.NOM DAT-CN child 3S.GEN  
sa-pi-palu-an tu cingra<sub>i</sub>.  
InA-PI-beat-MOOD.AV ASP 3S.NOM  
'He feels very angry with his child, (so) (he) wants to beat (him).'

Unlike the UV *-en* examples discussed earlier, the examples in (4.31) show that the verbs suffixed with *-en2* (glossed as *-EN2*) do not follow the UV case marking pattern (i.e. Genitive-Nominative). On the contrary, it seems that *-en2* does not have any voice marking function, as the verb affixed by *-en2* still retains its voice marker (e.g. *ma-* for *ma-ulah-en* in (4.31c)), and the case marking pattern is controlled by this voice marker (e.g. actor voice in (4.31c)). Notice that the verbs suffixed with *-en2* all receive a 'feel...' or 'judge...' interpretation, and the state or proposition that is felt or judged seems to be intensified or exceed a certain standard/limit that is assumed by the speaker. The over-the-limit reading is most likely to be found with one-place state verbs in (4.31a-b). For two-place psych-predicates exemplified in (4.31c-d), this suffix intensifies the emotions

<sup>35</sup> The speaker is not sure whether the water is hot or not; the statement is made when the speaker is looking at the water. Notice that, although this sentence and the one in (4.31a) seems to have two arguments, these two arguments do not belong to the same predicate, as we will see later in the decomposition. Therefore, it is analyzed as an intransitive sentence, and thus the voice pattern is labeled as neutral.

denoted by the verbs, and often such verbs are followed by an action triggered by that strong emotion. Such intensified reading is also implied in (4.31a-b).

The *-en2* construction displays the following three features. First, it is the argument bearing the feeling/judgment that is marked by the nominative case, not the one serving as the stimulus that triggers the feeling/judgement. As I have pointed out, this case marking pattern is different from the UV case marking pattern found with *-en1*. Compare an *-en1* verb in (4.32a) with an *-en2* verb of the same root in (4.32b), repeated from (4.31c):

- (4.32)a. Fa'det-**en**    aku                      k-u-ya                      dateng  
                  hot-UV    1S.GEN              NOM-CN-that              vegetable  
                  'I will heat up that dish (for sure).'
- b. Fa'det-**en**    kaku                      t-u-ya                      nanum.  
                  hot-EN2    1S.NOM              DAT-CN-that              water  
                  'I feel that that water is very hot.'<sup>36</sup> (Neutral Voice)

Second, the AV voice prefix *ma-* does not co-occur with *-en1*, the UV marker, but it can show up with *-en2*. Compare (4.33a) with (4.33b), repeated from (4.31c). In (4.33a), the combination of *ma-* + *-en1* is not allowed:

- (4.33)a. Ulah-**en**/\*ma-ulah-**en**    namu    k-u    ina    namu.<sup>37</sup>  
                  like-UV/AV-like-UV    2P.GEN    NOM-CN    mother    2P.GEN  
                  'You have to love your mothers.'
- b. Ma-ulah-**en**    cingrai<sub>i</sub>    t-u    nguhah    nira,  
                  AV-like-EN2    3S.NOM    DAT-CN    lover    3S.GEN
- sa-pi-kadafu-an                      tu    cingrai<sub>i</sub>.  
                  InA-PI-marry-MOOD.AV    ASP    3S.NOM  
                  'She likes her lover very much, so (she) wants to marry (him).'

<sup>36</sup> The speaker is not sure whether the water is hot or not; the statement is made when the speaker is looking at the water. Notice that, although this sentence and the one in (4.31a) seems to have two arguments, these two arguments do not belong to the same predicate, as we will see later in the decomposition. Therefore, it is analyzed as an intransitive sentence, and thus the voice pattern is labeled as neutral.

<sup>37</sup> This example also shows that while *ma-ulah* behaves like a state verb, the unaffixed form does not.

Finally, due to the semantic incompatibility, *-en2* only attaches to roots or stems that carry a (non-result) state meaning; it is not found with roots or stems that carry an activity component, as illustrated in (4.34).

- (4.34) a. \**mi-palu-en* ( from *mi-palu* ‘(go to) beat’)  
 b. \**ma-palu-en* (from *ma-palu* ‘beat (UV)’)  
 c. \**ma-nanum-en* (from *ma-nanum* ‘drink (water) (UV)’)

Furthermore, as *-en2* carries a strong implicature of a state that is over a certain limit, it does not go with result state predicates very easily. When *-en2* appears with a result state predicate, specific contexts sometimes are required. This presents another piece of evidence for the distinction between result and non-result states. Examine:

- (4.35) a. ??*Ma-icang-en*      *kaku*              *t-u-ra*              *rikor*.  
                   NEUT-dry-EN2   1S.NOM        DAT-CN-that        clothes  
                   ‘I feel the clothes are too dry.’
- b. *Ma-icang-en*      *kaku*              *t-u-ra*              *kudasing*.  
                   NEUT-dry-EN2   1S.NOM        DAT-CN-that        peanut  
                   ‘I feel that those peanuts are over sun-dried (and become not tasty.)’

The comparison illustrated in (4.35) shows that *-en2* seems to be preferred to go with result states in a context where it is easier to construe a certain limit or a desired stage that is imposed on the result state, and this limit or stage does not coincide with the natural telic point of the result state. For example, in (4.35b), it is natural to imagine there is a desired degree of dryness when people sundry the peanuts, but it is not quite natural to impose such a desired stage for sundrying clothes.

As exemplified in (4.34) and (4.35), the attachability of *-en2* helps distinguish three classes of *ma-* verbs: non-result state, result state verbs and the UV *ma-* forms (the active/causative accomplishment). The classes differentiated by *-en1* (or UV *-en*) and *-en2* are summarized in Table 4.5:

**Table 4.5 Verb Types Differentiated by *-en1* and *-en2***

Default Marking	Verb Types	<i>-en1</i> Reading	<i>-en2</i> Reading	Examples
<i>ma-</i>	(intransitive) activity	agentive active accomplishment	DNA	<i>ma-tayal</i> ‘work’ → <i>tayal-en</i> ‘do something (for sure)’
<i>mi-</i>	(motional/purposive) activity	agentive active accomplishment	DNA	<i>mi-palu</i> ‘beat’ → <i>palu-en</i> ‘beat someone (for sure)’
<i>ma-</i>	active or causative accomplishment	agentive causative accomplishment	DNA	<i>ma-patay</i> ‘become dead’ → <i>patay-en</i> ‘kill’
<i>ma-</i>	accomplishment or result state	agentive causative accomplishment	DNA* <sup>38</sup>	<i>ma-ruhem</i> ‘ripe’ → <i>ruhem-en</i> ‘ripen sth for sure’
<i>ma-</i> or unaffixed	state	agentive causative accomplishment	feel...	<i>ma-tuniq</i> ‘soft’ → <i>tuniq-en</i> ‘soften; tenderize’ <i>fa’det</i> ‘hot’ → <i>fa’det-en</i> ‘heat sth. up’ or ‘feel hot’

As we can see from the table, *-en1* (i.e. the UV agentive marker) helps distinguish two classes, activity and state, while *-en2* ‘feel; judge’ helps differentiate state verbs from non-state verbs, and it also helps sub-categorize the state verbs. As *-en1* has a higher frequency in occurrence, unless specified, the *-en* form discussed hereafter in this dissertation refers to *-en1*; that is, I will use *-en1* or *-en* interchangeably to refer to the same suffix.

#### 4.2.3 The Meaning and Functions of the AV and UV Markers *Ma-s*

Unlike *mi-* and *-en*, it is rather difficult to pin down a unified meaning for *ma-*. For instance, in terms of voice-marking functions, we have seen in Chapter 3 that there at least two *ma-s* in the Amis voice system; one appears in the AV set and the other is a UV marker. In fact, there are more than two *ma-s* distinguished in Amis in terms of their derivational functions. For example, Yan (1992) proposes four classes of *ma-* verbs based on the argument structure and whether these *ma-* verbs can undergo possible derivation through the attachment of *mi-*.

The verbs marked by *ma-*, including the AV *ma-* and UV *ma-*, will be classified in

this section from a different perspective. To begin with, in terms of the temporal information, AV *ma-* verbs also have two readings: progressive and stative; the latter can be a result state, or an episodic/transient state. The progressive reading of *ma-* is found with roots that denote activities with low induced agency, as seen in the diagnostic test by the occurrence of {*paka-*} discussed in Section 4.2.1. These *ma-* activity verbs are exemplified below:

- (4.36)a. Ma-tayal                      Ø-ci                      sawmah.  
               NEUT-work                NOM-PPN        Sawmah  
               ‘Sawmah is at work.’ or ‘Sawmah is doing some job.’
- b. Ma-kerker                      Ø-ci                      panay.  
               NEUT-shiver            NOM-PPN        Panay  
               ‘Panay is shivering.’

As seen in (4.36), though both verbs get a progressive reading, they differ from each other in terms of volition. That is, presumably, *ma-tayal* ‘work’ is volitional, while *ma-kerker* ‘shiver’ is involuntary. However, the picture is not that clear, as the {*paka-*} test shows that {*paka-*}*tayal* does not by default get the agency-canceling reading that is found in *mi-* and some *-um-* verbs, though it is possible to get such a reading in a marked context. One reason for the preferred interpretation of {*paka-*} as *pa-ka-* for *ma-* activity verbs might be due to the fact that the *ma-* prefix of these verbs is conjugated into *ka-* in many syntactic constructions, such as the *ca’ay* negative construction (e.g. *ca’ay ka-tayal* ‘not work’ ....) and imperative sentences (e.g. *ka-tayal* ‘Work!’). We have seen this conjugation pattern in Chapter 3. In other words, the interpretation of {*paka-*}*tayal* as *pa-ka-tayal* is possibly due to an analogy of this conjugation pattern. However, comparably speaking, *ma-* activity verbs do contain a much lower degree of agentivity than their *mi-* or *-um-* counterparts, and *ma-* is found in many verbs denoting involuntary actions such

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<sup>38</sup> “\*” indicates that some complexities are involved.

as *ma-kerker* ‘shiver’ in (4.36) and *ma-tukatuk* ‘dose off’. Tentatively, the logical structure for *ma-* activity verbs (i.e. *ma-I*) is represented as (4.37):

(4.37) The Logical Structure of *ma-I* (*ma-* activity verbs)<sup>39</sup>  
*ma-I*: **do’** (x, [**pred’** (x, (y))])

In addition to activities, the AV *ma-* is also frequently found with state predicates.

Nevertheless, there are finer distinctions among these *ma-* state predicates. Consider the following two sets of examples:

- (4.38) a. Ma-adah                      tu            kaku  
                  NEUT-recover        ASP    1S.NOM  
                  ‘I have recovered (from illness).’  
                  ‘I have started to recover (from illness).’
- b. Ma-ruhem    tu            k-u                      pawli.  
                  NEUT-ripe ASP    NOM-CN            banana  
                  ‘The banana is ripe (just now).’
- c. Ma-fasaw                      tu            k-u                      nanum.  
                  NEUT-cool.down ASP    NOM-CN            water  
                  ‘The water is cooled down (just now).’
- d. Ma-palal                      cingra.  
                  NEUT-wake.up        3S.NOM  
                  ‘He woke up.’
- (4.39) a. Ma-laluk                      Ø-ci                      sawmah.  
                  NEUT-diligent        NOM-PPN        Sawmah  
                  ‘Sawmah is diligent.’
- b. Ma-radiw                      k-u-ra                      kaying.  
                  NEUT-song                      NOM-CN-that            young.lady  
                  ‘That young lady is good at singing.’
- c. Ma-ulah            Ø-ci                      sawmah            (i)            ci            panay-an.  
                  AV-like        NOM-PPN        Sawmah            PREP    PPN        Panay-DAT  
                  ‘Sawmah likes Panay.’

There are some differences between the two groups of *ma-* state verbs in (4.38) and

<sup>39</sup> The determination of the voice pattern for each logical structure is crucially related to the case assignment rules in Amis, which will be discussed in Chapter 5.

(4.39), though they all follow the same voice pattern. Crucially, the verbs in (4.38) are interpreted as result states and some may imply a process before reaching the state, while those in (4.39) are rendered more like plain states. Such a semantic difference is also reflected in their syntactic structures. To begin with, the roots of the result state predicates in (4.38) are coded differently in the ideophone-forming construction *X sa* from the roots of the plain states in (4.39); the former cannot appear in the *sa-Root sa* frame, in which the latter can occur. Secondly, the predicates in (4.38) tend to appear with the perfective/inchoative aspectual marker *tu*, but such a tendency is not found with the verbs in (4.39). Furthermore, it is difficult to elicit the verbs in (4.38) with the incomplete aspectual marker *ho* in (affirmative) sentences, but there is no such difficulty for the verbs in (4.39). Compare:

- (4.40)a. ??Ma-adah                      ho      kaku  
               NEUT-recovered            ASP    1S.NOM  
               ‘I am still recovering.’
- b. \*Ma-ruhum              ho      k-u-ni                      a      pawli.  
               NEUT-ripe            ASP    NOM-CN-this                LNK    banana  
               ‘The banana is still ripe.’
- c. Ma-laluk                  ho      cingra.  
               NEUT-diligent        ASP    3S.NOM  
               ‘He is still diligent.’
- d. Ma-ulah      ho      Ø-ci                  sawmah              (i)      ci      panay-an.  
               AV-like      ASP    NOM-PPN        Sawmah              PREP   PPN    Panay-DAT  
               ‘Sawmah still likes Panay.’

As seen in (4.40), when appearing with the incomplete aspect marker *ho*, verbs like *ma-laluk* ‘diligent’ and *ma-ulah* ‘like’ are interpreted with an on-going status, while predicates like *ma-adah* ‘recover’ and *ma-ruhem* ‘ripe’ cannot readily appear in such an



environment.<sup>40</sup> The verbs in (4.38) all have an inherent ending point in the events they depict. It is quite likely that their telic feature contributes to the difficulty of their co-occurrence with the incomplete aspect marker *ho*. Such a telic feature is not found in the non-result state verbs in (4.39). The following two logical structures are postulated to capture the distinction between the two classes of state predicates:

- (4.41)a. The Logical Structure of *ma-2* (*ma-* result state verbs)  
*ma-2*: (INGR/BECOME) (**pred'** (x,(y)))
- b. The Logical Structure *ma-3* (*ma-* transient or plain state verbs)  
*ma-3*: **pred'** (x, (y))

The LS in (4.41a) indicates the telic property of the verb, while the LS in (4.41b) is used to represent state predicates that do not have a telic feature, or where the feature is irrelevant to the discussion of its semantics. Notice that the INGR and BECOME part are placed in parentheses in the LS of the result state verbs in (4.41a) as the process part in these verbs is not usually referred to in the sentences, unless it is highlighted by the aspectual markers *tu* or *ho* in specific contexts. That is, the above-mentioned features of the result state verbs seem to be more relevant to the telic point inherent in these predicates but not their punctual/non-punctual features. Even though a process before reaching an ending point is entailed in the semantics of verbs like *ma-adah* 'recoverd', it is difficult to refer to that process; the unmarked reading of the *ma-* telic verbs is always the result state, and the aspectual marker *tu* is preferred if one wants to refer to the inception of the result state (i.e. change of state). One of the possible ways to test whether or not there is a process is using the co-occurrence of pace predicates such as

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<sup>40</sup> This sentence sounds more natural if it is an interrogative sentence:

(4.40) a'    Ma-adah                    ho            cingra?  
               NEUT-recovered        ASP        3S.NOM  
               'Is he still recovering?'

*ma-usuy* ‘slow’ and *harakat* ‘fast’. This test is illustrated in the following sentences:

- (4.42)a. Harakat/Ma-usuy    ma-adah                    k-u                    adada.  
                                  fast/NEUT-slow    NEUT-recovered    NOM-CN            ailment  
                                  ‘The ailment recovered fast/slowly.’
- b. Harakat/Ma-usuy    ma-likat                    k-u-ra                    tingki.  
                                  fast/NEUT-slow    NEUT-light            NOM-CN-that            lamp  
                                  ‘The lamp became lit up fast/slowly.’

The pace predicates in (4.42) show that there is a process before reaching the result states denoted by the two *ma-* verbs. More discussion of using pace words as a diagnostic test is provided in Section 4.3. The distinctions between *ma-* result state verbs and *ma-* non-result state verbs can also be observed in the sentences containing *-en2*, which was discussed in the previous section. Usually, *ma-* result state verbs are not allowed to appear with *-en2* unless a specific context is provided. The examples are given below:

- (4.43)a. ??Ma-ruhem-en    cingra                    t-u-ya                    pawli.<sup>41</sup>  
                                  NEUT-ripe-EN2 1S.NOM            DAT-CN-that            banana  
                                  ‘He feels that the banana is too ripe.’
- b. ??Ma-icang-en    kaku                    t-u-ra                    rikor.  
                                  NEUT-dry-EN2 1S.NOM            DAT-CN-that            clothes  
                                  ‘I feel that the clothes are too dry.’
- b’. Ma-icang-en    kaku                    t-u-ra                    kudasing.  
                                  NEUT-dry-EN2 1S.NOM            DAT-CN-that            peanut  
                                  ‘I feel that those peanuts are over dried.’
- c. Ma-’efcang-en    kaku                    t-u-ra                    a’ol.  
                                  NEUT-stiff-EN2 1S.NOM            DAT-CN-that            bamboo  
                                  ‘I feel that the bamboo is too stiff.’ (The bamboo is not grated thin enough.)

As seen in (4.43), the result state verbs do not readily take *-en2* due to the semantic nature of this suffix. A possible reason for the different compatibility with *-en2* between result states and non-result states might be because the desired state or limit imposed by *-en2* is less compatible with predicates that have an inherent telic point. Therefore, it is

more difficult to construe the combination of *-en2* with a result state, unless, first, there is a special context like those exemplified in (4.43), or, second, the derived predicate is rendered as the duration of the result state, as illustrated in (4.44):

- (4.44)a. Ma-palal-en                      ho      kaku                      t-u-ya                      wawa.  
                   NEUT-wake.up-EN2      ASP    1S.NOM                      DAT-CN-that                      child.  
                   ‘I feel that the child is still awake.’
- b. Ma-adah-en                      tu      kaku.  
                   NEUT-recoverd-EN2      ASP    1S.NOM  
                   ‘I feel that I am recovered now.’

Notice that although the combination of telic verbs and *-en2* is possible in (4.44), the over-the-limit reading of the result state is no longer obtained.<sup>42</sup>

The structure of *-en2* also leads us to the distinction between the *ma-* verbs discussed so far and the *ma-* verbs in (4.45):

- (4.45)a. Ma-palu    n-i                      sawmah                      Ø-ci                      mayaw.  
                   UV-beat    GEN-PPN    Sawmah                      NOM-PPN    Mayaw  
                   ‘Mayaw was beaten by Sawmah.’
- b. Ma-ka'en    n-u                      wawa    t-u-ra                      futing.  
                   UV-eat    GEN-CN    child    DAT-CN-that                      fish  
                   ‘That fish was eaten by the kid.’

The predicates in (4.45) are not allowed to appear with *-en2*, as already shown in (4.34). The *ma-* here often prefixes to a verb with potential agency (i.e. verbs appearing with *mi-* or *-um-* by default) and generates an unmarked interpretation of the completion of an action. Notice that this *ma-* also serves as a UV marker, and the whole sentence is often rendered like a passive sentence in English. The *ma-* verbs in (4.45) seem to also possess a kind of telic point, as they indicate now the action is completed. However, unlike the

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<sup>41</sup> The acceptability of (4.43a-b) varies among speakers.

<sup>42</sup> As remarked by the informant, these two sentences are used to argue against someone's otherwise assumption.

result state verbs in (4.43), the verbs in (4.45) receive an iterative reading when appearing with *ho*. The relevant examples are provided in (4.46):

- (4.46) a. Ma-palu    **heca/ho**    n-u-ya    mama k-u    wawa.  
 UV-beat    again/ASP    GEN-CN-that    father NOM-CN    child  
 ‘The child was beaten again by that father.’
- b. Ma-nanum    **heca/??ho**    n-i    kacaw k-u    sayta  
 UV-water    again/again    GEN-PPN    Kacaw NOM-CN    soda  
 aku.  
 1S.GEN  
 ‘My soda was drunk by Kacaw again.’
- c. Ma-nengneng    **ho**    aku.  
 UV-watch    ASP    1S.GEN  
 ‘I have just watched (it), and now you want me to watch (it) again.’

As seen in (4.46), the *ma-* verbs are interpreted with an iterative sense when followed by *ho*. Notice that such a co-occurrence, similar to the combination of *ma-* result state verbs and *ho*, is not very common; the preferable choice is the adverb *heca* ‘again’ instead of *ho*.

The LS of this set of *ma-* verbs is given in (4.47), which indicates that *ma-* adds a telic point to an activity verb or verbs containing a **do’** operator:

- (4.47) The Logical Structure of *ma-4* (*ma-* active/causative accomplishment)  
*ma-4*: ....**do’**(x, [**pred’**(x, y)]) ... INGR/BECOME (**pred’**(y))

There are two parts in this logical structure, an activity and an accomplishment. However, unlike the active accomplishment predicates discussed in RRG (e.g. the consumption verbs and the creation verbs discussed in VVLP (1997:111)), there is no “&” between the two parts in the logical structure. The representation here leaves the possibility that the activity can be a causing event that brings about the accomplishment part. An example like this is *ma-patay* ‘kill’, illustrated in (4.48d). If there is no causing event, then the LS

of this type of *ma*- verb is just like that of an active accomplishment. Hence, the *ma*- verb here can either be an active accomplishment or a causative accomplishment. The activity part also explains why this type of *ma*- verb is (sometimes marginally) allowed to appear with *ho*, which goes well with an activity verb but not a result state predicate. Notice that this logical structure is similar to that of *-en* in (4.30); the only difference lies in the agentivity part carried by *-en*. Such agentivity is not found with *ma*- verbs. It is this agentivity that possibly contributes to the default future reading *-en* verbs usually get, and also the anticipatory telic point (similar to English ‘yet’) reading when *-en* verbs are followed by *ho*, in addition to the iterative reading. See the examples in (4.29).

So far the following four distinctions among *ma*- verbs have been made: activity, result state, non-result state, and active/causative accomplishment. Except for the *ma*- activity verbs, it is sometimes difficult to tell which LS a particular *ma*- verb has, as the same root may appear with more than one *ma*-. Hence, there might be categorical ambiguity for a *ma*- verb if no contextual information is provided. For example:

- (4.48)a. Ma-radiw k-u-ra kaying.  
 Ma-song NOM-CN-that young.lady  
 ‘That young lady is good at singing.’

a.’ **good.at.singing**’ (kaying)

- b. Ma-radiw n-i aki k-u radiw aku  
 UV-song GEN-PPN Aki NOM-CN song 1S.GEN  
 ‘My song was sung by Aki.’

b.’ **do**’ (aki, [**sing**’ (aki, radiw aku)]) & BECOME (**sung**’ (radiw aku))

- c. Ma-patay k-u-ra fafuy.<sup>43</sup>  
 NEUT-dead NOM-CN-that pig  
 ‘That pig is dead.’  
 ‘That pig is killed.’

<sup>43</sup> A more natural interpretation of (4.49c) is the first translation as the verb for “killing pigs” is *mi-pacuk* ‘slaughter (pigs)’; *mi-patay* is not usually used in such a context.

c'. BECOME **dead'** (fafuy)

d. Ma-patay n-i aki k-u-ra fafuy.  
 UV-dead GEN-PPN Aki NOM-CN-that pig  
 'That pig was killed by Aki.'

d.' **do'** (aki, [**kill'** (aki, fafuy)]) CAUSE BECOME (**dead'** (fafuy))

As demonstrated in (4.48), to disambiguate the verb types of *ma-radiw* and *ma-patay*, proper contextual information has to be provided, or one can perform the tests such *-en2* and *ho* to distinguish the verb types. Table 4.6 summarizes the properties of the four classes of *ma-* verbs examined above:

**Table 4.6 Verb Types Differentiated by AVor Neutral and UV *ma-s***

Default marking	<i>ma-</i> form types	<i>ma-</i> form TAM reading	Induce agency (the <i>paka</i> -test)	Co-occurrence with <i>ho</i>	Affixation with <i>-en2</i>	Examples
<i>ma-</i>	(intransitive) activity	progressive	no*	on-going or anticipatory telic point	not allowed	<i>ma-tayal</i> 'work'
<i>ma-</i>	result state	change of state or result state	DNA	no	specific context required	<i>ma-ruhem</i> 'ripe'
<i>ma-</i>	plain state	state	DNA	on-going	yes	<i>ma-laluk</i> 'diligent'
<i>mi-</i>	active/causative accomplishment (UV)	completion of an activity	yes	iterative	not allowed	<i>ma-palu</i> 'get beaten'

As implied in the verbs in Table 4.6, *ma-* verbs, regardless of their voice marking, are relatively more stative, compared with *mi-*, *-um-*, and *-en* verb. However, as mentioned in the very beginning, a large proportion of the state predicates can occur by themselves without any affixation (i.e. the unaffixed predicates). The *ma-* counterparts of these verbs may have different readings. Consider the examples in (4.49):

(4.49)a. Lipahak Ø-ci sawmah.  
 happy NOM-PPN Sawmah  
 'Sawmah is happy.'

a.' **be'** (sawmah [**happy'**])

- b. Ma-lipahak            Ø-ci            sawmah.  
       NEUT-happy        NOM-PPN    Sawmah  
       ‘Sawmah is very happy (because of remembering a certain event).’

b’. **happy**’ (sawmah)

- c. Kuhting        k-u-ni            qayam.  
       black        NOM-CN-this chicken  
       ‘This chicken is black.’

c’. **be**’ (qayam [**black**’])

- d. Ma-kuhting        k-u            pising nira.  
       NEUT-black        NOM-CN    face    3S.GEN  
       ‘His face became black.’

d’. BECOME **black**’ (pising nira)

- e. Fa’edet        k-u-ni            a        dateng.  
       hot        NOM-CN-this LNK    vegetable  
       ‘The dish is hot.’

e’. **be**’ (dateng [**hot**’])

- f. Ma-fa’edet k-u-ni            a        dateng.  
       UV-hot    NOM-CN-this        LNK    vegetable  
       ‘This dish was heated.’

f’. [**do**’ (Ø, [**heat**’ (Ø, dateng)])] CAUSE [BECOME **hot**’ (dateng)]

The examples in (4.49) display some possible *ma*- counterparts of unaffixed state predicates. We can see that the derived *ma*- predicates can be a transient state (e.g. (4.49b)), a result state (e.g. (4.49d)), or a causative accomplishment (e.g. (4.49f)). Notice that the distinction between the result states and the causative accomplishments is not very clear as the result state might be brought into existence by a causing event, which maybe implicit (e.g. (4.49d)) or explicit (e.g. (4.49f)).

The contrast between unaffixed states and their *ma*- versions in (4.9) is similar to the following Tagalog examples mentioned in VV (2005:48, original gloss):

(4.50)a. Puti            ang    damit            niya.  
           white        NOM clothes       her  
           ‘Her clothes are white.’

a’. **be’** (damit niya, [**white’**])

b. Ma-puti        ang    damit            niya.  
           white        NOM clothes       her  
           ‘Her clothes are clean.’

b’. **white’** (damit niya)

The *ma-* form in (4.50b) indicates that the whiteness of the clothes is not an inherent property as compared with the unaffixed form in (4.50a). The difference is captured by their respective logical structures in (4.50b’) and (4.50a’).

Based on the discussion so far, we can see that *ma-* has multiple functions in the verbal derivations of Amis, in addition to its multiple functions in the voice system. In fact, the semantic chaos of this prefix is not something unusual. As reviewed in Chapter 1, Yan (1992) identifies four *ma-* classes in his work. Tsukida (2005b) also proposes four *ma-* classes that are differentiated by the features [ $\pm$  state], [+affected], and [ $\pm$  control]. As mentioned in a study by Evans and Ross (2001) about the history of Proto-Oceanic *\*ma-*, the prefix *ma-* might have two distinct functions in Proto-Malayo-Polynesian (PMP) languages based on their investigation of some Malayo-Polynesian languages such as Tagalog, Cebuano, Tukang Besi, etc. The first function is roughly rendered as “become + Root”, meaning “get into the state denoted by, or associated with the root”, while the second one means “have + root”, meaning “be characterized by what the root denoted”. A similar proposal for *ma-* in Tagalog has also been made and extensively discussed in Himmelmann (in press), in which many pieces of morphosyntactic evidence are provided to show the distinctions between the two types of *ma-* in Tagalog. In the Amis data



examined above, similar correspondents of the two PMP forms can be found. The “become + root” is similar to the result state *ma-* verbs, while the “have + root” is similar to the plain transient state *ma-* verbs, which can be conceived as derivations from *ma-* plus a root denoting an entity or quality (e.g. *ma-kapah* ‘young’ > *ma-* + *kapah* ‘youth’ and *ma-radiw* ‘good at singing’ > *ma-* + *radiw* ‘song’). The “have” meaning is also found in the derivation of *ma-* activity verbs, as we will see later in the discussion.

#### 4.2.4 Interim Summary

In this section, I have tried to classify Amis verbs based on their co-occurrence with three voice markers: *mi-*, *ma-*, and *-en* and propose a decompositional analysis for the voice markers. The analysis is summarized in Table 4.7:

**Table 4.7 The Logical Structures of The Voice Affixes**

Affix	Voice <sup>44</sup>	Logical Structures
<i>mi-</i>	AV	( <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)) PURP) <b>do'</b> (x, [ <b>pred'</b> (x, y)]) ( <i>motional/purposive activity</i> )
<i>-en (-en1)</i>	UV	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]) ....BECOME ( <b>pred'</b> (y)) ( <i>agentive active/causative accomplishment</i> )
<i>ma-1</i>	AV or NEUT	<b>do'</b> (x, [ <b>pred'</b> (x, y)]) ( <i>activity</i> )
<i>ma-2</i>	AV or NEUT	INGR/BECOME ( <b>pred'</b> (x, y)) ( <i>result state</i> )
<i>ma-3</i>	UV	<b>do'</b> (x, [ <b>pred'</b> (x, y)]) ....BECOME ( <b>pred'</b> (y)) ( <i>active/causative accomplishment</i> )
<i>ma-4</i>	AV or NEUT	<b>pred'</b> (x, y)) ( <i>transient/plain state</i> )

The decompositional analysis proposed here can help us better understand the behavioral properties of these markers in the Amis grammar. For example, the specification of the agency component in *-en* explains the reason why it only goes with human (or personified) actor, while the lack of such specified agency in *mi-* accounts for why the actor is not necessarily human or even animate. In addition, such an analysis also better describes the derivations among these verb classes regarding why and how the derived

<sup>44</sup> As the main concern of this chapter is the derivational functions of the voice affixes, unless necessary, the voice functions of these markers will not be specified in the discussion, except for *ma-*. The voice marking functions of *ma-* requires specification as this affix appears in both the AV set and the UV set.

meaning is obtained. For instance, the logical structure of *mi-* tells us why it can derive a motional/purposive activity as well as a causative predicate from different types of roots.

Such a decompositional analysis also has an important consequence. That is, with the features specified in the logical structures, they can affect the original classes of the roots. Such influence raises some complexity regarding diagnosing the Aktionsart classes of the derived predicates as these predicates are composed of more than one logical structure, and each of the composed logical structures may influence the Aktionsart type of the derived verbs. More exploration of this point is given in Section 4.3.

A preliminary verb classification based on the interaction of the roots and the voice affixes is summarized in Table 4.8:

**Table 4.8 Summary of Verb Classes Differentiated by *mi-*, *ma-s*, and *-enl***

Default Marking	Verb Types	Unmarked TAM Reading	<i>mi-</i> form Reading	<i>ma-</i> Form Reading	<i>-enl</i> Form Reading	Induced Agency
<i>mi-</i>	potentially agentive activity	progressive motional/purposive	progressive motional/purposive	completion of an action	agentive active accomplishment	yes
<i>-um-</i>	potentially agentive activity	progressive	motional/purposive	completion of an action	agentive active accomplishment	yes*
<i>ma-1</i>	non-agentive intransitive activity	progressive	motional/purposive	progressive	agentive active accomplishment	no
<i>ma-2</i>	result state	result state	causative accomplishment or achievement	result state	agentive causative accomplishment	DNA
<i>ma-3</i>	plain state	stative	causative accomplishment	transient or plain state	agentive causative accomplishment	DNA
<i>ma-4</i>	active/causative accomplishment	perfective	activity or causative accomplishment	completion of an action	agentive active accomplishment	yes*

### 4.3 The Aktionsart Tests and Verb Classes

Based on the structures of the ideophone-forming construction *X sa* and the interaction with the voice affixes, at least four verb classes have been identified in Amis, namely activity, achievement, accomplishment, and state. In this section, these classes will be examined with the RRG-based Aktionsart tests and two language-specific tests

via the co-occurrence of aspectual markers *tu* and *ho*. These tests are summarized in Table 4.9 and a detailed discussion is provided following the table.

**Table 4.9 Tests for Amis Aktionsart Classes**<sup>45</sup>

Criterion	States	Activities	Accomp	Achieve	Seml	Active Accomp
1. Occurs with <i>X ccay tu</i> <i>tatukain</i> “for an hour”	Yes*	Yes	irrelevant*	No	Yes*	irrelevant*
2. Occurs with <i>X i ccay</i> <i>tatukian</i> “in an hour”	No	No	Yes	No*	No	Yes
3. Occurs with adverbs like <i>harakat</i> “quickly”, <i>rara saan</i> “slowly”, etc.	No	Yes	Yes	No*	No*	Yes
4. Occurs with <i>tu</i>	change of state	perfective- ness or inception of activity	inception of activity or result state	result state	inception of activity	completion of the activity
5. Occurs with <i>ho</i>	continuing state	anticipatory telic point or progressive	anticipatory telic point or DNA (ma-)	iterative	anticipatory telic point or iterative*	iterative
6. The Reading of <i>X sa</i>	on-going state	on-going activity	result state	iterative	iterative	irrelevant

Tests 1 to 3 in the table are based on the RRG framework, which were originally proposed in Dowty (1979). Tests 4 to 6 are language specific tests in Amis, including the interaction between verb classes and two aspectual markers, and the reading of *X sa* construction discussed in the beginning of this chapter. Before the discussion of the

<sup>45</sup> Some of the tests originally proposed in RRG have been neglected here for language-specific reasons. For example, as there is no marker for progressive in Amis, strictly speaking, there is no way to perform the test of the occurrence of progressive aspect for this language. Nevertheless, as seen later, the test of using the “incomplete” aspect marker *ho* can partially serve as the progressive test. By the same token, I am not sure if there is a corresponding construction for the stative modifier in Amis, and therefore, I leave out the test of whether a derived predicate can serve as a stative modifier in Amis. Finally, as expressions such “vigorously” and “actively” are difficult to elicit in this language, the test of using such expressions is also excluded in the table.

Aktionsart tests, there are a few comments I would like to make. First, it is not easy to run some of the tests in Amis, and hence, speakers might have different judgments regarding the same sentences. The tests with the “*for + time*” and “*in + time*” are two such examples. As it is difficult to find the corresponding expressions of the two time phrases in Amis, speakers sometimes encounter difficulties in providing the data when the tests were performed. Second, as the predicate in Amis is almost always composed of a voice affix and a root form, the Aktionsart type may be a combination of both, and thus the test result might also be affected. In spite of these two difficulties, in general, the lexical aspect features can still be diagnosed by the application of the tests.

Let us first discuss the *for*-test. As predicted, it works well with activity verbs:

- (4.51)a. Ccay      tu<sup>46</sup>      (a)      tatukian      kaku      mi-futing.  
                  one      ASP      LNK      hour      1S.NOM      AV-fish  
                  ‘I have been fishing for an hour.’
- b. Ccay      tu      (a)      tatukian      kaku      c-um-ikay.<sup>47</sup>  
                  one      ASP      LNK      hour      1S.NOM      run<NEUT>  
                  ‘I have been running for an hour.’

State verbs can also show up with this time expression:

- (4.52)a. Ccay      tu      (a)      mihcaan      ma-su’su’      cingra.  
                  one      ASP      LNK      year      NEUT-fat      3S.NOM  
                  ‘He has been fat for a year.’

<sup>46</sup> The aspectual marker *tu* has nothing to do the verbs that undergo the test; it is part of the expression of *for + time*, meaning “it has been + time”.

<sup>47</sup> Note that this construction does not work for every activity verb. For example, *mi-’epah* ‘drink alcohol; go to drink alcohol’, an apparent activity verb, cannot appear in such a context. However, a more commonly used paraphrase of this verb is allowed. Consider:

- (4.51)b. \*Ccay      tu      a      tatukian      kaku      \*mi-’epah  
                  one      ASP      LNK      hour      1S.NOM      AV-wine  
                  ‘I have been fishing/dig a hole/drinking wine for an hour.’
- c. ccay      tu      a      tatukian      kaku      k-um-a’en      t-u      ’epah  
                  one      ASP      LNK      hour      1S.NOM      eat<AV>      DAT-CN      wine  
                  ‘I have been drinking wine for an hour.’

I suspect that the inappropriateness of (4.51b) might be due to the rare occurrence of the verb *mi-’epah* rather than the semantics of the verb.

- b. Ccay          tu          (a)          mihccan          ma-ulah          cingra          ci  
          one          ASP          LNK          year          AV-like          3S.NOM          PPN

panay-an.

Panay-DAT

‘He has been in love with Panay for a year.’

Although this test is irrelevant for the accomplishment verbs, it works fine with causative accomplishment verbs when referring to the motional/purposive component of the verb.

- (4.53)a. Ccay          tu          tatukian          mi-patay          Ø-ci          aki  
          one          ASP          hour          AV-dead          NOM-PPN          Aki

t-u                                  oner.  
 DAT-CN                                  snake

‘Aki has gone to kill the snake for an hour (not back yet).’

- b. Ccay          tu          tatukian          mi-palal          Ø-ci          aki          ci  
          one          ASP          hour          AV-wake.up          NOM-PPN          Aki          PPN

panay-an.

Panay-DAT

‘Aki has gone to wake Panay up for an hour.’

‘Aki has been waking Panay up for an hour.’

For verbs with a [+punctual] feature, this test only works with their *mi-* form. For example, the *for + time* phrase is acceptable for achievement verbs marked by *mi-*, as illustrated by *mi-tepoc* ‘(go to) chop down something at once’ in (4.54a), but the duration of time only refers to the motional/purposive component inherent in the prefix *mi-*. Another possible interpretation for *mi-tepoc* in this sentence is an iterative activity, which can be judged from the obligatory plural interpretation of *’aol* ‘bamboo’. The expression of *for + time* is also allowed to co-occur with a semelfactive verb such as *ma-piyat* ‘flash (intransitive)’, but it has to show up in the form of *mi-sa-piya-piyat*, as seen in (4.54b), in which the reduplication manifests an iterative sense for the verb. Notice that there is no motional/purposive reading involved in *mi-sa-piya-piyat*, which might be due to the

incompatibility between the motional/purposive reading and an inanimate effector (i.e.

*tingki* ‘lamp’):

- (4.54)a. Ccay          tu          tatukian          mi-tepoc          cingra  
one          ASP          hour          AV-chop.down.at.once          3S.NOM

t-u-ra          ’aol.  
DAT-CN-that          bamboo.

‘He has been chopping down those bamboos/\*that bamboo for an hour.’

‘He has gone to chop down those bamboos for an hour.’

- b. Ccay          tu          a          tuki          mi-sa-piya-piyat/\*ma-piyat  
one          ASP          LNK          hour          AV-SA-RED-flash/NEUT-flash

k-u-ra          tingki.  
NOM-CN-that          light

‘The lamp has been flashing for an hour.’

Contrary to the result of the *for*-test, activities cannot appear with *in+time*. Observe:

- (4.55)a. \*Ccay          a          tatukian          ma-ranam          kaku.  
one          LNK          hour          NEUT-breakfast          1S.NOM  
‘I have breakfast in an hour.’

- b. \*Pangkyu          tatukian          mi-nengneng          kaku          t-u-ni  
half          hour          AV-see          1S.NOM          NOM-CN-this

cudad.  
book

‘I read this book in half an hour.’

- c. Pangkyu          tatukian          repun-en          aku          mi-nengneng  
half          hour          finish-UV          1S.GEN          AV-watch

k-u-ni          cudad.  
NOM-CN-this          book

‘I will finish reading this book in half an hour.’

- d. Pangkyu          tatukian          ma-repun          tu          aku          mi-nengneng  
half          hour          UV-finish          ASP          1S.GEN          AV-watch

k-u-ni          cudad.  
NOM-CN-this          book

‘I finished reading this book in half an hour.’

- e. Pangkyu      tatukian      ma-nengneng      tu      n-i      sawmah  
half      hour      UV-watch      ASP      GEN-PPN      Sawmah

k-u-ni      cudad.  
NOM-CN-this      book  
‘Sawmah read this book in half an hour.’  
??‘Sawmah read through this book in half an hour.’

- f. ??Pangkyu      tatukian      nengneng-en      tu      n-i      sawmah  
half      hour      watch-UV      ASP      GEN-PPN      Sawmah

k-u-ni      cudad.  
NOM-CN-this      book  
‘Sawmah will read this book in half an hour.’  
\*‘Sawmah will read through that book in half an hour.’

As shown in (4.55a) and (4.55b), a plain activity verb cannot co-occur with the phrase *in + time*; it has to appear with another verb that signals the termination of the activity such as *repun-en* ‘finish (for sure)’ in (4.55c) or *ma-repun* ‘finish (UV)’ in (4.55d). Notice that the active accomplishment version of the same verb (i.e. *ma-nengneng* and *nengneng-en* in (4.55e-f)) can appear with the *in + time* phrase. However, these two sentences only express that the activity of reading happened or will happen in that period of time; the completion of the reading is not indicated.<sup>48</sup>

State verbs may appear with *in + time*, but the interpretation is not about the termination of the state but rather a comparison or a contrast with another time span:

- (4.56) Ccay      mihcaan      ma-ulah      Ø-ci      dongi      ci      aki-an.  
one      year      AV-like      NOM-PPN      Dongi      NOM      Aki-DAT  
\*‘Dongi finished loving Aki in one year.’  
‘In one year, Dongi loved Aki. (In another year, she loved others).’

(Causative) accomplishment verbs can appear with *in + time*. However, the voice form of the verb seems to affect the acceptability of such examples. Consider:

<sup>48</sup> Notice that speakers seem to prefer *ma-nengneng* to *nengneng-en* in this context. I have no good explanation here.

- (4.57) a. Ccay          a          tatukian          mi-pitek          Ø-ci          aki  
                  one          LNK          hour          AV-break          NOM-PPN          Aki  
  
                  t-u-ra                                  a'ol.  
                  DAT-CN-that                          bamboo.  
                  'Aki is going to break that bamboo and the bamboo will become broken in an hour.'
- b. Ccay          a          tatukian          pitek-en          n-i          aki  
                  one          LNK          hour          break-UV          GEN-PPN          Aki  
  
                  k-u-ra                                  a'ol.  
                  NOM-CN-that                          bamboo  
                  'Aki will break that bamboo and the bamboo will become broken in an hour.'
- c. Ccay          a          tatukian          ma-pitek          n-i          aki  
                  one          LNK          hour          UV-break          GEN-PPN          Aki  
  
                  t-u-ra                                  a'ol.  
                  NOM-CN-that                          bamboo  
                  'Aki broke that bamboo in an hour.'
- d. Ccay          a          tatukian          ma-palal/palal-en                          n-i  
                  one          LNK          hour          UV-wake.up/wake.up-UV          GEN-PPN  
  
                  aki    Ø-ci                          panay.  
                  Aki    NOM-PPN                          Panay  
                  'Aki woke Panay up in an hour.' (the reading for *ma-palal*)  
                  'Aki will wake up Panay and she will be woken up in an hour.' (the reading for *palal-en*)
- e. \*Ccay          a          takukian          mi-palal          Ø-ci          aki          ci  
                  one          LNK          hour          AV-wake.up          NOM-PPN          Aki          PPN  
  
                  panay-an.  
                  Panay-DAT  
                  'Aki is going to wake Panay up and finish waking her up in an hour.'
- f. Ccay          a          tatukian          ma-fafaw                          k-u                          nanum.  
                  one          LNK          hour          NEUT-cool.down          NOM-CN                          water  
                  'The water will cool down in an hour.'



As exemplified in (4.57), while the *mi-* form of the causative accomplishment verb *mi-pitek* ‘(go to) break something’ (derived from *ma-pitek* ‘become broken’)<sup>49</sup> can appear with *in + time*, *mi-palal* ‘(go to) wake up somebody’ (from *ma-palal* ‘wake up (naturally) or wake up someone (UV)’)<sup>50</sup> is not allowed; rather, it has to appear in its UV forms *ma-* or *-en*. It seems that the voice constructions also play a role regarding the telicity and punctuality of the verbs, as the UV versions of the (causative) achievement verbs (e.g. *ma-palal* ‘wake up someone (UV)’ or *palal-en* ‘wake up someone’) behave more like accomplishment verbs, which are then compatible with the *in+time* expression.<sup>50</sup>

Punctual verbs such as achievement verbs (e.g. *ma-tepoc* ‘chop down at once’) and semelfactive verbs (e.g. *ma-piyat* ‘flash’) cannot co-occur with the *in + time* phrase.

Examples follow:

- (4.58)a. \*Ccay a tatukian ma-tepoc k-u-ra  
 one LNK hour UV-chop.down.at.once NOM-CN-that  
 kilang.  
 tree  
 ‘The tree was chopped down at once in an hour.’

- b. \*La-lumaq n-u ccay a tuki ma-piyat  
 RED-house GEN-CN one LNK hour NEUT-flash  
 k-u-ra tingki.  
 NOM-CN-that lamp  
 ‘The lamp flashed in an hour.’

As for the co-occurrence with adverbs test, the pace predicates such as *harakat* ‘fast’ and *ma-usuy* ‘slowly’ (or *rara saan* ‘slowly’) help distinguish the four major classes of

<sup>49</sup> The verb *mi-pitek* behaves like an accomplishment. However, I suspect that not every “breaking” verb behaves like this. For example, *ma-peleng* ‘broken (for vase or glass)’ behaves more like an achievement verb, as exemplified in (4.59e).

<sup>50</sup> There may be finer distinctions between these accomplishment verbs. While the verb *ma-pitek* ‘break’ may involve a series of stages of the breaking, a verb like *ma-palal* ‘wake up’ does not seem to have such stages. Rather, it only has a process and a punctual point. Such subtle semantic difference may contribute to the different behaviors discussed in (4.58).

verbs. To begin with, punctual verbs such as achievement verbs (e.g. *mi-tepoc* ‘chop down at once’, *ma-tekek* ‘peck once’, *ma-paleng* ‘break (intransitive)’) and semelfactive verbs (e.g. *ma-piyat* ‘flash’) are banned in the contexts with pace adverbials. However, the activity counterparts of some achievement verbs (e.g. *mi-tetek* ‘peck continuously’) can appear in such contexts. This is exemplified in (4.59):<sup>51</sup>

- (4.59)a. \*Harakat    mi-tipoc...  
fast            AV-chop.down.at.once
- b. \*Ma-usuy        mi-tipoc....  
NEUT-slow        AV-chop.down.at.once
- c. \*Harakat    mi-tekek  
fast            AV-peck.once
- d. Harakat/Ma-usuy    mi-tetek                            k-u            qayam  
fast/NEUT-slow    AV-peck.continuously    NOM-CN        chicken
- t-u            kaka’enen.  
DAT-CN    food  
‘The chicken is quickly/slowly pecking up the food (continuously).’
- e. \*Rara            saan    ma-peleng    k-u            takid.  
slow            say.so    NEUT-break    NOM-CN        bottle  
‘The bottle broke slowly.’
- f. \*Harakat    ma-piyat            k-u-ra            tingki.  
fast            NEUT-flash    NOM-CN-that        lamp  
‘The light flashes fast.’

Accomplishment verbs in (4.60) work well with these pace predicates. Consider:

- (4.60)a. Harakat/Ma-usuy    ma-adah                            k-u            adada.  
fast/NEUT-slow    NEUT-recoverd    NOM-CN        ailment  
‘The ailment recovered fast/slowly.’

<sup>51</sup> Notice that in (4.60), the pace adverbial cannot modify the motional/purposive component in the *mi*-verbs. A possible reason for this might be that the pace adverbial modifies the Core, but the motional/purposive component is inside the Nucleus. More investigation is needed.

- b. Harakat/Ma-usuy ma-likat k-u-ra tingki.  
 fast/NEUT-slow NEUT-light NOM-CN-that lamp  
 ‘The lamp became lit up fast/slowly.’

Note that some apparent state predicates can also appear with pace predicates.

Nevertheless, the interpretation seems to refer to the process before the result state and thus makes the state verb look like an accomplishment. Consider:

- (4.61) Harakat ma-futiq k-u-ra wawa.  
 fast NEUT-sleep NOM-CN-that child  
 ‘That child fell asleep quickly.’

In addition to the Aktionsart tests adopted from VVLP (1997) and VV (2005), two more tests are employed to diagnose the lexical aspects of Amis verbs. The first one is the temporal interpretation of the verb when it co-occurs with the aspectual marker *tu*. This marker either depicts an inception of an activity or a state, or the completion of an activity (Liu 2003); that is, the verbs followed by *tu* either receive an inchoative reading or a perfective reading, depending on the classes of the verbs. For activity verbs, the default reading of “verb + *tu*” is the completion of an action but the inchoative reading is sometimes allowed, especially when the actor is first person plural and the whole sentence is interpreted as an inclusive imperative, rendered as “let’s...”. Consider:

- (4.62)a. Mi-nanum tu Ø-ci sawmah.  
 AV-water ASP NOM-PPN Sawmah  
 ‘Sawmah has already drunk water.’  
 ‘Sawmah has gone to drink water.’
- b. Ma-kro’ tu kita  
 NEUT-dance ASP 1P.INCL.NOM  
 ‘We have danced.’  
 ‘Let’s dance!’
- c. Ma-tayal tu kaku (t-u-na demak).  
 NEUT-work ASP 1S.NOM DAT-CN-this matter  
 ‘I have done it.’  
 ‘I have started to do it.’

When occurring with *tu*, achievement verbs marked by *mi-* receive an inchoative reading for the “motional/purposive” part contained in the logical structure of *mi-*, but the perfective reading of the event is not accepted<sup>52</sup> unless the achievement verb is marked by *ma-* (e.g. (4.63a’)). The *ma-* form for a semelfactive verb also receives the perfective reading, as illustrated by *ma-piyat* ‘flash’ in (4.63c):

- (4.63) a. Mi-tepoc                      tu      cingra                      t-u-ra                      kilang.  
 AV-chop.down.at.once      ASP    1S.NOM                      DAT-CN-that                      tree  
 ‘He has gone to chop and cut down the tree.’  
 \*‘He has already chopped and cut down the tree.’
- a’. Ma-tepoc                      tu      nira                      k-u-ra                      kilang.  
 UV-chop.down.at.once      ASP    3S.GEN                      NOM-CN-that                      tree  
 ‘He has already chopped down that tree.’
- b. Mi-tetek                      tu      k-u                      qayam.  
 AV-peck.once                      ASP    NOM-CN                      bird  
 ‘The bird has started to peck the food (and is still pecking).’  
 \*‘The bird has pecked the food.’
- c. Ma-piyat                      tu      k-u                      totay.  
 NEUT-flash                      ASP    NOM-CN                      light.house  
 ‘The light house has flashed.’

Result state verbs get the perfective reading when followed by *tu*, as shown in (4.64a-b). As for the active accomplishment or causative accomplishment verbs (e.g. (4.64c)), two readings may be obtained when they are followed by *tu*, either the inception of the motion part in *mi-* or the completion of the event. This is rather different from the *mi-* achievement verbs in (4.63).

- (4.64) a. Ma-icang                      tu                      k-u-ra                      rikor.  
 NEUT-dry                      ASP                      NOM-CN-that                      clothes  
 ‘That dress is dry (just now).’

<sup>52</sup> A possible reason for such a phenomenon might be due to the inherent telicity of the verb, which makes it unnecessary to talk about the perfective aspect of the event by adding one more marker.

- b. Mala-su'ur tu k-u kitec-ay.  
 become-dew ASP NOM-CN icy-FAC  
 'The ice has melted.'
- c. Mi-patay tu k-u matu'asay t-u 'oner.  
 AV-dead ASP NOM-CN old.man DAT-CN snake  
 'The old man has killed the snake.'  
 'The old man has gone to kill the snake.'

When showing up with *tu*, the *ma-* UV counterparts of the activity verbs (i.e. the active accomplishment or causative accomplishment) always get the perfective reading. In fact, the perfective reading is also the default temporal reading of this set of *ma-* verbs even without the co-occurrence of *tu*. This property is similar to the result state verbs shown in (4.64a-b).

- (4.65)a. Ma-nanum tu aku k-u sayta.  
 UV-water ASP 1S.GEN NOM-CN soda  
 'I have already drunk the soda.'
- b. Ma-ka'en tu n-i kacaw k-u-ra futing.  
 UV-eat ASP GEN-PPN Kacaw NOM-CN fish  
 'Kacaw has already eaten that fish.'

The state predicates obtain an accomplishment reading (i.e. "Become...") that refers to the onset of a state of affairs when followed by *tu*. Consider:

- (4.66)a. Ma-su'su' tu cingra.  
 NEUT-fat ASP 3S.NOM  
 'He has become fat.'
- b. Tata'ang tu k-u-ra qayam.  
 big ASP NOM-CN-that chicken  
 'That chicken has become big.'

The co-occurrence of *-en* verbs with *tu* is interpreted as an inception of an activity, and sometimes it may accompany an iterative sense (e.g. (4.67d)).<sup>53</sup>

<sup>53</sup> The tendency to get a reading of an inception of the activity might be due to the strong agentivity carried by *-en*.

- (4.67) a. Sadek-en tu k-u-ra dateng.  
go/come.out-UV ASP NOM-CN vegetable  
'Start to serve that dish!'
- b. Nanum-en tu aku k-u-ra sayta.  
water-UV ASP 1S.GEN NOM-CN-that soda.  
'I will drink the soda in a short moment.'
- c. Nanum-en tu k-u-ra sayta!  
water-UV ASP NOM-CN-that soda  
'Drink the soda (now)!'
- d. Palu-en tu n-i mama k-u wawa.  
beat-UV ASP GEN-PPN father NOM-PPN child  
'Father beat the child again.'

The marker *tu* does not seem to make clear distinctions with *-en* verbs. As the agentive causative accomplishment (e.g. *sadak-en* in (4.67a)) and the agentive active accomplishment (*nanum-en* in (4.67b-c)) all receive the inchoative reading when followed by *tu*. The perfective reading of *tu* is rarely found with *-en* verbs. This might be due to the default future reading associated with *-en*.

The following table summarizes the interaction of different verb classes and *tu*:

**Table 4.10 Verb Types and Their Co-occurrence with *tu***

Verb Types	V + <i>tu</i> interpretation
<i>mi-</i> + activity	perfective (default) or inchoative
<i>ma-</i> (AV or neutral) + activity	perfective (default) or inchoative
<i>mi-</i> + achievement	perfective of the motion part
<i>ma-</i> (AV or neutral) + semelfactive	perfective
<i>ma-</i> (AV or neutral) + result state	perfective
<i>ma-</i> (UV) + activity or causative activity (i.e. <i>ma-</i> active/causative accomplishment)	perfective
non-result state	accomplishment (Become...)
Verb + <i>-en</i>	inchoative or iterative

The other aspectual marker *ho* in general signals an “incomplete” aspect for the verbs that it attaches to. The verbs followed by *ho* usually get two readings, depending on where the stress falls. If the stress falls on the verb, then the verb is interpreted as

“on-going” (roughly rendered as ‘still’ in English). If the stress falls on *ho*, then the sentence is interpreted as ‘do something first (before doing others)’, which in general corresponds to ‘yet’ in English. The latter case seems to indicate that there is an anticipatory telic point for the activity denoted by the verb. The verb classes and their interaction with *ho* are discussed as follows.

When followed by *ho*, *mi-* activity verbs receive either the on-going reading or the anticipatory telic point reading described above. Nevertheless, the anticipatory telic point seems more likely to be construed for activities that usually do not involve a long time span (e.g. drinking and eating). For activities that can go on for a long time, this reading is less likely to get. Consider the following examples:

- (4.68)a. Mi-nanum ho kaku.  
 AV-water ASP 1S.NOM  
 ‘I am still drinking water.’ (stress on “*mi-nanum*”)  
 ‘I will go drink water first.’ (stress on “*ho*”)
- b. Mi-futing ho kaku t-u sakalafi.  
 AV-fish ASP 1S.NOM DAT-CN food.for.dinner  
 ‘I am still fishing for the fish for the food for dinner.’  
 ‘I will go catch the fish for the food for dinner.’
- c. Mi-pacuk ho kaku t-u fafuy, ta  
 AV slaughtering ASP 1S.NOM DAT-CN pig then  
 pa-tireng t-u ngayangay.  
 CAU-body DAT-CN canopy  
 ‘I will go slaughter the pig first, and then build up the canopy (for the ceremony).’

The same readings of *V + ho* are also found in *-um-* and *ma-* activity verbs. Consider:

- (4.69)a. K-um-a’en ho kaku.  
 eat<AV> ASP 1S.NOM  
 ‘I am still eating.’  
 ‘I will go eat first.’

- b. Ma-tayal                      ho                      kaku.  
 NEUT-work                      ASP                      1S.NOM  
 ‘I am still at work (or busy with doing something).’  
 ‘I will go work first.’

When *mi-* attaches an achievement verb and the derived predicate is followed by *ho*, it may receive the anticipatory telic point reading or an iterative reading. Although an on-going reading is also possible, the informants do not agree among themselves concerning the acceptability of this interpretation.

- (4.70)a. Mi-tepoc                      ho                      cingra                      t-u-ra                      kilang.  
 AV-chop.down.at.once                      ASP                      3S.NOM                      DAT-CN-that                      tree  
 ‘He went to chop that tree first (and then do something else).’  
 ‘He went to chop those trees/\*that tree again.’  
 ?‘He is chopping those trees/\*that tree.’

- b. Mi-toktok                      ho                      kaku                      t-u                      sapad, ta  
 AV-hammer.once                      ASP                      1S.NOM                      DAT-CN                      board then  
  
 ma-tayal.  
 NEUT-work  
 ‘I will go to nail that board first, and then (go to) work.’

As seen in (4.70a), a punctual verb like *mi-tepoc* ‘chop and cut down at once’ is less likely to get the on-going reading of the action when preceding *ho* unless the patient argument is interpreted as a plural form. The plurality requirement of the patient argument is also found with the iterative reading of the same verb. This is reminiscent of the cases of the English achievement verbs such as *pop* and *explode*, as discussed in VVLP (1997:94). When occurring in a progressive context, these verbs will generate an iterative reading, and that is why they can only show up with a plural argument:

- (4.71)a. The balloons/\*balloon are/\*is popping  
 b. The bombs/\*bomb are/\*is exploding.

Verbs marked by *-en* are interpreted as verbs with an anticipatory telic point when



followed by *ho* (i.e. the ‘yet’ reading), and sometimes they are accompanied with an encouraging tone, especially in imperative sentences. Examples follow:

- (4.72)a. Nanum-en ho aku.  
 water-UV ASP 1S.GEN  
 ‘I will drink it first.’
- b. Tayal-en ho isu!  
 work-UV ASP 2S.GEN  
 ‘Do it for me!’  
 ‘Keep on doing it (until you finish it)!’
- c. Ulah-en ho Ø-ci panay!  
 like-UV ASP NOM-PPN Panay  
 ‘Try to love Panay (and see what will happen)!’

When *ho* comes after a verb marked by *ma-*, some complexities may arise. First, some *ma-* state verbs are interpreted as having an on-going sense or an anticipatory telic point. Notice that in this context, the otherwise state predicate is interpreted as a dynamic verb. It seems that this type of state predicate has an ambiguous status between a state and an activity. For example:

- (4.73) Ma-futiq ho cingra.  
 NEUT-sleep ASP 3S.NOM  
 ‘He is still sleeping.’  
 ‘He will go sleep first.’

*Ma-* verbs denoting involuntary activities can only have the on-going reading when they show up with *ho*, as the anticipatory telicity reading is not likely to be construable.

Consider:

- (4.74)a. Ma-turu’uk ho cingra.  
 NEUT-belch ASP 3S.NOM  
 ‘He is still belching.’
- b. Ma-suwaf ho cingra.  
 NEUT-yawn ASP 3S.NOM  
 ‘He is still yawning.’

Similar to *ma-* involuntary activities, the *ma-* verbs with a more stative meaning

only get the on-going reading when followed by *ho* but not the anticipatory telic reading.

For example:

- (4.75)a. Ma-ulah ho Ø-ci panay ci kacaw-an  
 AV-like ASP NOM-PPN Panay PPN Kacaw-DAT  
 ‘Panay still likes Kacaw.’
- b. Ma-su’su’ ho cingra.  
 NEUT-fat ASP 3S.NOM  
 ‘He is still fat.’

The data in (4.74) and (4.75) seem to suggest that involuntary activity verbs should be treated as states, not activities, as they behave more like states when appearing with *ho*.

However, there is a crucial property indicating that the verbs in (4.74) are activities.

That is, the *-en* counterparts of the verbs in (4.74) (e.g. *туру’uk-en* ‘belch something out (intentionally)’) are more likely to be rendered as agentive active accomplishment, while the *-en* forms of state predicates in (4.75) (e.g. *su’su’-en* ‘fatten’) tend to be agentive causative accomplishment.<sup>54</sup> Although there are some exceptions, this non-causative/causative contrast in the reading of the UV *-en* form can in general demonstrate the difference between involuntary activities and states.

*Ma-* result state verbs normally are not allowed to appear with *ho* unless they occur in a negative context (e.g. (4.76c)). This point has been discussed in an earlier section.

The examples are given again in (4.76):

- (4.76)a. \*Ma-patay ho cingra.  
 NEUT-dead ASP 3S.NOM  
 ‘He is still dead.’
- b. \*Ma-icang ho k-u-ra rikor.  
 NEUT-dry ASP NOM-CN-that clothes  
 ‘Those clothes are still dry.’

<sup>54</sup> However, the *-en* form of some psych-predicates (e.g. *ma-ulah* ‘like’) may be agentive accomplishment. Such predicates will be discussed later in this chapter.

- c. Ca'                      ho                      ka-icang                      k-u-ra                      rikor.  
                                  NEG                      ASP                      KA-dry                      NOM-CN-that                      clothes  
                                  'That dress is not dry yet.' (Negative, Neutral)

More such verbs include *ma-cepet* '(become) dehydrated', *mala-su'ur* 'melt (i.e. become dew)', *ma-ruhem* 'ripe'. It seems that *ho* cannot refer to the process before obtaining the result states, nor is it possible to refer to the stage after the result state has been accomplished. Interestingly enough, *ho* can co-occur with the *mi-* causative accomplishment version of result state verbs such as *mi-ruhem* '(go to) ripen' (related to *ma-ruhum* 'ripe') and also motional accomplishment verbs such as *tahini/tahira* 'arrive (here)/arrive (there)'. The reading of their co-occurrence with *ho* can refer to the process of arriving,<sup>55</sup> as illustrated in (4.76d), though not every informant accepts examples like (4.76e):

- (4.76)d. Mi-ruhum    ho                      kaku                      t-u                      pawli.  
                          AV-ripe                      ASP                      1S.NOM                      DAT-CN                      banana  
                          'I am still ripening the banana.'  
                          'I will go to ripen the banana first.'
- e. Tahini/tahira                      ho                      Ø-ci                      aki.  
                          arrive.here/arrive.there                      ASP                      NOM-PPN                      Aki  
                          'Aki is arriving here/there.'

When co-occurring with *ho*, *ma-* active/causative accomplishment verbs (i.e. the UV *ma-* verbs) are usually interpreted with an iterative sense (i.e. 'again'), but most of the time, this aspectual marker will be replaced by *heca* 'again'. This observation has been pointed out earlier in the discussion in (4.46).

The semelfactive verbs present an interesting case when they show up with *ho*.

Consider:

- (4.77)a. \*Ma-piyat                      ho                      k-u                      tingki.  
                          NEUT-flash                      ASP                      NOM-CN                      lamp

<sup>55</sup> It is likely that the motion part of such verbs makes this reference possible.

- b. *Ma-faha*                      *ho*      *kaku*.  
       NEUT-cough              ASP    1S.NOM  
       ‘I am still coughing.’  
       ‘I will go (somewhere) to cough first.’

The two verbs behave rather differently when appearing with *ho*. Notice that the meaning of the predicate *ma-faha* has been changed in this context; it behaves somewhat like an activity verb. A possible reason for why *ma-piyat* does not co-occur with *ho* may be due to the inanimacy of its effector, which makes the readings (i.e. the on-going and the anticipatory telic reading) inconstruable. The contrast in (4.77) also shows that contextual features such as the agency of the co-occurring NPs can affect the classes of the verbs. More examples illustrating such contextual influence will be offered later.

The table below summarizes the interaction of verb classes and the aspectual marker *ho*:

**Table 4.11 Verb Types and Their Co-occurrence with *ho***

Verb Types	V + <i>ho</i> interpretation
<i>mi-</i> + activity	on-going or anticipatory telic point
<i>ma-</i> (AV or neutral) + (voluntary) activity	on-going or anticipatory telic point
<i>-um-</i> + activities	on-going or anticipatory telic point
<i>ma-</i> (AV or neutral) + (involuntary) activity	on-going
<i>mi-</i> (AV or neutral) + achievement	iterative or anticipatory telic point
<i>ma-</i> (AV or neutral) + semelfactives	iterative, anticipatory telic point, or DNA
<i>ma-</i> (AV or neutral) + result state	DNA
<i>ma-</i> (UV) + activity or causative activity (i.e. <i>ma-</i> active/causative accomplishment)	iterative
motional accomplishment	on-going (the process before reaching the telic point)
non-result state	on-going
Verb + <i>-en</i>	anticipatory telic point

The following generalizations can be made from Table 4.11. First, activity predicates tend to get either an on-going or anticipatory telicity reading when they are followed by *ho*, but the latter reading is affected by the agency of the co-occurring effector. The less

agentive the effector is, the less likely the anticipatory telicity reading will be obtained. This influence is also found with semelfactive predicates. Second, whether or not the telic roots can co-occur with *ho* depends on the voice affixes that attach to them. If they are affixed with *mi-*, which contributes a motional/purposive component to the logical structure of the derived predicates, then the co-occurrence with *ho* is acceptable. If they are affixed with UV *ma-*, which signals the perfectiveness of the event, then the co-occurrence with *ho* is less likely to be acceptable. Third, punctual verbs such as *ma-piyat* ‘flash’ and *ma-faha* ‘cough’ tend to get an iterative reading, as seen in (4.77b), if their co-occurrence with *ho* is allowed. Moreover, as shown in the table, the *ma-* UV verbs seem to behave more like punctual verb as they also get an iterative reading when they co-occur with *ho*.

I have shown in this section how to differentiate the verb classes by applying the Aktionsart tests. Although the tests are not perfect, in general, they can still help us detect the lexical aspectual features that pertain to each class. The table below summarizes the classes that have been identified so far in Amis and the voice marker they may appear with. Notice that these markers may change the categories of the root form:

**Table 4.12 Verb Classes and Possible Markers<sup>56</sup>**

Verb Types	Markers
activity	<i>mi-</i> : motional/purposive activity or plain activity
	<i>-um-</i> : activity
	<i>ma-</i> (AV or neutral): voluntary or involuntary
	unaffixed: motional activity
state	unaffixed: attributive (mostly)
	<i>ma-</i> (AV or neutral): transient or result
accomplishment	<i>ma-</i> (AV or neutral): (result state)
	<i>ma-</i> (UV): active or causative accomplishment
	<i>-en</i> : agentive active/causative accomplishment
achievement	<i>mi-</i> : motional/purposive achievement
semelfactive	<i>ma-</i> (AV or neutral)

<sup>56</sup> The causative class is not included here; it will be discussed later in this chapter.

#### 4.4 Further Discussion of Two Verb Sub-classes

Two sub-classes of verbs will be further discussed in this section: involuntary activities and psych-predicates. These two sub-types of predicates are both marked by *ma-* in Amis, and they exhibit some interesting derivational properties that are different from typical activities and states, the major verb types they belong to. Activities in Amis typically receive a motional/purposive reading when prefixed with *mi-*, but the *mi-* forms for involuntary activities usually get a causative reading. In contrast, the combination of *mi-* + state predicates typically yields a causative reading, but this is not necessarily the case with psych-predicates; some of them can get a motional/purposive reading. These peculiar derivational properties of the two types of verb will be explored in this section.

##### 4.4.1 Involuntary Activities

Typical examples of involuntary activities include: *ma-suwaf* ‘yawn’, *ma-’etut* ‘fart’, *ma-turu’uk* ‘belch; burp’, and *ma-uta* ‘vomit’. While the core argument of such verbs is almost always animate (even human) and sentient, it cannot control such activities volitionally. This semantic feature of such activities contributes to their potential incompatibility with the prefix *mi-*, which has motional/purposive element, as the derived interpretation (i.e. ‘purposely go to do the activity to somebody’) may not be construable. An interesting result for such an incompatible combination is a causative verb in which an inanimate entity causes the involuntary activities for the effector.<sup>57</sup>

Examples are given below:

- (4.78)a. Ma-turu’uk           kaku.  
          NEUT-belch       1S.NOM  
          ‘I am belching.’

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<sup>57</sup> I actually suspect that involuntary verbs can still get the motional/purposive reading for their *mi-* forms, though such sentences might be semantically marginal.

- a'. Mi-turu'uk k-u sayta t-u tamdaw.  
 AV-belch NOM-CN soda DAT-CN people  
 'The soda drink will make people belch.'
- a''. Ma-turu'uk n-u sayta kaku.  
 UV-belch GEN-CN soda 1S.NOM  
 'I was made to belch by the soda.'
- b. Ma-'etut ho kaku (t-u kunga).  
 NEUT-fart ASP 1S.NOM DAT-CN sweet.potato  
 'I am still farting (because of eating sweet potatoes).'
- b'. Mi-'etut k-u kunga takuwanan.  
 AV-fart NOM-CN sweet.potato 1S.DAT  
 'The sweet potato will make me fart.'
- c. Ma-uta kaku (t-u sanek n-u  
 NEUT-vomit 1S.NOM DAT-CN smell GEN-CN  
 tusiya).  
 car  
 'I vomit (because of the smell of the car.)
- c'. Mi-uta k-u simal (t-u tamdaw).  
 AV-vomit NOM-CN oil DAT-CN person  
 'Oil will make people vomit.'
- c''. Ma-uta n-u sanek n-u tusiya kaku.  
 UV-vomit GEN-CN smell GEN-CN car 1S.NOM  
 'I was made to vomit by the smell of the car.'

As illustrated in the data, the *mi-* version of the involuntary verbs is causative, and this causative verb can have a UV *ma-* counterpart, a causative accomplishment verb (e.g. *ma-turu'uk* in (4.78a'')). Some of the verbs also have a causative verb marked by *pa-* (or *pa-pi*). Contrary to the *mi-* causative predicates, *pa-* causatives have a human causer. Notice that in the *pa-pi-* causative form, the caused activity is no longer involuntary.<sup>58</sup>

Consider:

<sup>58</sup> As I will argue later in the discussion of *pa-* causatives, the logical structure of *pa-pi* is [**do'** (x, Ø)] CAUSE DO (y, [**do'** (y, [**pred'** (y, (z))])]). In this LS, the effector of the caused event (i.e. y) has to be agentive.

- (4.79)a. Pa-turu'uk kaku t-u wawa.  
 CAU-belch 1S.NOM DAT-CN child  
 'I help the baby belch (e.g. after feeding him milk).'
- b. Pa-pi-turu'uk kaku cingraan.  
 CAU-PI-belch 1S.NOM 3S.DAT  
 'I ask him to belch.'

Unlike the *mi-* form, the *-en* form of an involuntary activity is not causative; it becomes an agentive accomplishment with a specific undergoer. Consider:

- (4.80)a. Turu'uk-en aku k-u-ni.  
 belch-UV 1S.GEN NOM-CN-this  
 'I am going to belch this out.'
- b. Uta-en!  
 vomit-UV  
 'Vomit it out!'

This non-causative interpretation of *-en* verbs marks the distinction between involuntary activities and states; for the latter, both the *mi-* and *-en* forms tend to be causative. In (4.80), we can see that *-en* supplies the agency to the semantics of the involuntary verb and makes it a volitional active accomplishment now. Notice that the forms in (4.80) are all transitive activities with specific undergoers. For involuntary activities that are unlikely to have undergoers, their *mi-* and *-en* forms will be causative. This is exemplified by *ma-puleneng* 'sink' in (4.81):

- (4.81)a. Ma-puleneng kaku.  
 NEUT-sink 1S.NOM  
 'I sank.'
- b. Mi-puleneng kaku t-u talid.  
 AV-sink 1S.NOM DAT-CN bottle  
 'I am going to sink the bottle.'
- c. Ma-puleneng aku k-u talid.  
 UV-sink 1S.GEN NOM-CN bottle  
 'I sank the bottle.'



d.	Puleneng-en	aku	k-u	talid.
	sink-UV	1S.GEN	NOM-CN	bottle
	'I will sink the bottle.'			

As illustrated in (4.81), when a second argument is added to the logical structure of the predicate *puleneng* 'sink' by *mi-* or *-en*, it always involves a causative reading.<sup>59</sup>

#### 4.4.2 Psych-predicates

Another set of verbs that also behave quite interestingly roughly corresponds to the psych-predicates, though there are a few exceptions. Although these verbs are all marked by *ma-* and can be represented by the same logical structure [**pred'** (x, (y))], they can be divided into two sub-classes. One group, exemplified by *ma-ulah* 'like', *ma-fanaq* 'know', *ma-tawa* 'smile; laugh (at)', *ma-ngudu* 'be polite to; respect; embarrassed; humbled', and *ma-inal* 'envious', can take two arguments or possibly be a two-place predicate, in which the *x* argument serves as the actor and *y* argument functions as the undergoer or non-macrorole direct core argument. The other group, which usually takes only one argument, includes *ma-'esam* 'annoyed' and *ma-lanang* 'irritated' and *ma-cangal* 'discontented'; the only argument of these verbs is an undergoer. There are some major distinctions between the two sub-classes of psych-predicates, namely the actor-experiencer psych-predicates and the undergoer-experiencer psych-predicates. First, when being affixed with *mi-*, the actor-experiencer set gets the motional/purposive reading (i.e. 'go to do something to show the mental state'), but the undergoer-experiencer set gets the causative reading. The contrast is illustrated in (4.82) and (4.83) below:

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<sup>59</sup> This example indicates that the involuntary activities can be further subcategorized. I will leave this issue for future study.

- (4.82)a. Mi-ulah    Ø-ci            aki    ci        dongi-an.  
 AV-like    NOM-PPN    Aki    PPN    Dongi-DAT  
 ‘Aki is going to express his love to Dongi.’
- b. Mi-ngudu            cingra            t-u            lafang.  
 AV-humbled        3S.NOM        DAT-CN        guests  
 ‘He will behave himself in front of the guests (to show the respect to them).’
- c. Mi-inā            kaku            mi-sanga        t-u            tafolud.<sup>60</sup>  
 AV-envious        1S.NOM        NEUT-make    DAT-CN        bag  
 ‘I feel envious (to someone’s bag) so I (also) make the same bag.’  
 (I made the bag out of the envious feeling.)
- (4.83)a. Mi-’esam            k-u-ni                    a        lalangaw        (t-u  
 AV-irritated        NOM-CN-this            LNK    fly            DAT-CN  
 tamdaw).  
 people  
 ‘This fly is irritating (people).’
- b. Mi-lanang                    k-u            suni    takuwanan.  
 AV-annoyed.by.noise        NOM-CN        sound    1S.DAT  
 ‘The sound is annoying me.’

Second, while the actor-experiencer group can take the *-en* form to generate an agentive active accomplishment reading, the undergoer-experiencer group cannot. The *-en* form for the actor-experiencer group is illustrated in (4.84):

- (4.84)a. Ulah-en        cingra!  
 like-UV        3S.NOM  
 ‘(You must) love him!’
- b. Ngudu-en            k-u            singsi!  
 humbled-UV        NOM-CN        teacher  
 ‘Respect the teacher!’

<sup>60</sup> Notice that the verb *mi-inā* ‘go to do something out of the jealous feeling’ displays some differences from *mi-ulah* ‘(go to express) love’ and *mi-ngudu* ‘(go to show) respect’. First, unlike *mi-ulah* and *mi-ngudu*, the motional/purposive reading is not very obvious in the verb *mi-inā*. Furthermore, an additional predicate (i.e. *mi-sanga*) has to be added following *mi-inā*, but such a structure is not found with *mi-ulah* and *mi-ngudu*. However, the verb *mi-inā* is placed under the same category with *mi-ulah* and *mi-ngudu* because these psych-predicates seem to all share one feature; that is, some subsequent action is triggered because of the mental state. This feature is not found in the *mi-* verbs of the undergoer-experiencer psych-predicates, as discussed later. With *mi-ulah* and *mi-ngudu*, the action does not have to be specified, but with *mi-inā*, the action has to be specified in the sentence. This suggests that finer distinctions can be made among the three verbs in (4.82). More investigation is needed.

- c . Inal-en                      aku                      cingra.  
 envious-UV                      1S.GEN                      3S.NOM  
 ‘I will follow him (because of my envious feeling to him.)’

Third, while the actor-experiencer group can be causativized by *pa-* (or more precisely, *pa-ka-*), the undergoer-experiencer group does not have a *pa-ka-* causative form.

Examples follow:

- (4.85) a. Pa-ka-inal                      k-u                      tafulod                      aku                      t-u  
                  CAU-KA-envious   NOM-CN                      bag                      1S.GEN                      DAT-CN  
                  tao.  
                  others  
                  ‘My bag made other people feel envious.’
- b. Pa-ka-ngudu                      kaku                      t-u                      singsi.  
                  CAU-KA-humbled 1S.NOM                      DAT-CN                      teacher  
                  ‘I made the teacher feel ashamed.’ (i.e. I disgrace the teacher.)

The distinctions of the two types of psych-predicate are summarized in Table 4.13.<sup>61</sup>

**Table 4.13 The Sub-classes of Psych-predicates**

Experiencer	Examples	reading of <i>mi-</i> <sup>62</sup>	-en	<i>pa-ka-</i>	<i>ma-ka-ka-...-en</i>
Actor	<i>ma-ulah</i> ‘like’	motional/purposive	Yes	Yes ‘reward’	Yes
	<i>ma-fanaq</i> ‘know’	motional/purposive	Yes	Yes ‘inform’	Yes
	<i>ma-tawa</i> ‘smile; laugh’	motional/purposive	Yes	Yes ‘make laugh’	Yes
	<i>ma-ngudu</i> ‘respect; be polite to; embarrassed’	motional/purposive	Yes	Yes ‘disgrace’	Yes
	<i>ma-inal</i> ‘envious’	motional/purposive	Yes	Yes ‘make envious’	Yes
Undergoer	<i>ma-lanang</i> ‘annoyed by noise’	causative	No	No	Yes
	<i>ma-esam</i> ‘annoyed’	causative	No	No	Yes

There is a crucial semantic difference between the two groups of psych-predicates.

While the psych-states with an actor-experiencer can be motivated internally, those with an undergoer-experiencer tend to be caused by an external stimulus. This semantic

<sup>61</sup> The predicate *ma-ngudu* is semantically complicated. Some of the interpretations seem to suggest that it has an experiencer undergoer. However, as it behaves more like the one with an actor-experiencer, I tentatively place it with those actor-experiencer psych-predicates.

<sup>62</sup> Most, if not all, of these verbs do not have a *ma-* UV form. An exception is found with *mi-lanang*, which has *ma-* counterpart (i.e. *ma-nanang* ‘be made annoyed’)

distinction accounts for the fact that the internally motivated psych-predicates can only have the *pa-* causative form, which involves the addition of an external causer, while the externally caused psych-predicates do not take a *pa-* causative form, as their external cause is implied in their semantics, and their *mi-* form can indicate such an external cause if one wants to refer to it.

In spite of the distinctions displayed in Table 4.13, these psych-predicates do share a common feature; they all have *ma-ka-* and *ka-...-en* UV forms.<sup>63</sup> However, the interpretation of these forms is somewhat heterogeneous. Consider the following examples:

- (4.86)a. Ma-ulah      kaku              ci      panay-an  
 AV-like      1S.NOM      PPN      Panay-DAT  
 ‘I like Panay.’
- a’. Ma-ka-ulah              aku              Ø-ci              panay.  
 UV-KA-like              1S.GEN              NOM-PPN      Panay  
 ‘Panay is liked by me.’  
 ‘I like Panay.’
- b. Ma-fanaq      kaku              t-u-ra              tamdaw.  
 AV-know      1S.NOM              DAT-CN-that person  
 ‘I know that person.’
- b’. Ma-ka-fanaq              n-u              tao      k-u-ra              demak.  
 UV-KA-know              GEN-CN              other      NOM-CN-that thing  
 ‘That matter was discovered by others.’
- (4.87)a. Ma-ngudu              kaku              t-u              singsi.  
 NEUT-humbled      1S.NOM              DAT-CN              teacher  
 ‘I feel humbled with respect to the teacher.’
- a’. Ma-ka-ngudu              n-u              singsi              kaku.  
 UV-KA-humbled      GEN-CN              teacher              1S.NOM  
 ‘I made the teacher feel humbled/embarrassed (because I am superior to the teacher in certain respects.)’  
 ‘The teacher respects me.’

<sup>63</sup> These two forms seem to be in free variation as remarked by the informants.

- a". Ma-ka-ngudu      n-u      aluman-ay      kaku.  
 UV-KA-humbled    GEN-CN    many-FAC    1S.NOM  
 'I am respected by many people.'
- b. Ma-inal      kaku      t-u      tafulud      nira.  
 NEUT-envious    1S.NON    DAT-CN    bag      3S.GEN  
 'I feel envious with reference to his bag.'  
 'I envy him his bag.'
- b'. Ma-ka-inal      n-u      tao    k-u      tafulod  
 UV-KA-envious    GEN-CN    others    NOM-CN    bag  
  
 aku.  
 1S.GEN  
 'My bag made other people envious (because I showed it to them intentionally.)'
- c. Ma-tawa      kaku      t-u      wawa.  
 AV-laugh.at    1S.NOM    DAT-CN    child  
 'I am laughing at the kid.'
- c'. Ma-ka-tawa      n-u      tao    kaku.  
 UV-KA-laugh.at    GEN-CN    others    1S.NOM  
 'I let people laugh at me (because I have done something stupid.)'

Compare the *ma-ka-* forms in (4.86) and (4.87). Those in (4.87) sometimes have a causative sense, with the stimuli serving as a kind of causer. In fact, Starosta (1974) treats *ma-ka-* as one of the causative morphemes in Amis,<sup>64</sup> though he does not further discuss the form. However, treating *ma-ka-* as a causative construction will present a mismatch to the case-marking patterns in Amis, as now the genitive case marks the undergoer-experiencer (e.g. *singsi* in (4.87a')) while the nominative case marks the actor-stimulus (e.g. *kaku* in (4.87a')). It is extremely rare or even impossible that a genitive case would mark an undergoer in Amis, as it only marks the actor of non-AV verbs and the possessor in a possessive construction. If the causative analysis is adopted, we will

<sup>64</sup> This form (*maka-* in his paper) is analyzed as a process of causation by Starosta (1974), in which he called this as a resultative derivation.

have to make this case marking pattern an exceptional one here. An alternative way is to treat *ma-ka-* as a non-causative form. The reason why there is a causative reading in this form is because now the stimulus is a macrorole (i.e. undergoer) and is marked by the nominative case. That is, the *ma-ka-* form of the verbs is similar to two-place psych-predicates in English such as *envy* and *fear* (e.g. in *I envy you.* and *I fear dogs.*). However, unlike English which has the actor-experiencer (i.e. *I*) as the grammatical subject, in Amis it is the undergoer-stimulus that is marked as the subject, not the actor-experiencer. This non-causative analysis of *ma-ka-* is primarily based on the fact that *ma-ka-* is not consistently rendered as causative in all of the attested examples. As one can see in (4.86) and (4.87), not every *ma-ka-* example receives a causative interpretation. In fact, informants have different judgments/readings about the *ma-ka-* sentences exemplified above,<sup>65</sup> even regarding the same predicate, as seen in (4.87a') and (4.87a''). In contrast with the interpretation of *ma-ka-*, the *pa-* causative forms of the psych-predicates have a consistent causative meaning, as exemplified in (4.85). Notice that the *pa-* causative forms do follow the regular case marking patterns in Amis; the actor-stimulus is marked by the nominative case, and the experiencer is marked by the dative case. Therefore, it seems that the causation in *ma-ka-* is inferred rather than lexically coded. A possible reason to account for this causative inference or implication, as mentioned, is the highlighted status of the stimuli. As shown in Table 4.13, the meaning of *ma-ka-* is not exactly the same as the corresponding *ma-* form, especially for those one-place *ma-* psych-predicates.

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<sup>65</sup> One informant mentioned that *ma-ka-* actually has a reciprocal meaning in the form *ma-ka-ngudu* (i.e. mutually respect).

**Table 4.14 The Meaning of *ma-* and *ma-ka-* Psych-predicates**

<i>ma-</i> (AV or neutral)	<i>ma-ka-</i> (UV)
<i>ma-ulah</i> ‘like’	<i>ma-ka-ulah</i> ‘like’
<i>ma-fanaq</i> ‘know’	<i>ma-ka-fanaq</i> ‘know; discover’
<i>ma-tawa</i> ‘smile; laugh’	<i>ma-ka-tawa</i> ‘laugh at’
<i>ma-ngudu</i> ‘humbled; embarrassed; respect’	<i>ma-ka-ngudu</i> ‘embarrass; respect’
<i>ma-inal</i> ‘envious’	<i>ma-ka-inal</i> ‘envy’
<i>ma-hemek</i> ‘happy’	<i>ma-ka-hemek</i> ‘praise’

The table shows that the psych-predicates, when appearing with *ma-ka-*, all have a two-place reading, no matter how many core arguments their *ma-* counterpart take. It is possible that some psych-predicates may have two or more lexical entries, and these entries may vary in the number of the core arguments. While *ma-* picks up the lexical entry with only one core argument (i.e. experiencer), *ma-ka-* picks up the one with two (i.e. experiencer and stimulus). When the stimulus is chosen to be the PSA (i.e. marked by the nominative case) in the *ma-ka-* construction, it triggers a causative implication.<sup>66</sup> More investigation is required.

Moreover, all of these psych-predicates have a *ka-...-en* form, which is rendered almost the same as *ma-ka-* based on the remarks from the informants. Examples are given below:

- (4.88)a. Ka-ngudu-en      n-u      singsi      kaku.  
                  KA-humbled-UV   GEN-CN   teacher   1S.NOM  
                  ‘I am respected by the teacher.’
- a’. Ka-ngudu-en      k-u      singsi      namu.  
                  KA-humbled-UV   NOM-CN   teacher   2P.GEN  
                  ‘(You) should respect your teacher.’
- b. Ngudu-en      aku      k-u      matu’asay.  
                  humbled-UV   1S.GEN   NOM-CN   old.man  
                  ‘I will show respect to the old people.’

<sup>66</sup> This implicature seems especially strong when the experiencer is not specific (e.g. *tao* ‘others’)

- c. Ka-inal-en            n-u            tao    k-u            tafulod  
     KA-envious-UV    GEN-CN       others NOM-CN       bag  
  
     aku.  
     1S.GEN  
     ‘My bag made other people envious (because I showed it to them intentionally.)’
- d. Ka-cangal-en            n-u            tao    kaku.  
     KA-discontented-UV    GEN-CN       people 1S.NOM  
     ‘Others feel discontented about me (because I didn’t do a good job.)’
- e. Ka-tawa-en            n-u            tao    kaku.  
     KA-laugh.at-UV    GEN-CN       others 1S.NOM  
     ‘I let people laugh at me.’
- e’. Tawa-en            aku            kisu.  
     laugh.at-UV        1S.GEN       2S.NOM  
     ‘I will laugh at you.’

As illustrated in (4.88), the form *ka-...-en* differs from the bare *-en* form (i.e. the UV agentive marker), if attested, of the same root in that the actor of *ka-...-en* (i.e. the argument marked by the genitive case, e.g. *singsi* ‘teacher’ in (4.88a)) is not agentive, as the carried out activity is not necessarily volitional. This difference indicates that the presence of *ka-* seems to cancel the inherent agency of *-en*. This may also explain why *ka-...-en* can go with every psych-predicate, even with psych-predicates (e.g. *ma-cangal* ‘discontented’) that do not easily appear in an agentive context.

The two special sub-classes of verbs discussed above are all marked by *ma-* (AV or neutral) by default, which again exemplifies the heterogeneity of *ma-* verbs. Even though four classes of *ma-* verbs have been identified and represented with the logical structures, finer distinctions can still be made through further specification or further decomposition. This is also one of the recent developments pursued in RRG.<sup>67</sup>

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<sup>67</sup> For further development of the decompositional model in RRG, please refer to Mairal and Faber (2002, 2005).



## 4.5 Verbal Derivations

As argued in the beginning of this chapter, the root forms in Amis can be categorized into objects/entities, activities, attribute (non-episodic) states, result states, and achievements. Although some root forms are ontologically verbal (e.g. activity roots) and seem predicative inherently, a predicate in Amis has to be derived by either affixation or zero derivation. In this section, some commonly found derivational processes will be examined. I will begin with the discussion of how to derive a predicate by adding different voice affixes to various types of roots. Then, I will look into the causativization in Amis, in particular, the *pa-* causativization. The discussion on these derivational processes will lead us to explore two important prefixes in Amis: *pi-* and *ka-*, which appear very frequently in the verbal conjugation patterns that were shown in Tables 3.11 and 3.12.

A few comments need to be made before the exploration of the derivational processes. To begin with, the discussion of involuntary activity verbs and psych-predicates in the previous sections strongly suggests the necessity of further breaking down the basic *aktionsart* classes proposed in VVLP (1997) and VV (2005). For example, it is obvious that there are finer distinctions among the activity verbs in terms of their potential agency, though they are all marked by **do'**. By the same token, states should be further differentiated not only based on the presence/absence of the attribute feature, but also based on whether or not there is a process before obtaining a transient state. However, in RRG, no distinctions have been made in the logical structures between result transient state and non-result transient states; both are presented by [**pred'** (x, (y))]. In the following discussion, to better describe and formulate the derivational

rules, I will tentatively propose further decompositions for the subcategories in the root classes to compensate for the insufficient representations in the framework.

The second comment is about the derivational functions of the voice affixes. Syntactically, these affixes share the same function of deriving a predicate from the roots. However, semantically speaking, there are two different functions performed by these affixes, depending on the semantic structure of the roots they attach to. These two functions are termed “classifying” and “changing” in the following discussion. As different categories of the roots have their own semantic structures, it is possible that the semantic structure of a root is identical or very similar to that of the voice affix attaching to the root in the derivation. Under such circumstances, the major function of the voice marker is to classify or label the type of derived predicate; it does not add more semantic content to the root during the derivation. For example, this classifying function is frequently found when the *-um-* and one of the *ma-s* (i.e. the activity *ma-*) attaches to an activity root. As we will see later in the lexical rules, the logical structure of the derived predicate is almost the same as that of the root. The “changing” function takes place when the voice affixes attach to roots that have rather different semantic structures. In such a derivation, the voice affixes, besides classifying the predicate-type, change the logical structure of the root by either adding more semantic content to the root, for the majority of the examples, or remove some semantic features from the root. The semantic change is represented in the LS of the derived predicate. This is very common when a voice affix attaches to a root without a verbal meaning (e.g. an object root). These two functions will be specified in the lexical rules.

The lexical rules formulated below include at the least the following three parts.

The first part is the logical structure of the (voice) affix. The second part, the input, specifies the semantics of the root. The third part is the output that displays the logical structure of the derived predicate and the function(s) of the voice affixes in the derivation. The part that is supplied by the root during the derivation will be italicized in the LS of the output. If there is more than one possible output, each output will be given individually. For each rule, there will be at least one example provided to illustrate the application of the rule and further explanation will be provided when necessary.

#### **4.5.1 Deriving a Predicate from a Nominal Root**

It is a very common process to derive a predicate (causative or non-causative) from a root that denotes an object or an entity, termed “nominal root” in the following discussion. However, different affixes may interact with different semantic properties inherent in a nominal root. Regarding the semantic representation of nouns, RRG adopts the qualia theory proposed by Pustejovsky (1991, 1995), where nominals are represented by four qualia roles as listed in (4.89):

(4.89) Qualia Theory (Pustejovsky 1991:426-7)

- a. Constitutive Role: the relation between an object and its constituents, or proper parts
  1. Material
  2. Weight
  3. Parts and component elements
- b. Formal Role: that which distinguishes the object within a larger domain
  1. Orientation
  2. Magnitude
  3. Shape
  4. Dimensionality
  5. Color
  6. Position
- c. Telic Role: purpose and function of the object
  1. Purpose that an agent has in performing an act
  2. Built-in function or aim that specifies certain activities

- d. Agentive Role: factors involved in the origin or “bringing about” of an object
  1. Creator
  2. Artifact
  3. Natural kind
  4. Causal chain

The following representation is the qualia structure of *novel* given by Pustejovsky:

(4.90) **novel (x)**

- a. Const: **narrative'** (x)
- b. Form: **book'** (x), **disk'** (x)
- c. Telic: **do'** (y, [**read'** (y, x)])
- d. Agentive: **artifact'** (x), **do'** (y, [**write'** (y, x)]) & INGR **exist'** (x)

The interaction between the qualia roles and the voice affixes during the derivation will be discussed in the following.<sup>68</sup>

Observe the examples in (4.91):

(4.91) *mi-* + nominal root → activity

Root	<i>mi-</i> form
<i>nanum</i> ‘water’	<i>mi-nanum</i> ‘(go to) drink (water)’
<i>futing</i> ‘fish’	<i>mi-futing</i> ‘(go to) fish’
<i>icep</i> ‘betlenut’	<i>mi-icep</i> ‘(go to) chew betlenut’
<i>dateng</i> ‘vegetable’	<i>mi-dateng</i> ‘(go to) pick vegetable’
<i>kilang</i> ‘tree’	<i>mi-kilang</i> ‘(go to) chop down a tree’
<i>cudad</i> ‘book’	<i>mi-cudad</i> ‘(go to) study (i.e. read books)’

As we can see in the above examples, when *mi-* attaches to a nominal root, the whole derived form is an activity with the root form serving as the object. Judging from the examples in (4.91), we can see that when a nominal root is affixed with *mi-*, it is either the telic role (e.g. *mi-nanum* ‘(go to) drink (water)’) or the agentive role (e.g. *mi-dateng* ‘(go to) pick vegetable’) that is selected and reserved in the derived form. Hence, the lexical rule in (4.92) is postulated to account for such a derivation. In the rule, the part

<sup>68</sup> Nevertheless, I have to admit that there are some derivations that cannot be explained by the qualia theory. Such derivations may involve metaphorical extension or cultural specific factors and thus the semantic content of the derived predicates cannot be simply explained by the four qualia roles. As the investigation of such derivations is beyond the scope of this research, I will exclude such examples in the discussion.

supplied by the root in the logical structure of the derived predicate is italicized.

#### (4. 92) Lexical rule of *mi-* + nominal root $\alpha$

a. Rule

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	Nominal ( $\alpha$ ), selected qualia role: telic role or agentive role
Output 1	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <i>pred'</i> <sub>Qt</sub> (x, $\alpha$ ))]] Functions of <i>mi-</i> : classifying and changing
Output 2	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <i>pred'</i> <sub>Qa</sub> (x, $\alpha$ ))]] Function(s) of <i>mi-</i> : classifying and changing
Notes	The derived predicate selects either the telic role of the root, specified as <b>pred'</b> <sub>Qt</sub> in Output 1, or the agentive role of the root, specified as <b>pred'</b> <sub>Qa</sub> in Output 2.

b. Example for output 1

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	<i>nanum</i> 'water', selected qualia role: telic role
Output	<i>mi-nanum</i> '(go to) drink (water)' [[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <i>drink'</i> (x, <i>nanum</i> ))]]

c. Example for output 2

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	<i>dateng</i> 'vegetable', selected qualia role: agentive role
Output	<i>mi-dateng</i> '(go to) pick vegetable' [[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <i>pick'</i> (x, <i>dateng</i> ))]]

The rule in (4.92a) states the derivational process of *mi-* plus a nominal root, where *mi-* picks up either the telic role (i.e. the purpose and the function) or the agentive role (i.e. 'bringing about the existence; cause to become have') of the object root and derives related predicates. Two examples are provided in (4.92b) and (4.92c) to illustrate the two possible outputs. Notice that this rule is exactly an example in which the voice affix adds a part of its semantic content to the root and then derives a predicate.

As for *-um-*, the predicates with this infix are relatively few in number, and it is no longer productive, as loan words never undergo further derivation with *-um-*. Furthermore, this infix seldom attaches to nominal roots. The following are a few examples that I have collected:

(4.93) *-um-* + nominal root → activity

Root	<i>-um-</i> form
<i>tireng</i> ‘body’	<i>t-um-ireng</i> ‘stand’
<i>radiw</i> ‘song’	<i>r-um-adiw</i> ‘sing’
<i>suwal</i> ‘(spoken) words’	<i>s-um-uwal</i> ‘say’
<i>ta’iq</i> ‘stool’	<i>t-um-a’iq</i> ‘defecate’
<i>sela</i> ‘air’	<i>s-um-ela</i> ‘breath’
<i>teraq</i> ‘a drop of liquid’	<i>t-um-eraq</i> ‘drip; leak’

Unlike *mi-*, *-um-* does not select the telic role of the nominal root; rather, it only selects the agentive role during the derivation, and the new form is interpreted as ‘bring about the existence of something’.<sup>69</sup> The lexical rule for *-um-* derivation is postulated as (4.94):

**(4.94) Lexical rule of *-um-* + nominal root  $\alpha$  (preliminary)**

LS of <i>-um-</i>	<b>do’</b> (x, [ <b>pred’</b> (x, y)])
Input	Nominal ( $\alpha$ ), selected qualia role: agentive role
Output	<b>do’</b> (x, [ <b>pred’</b> <sub>Qa</sub> (x, ( $\alpha$ ))]) Function(s) of <i>-um-</i> : classifying and changing

Notice that the derivational rule in (4.94) suggests that the derived verb would be a two-place predicate. However, this is not always true, as I do find one-place *-um-*predicates such as *t-um-eraq* ‘drip’ in my data. The two-place version of this predicate will be *mi-teraq* ‘drip (transitive)’. In such examples, the nominal ( $\alpha$ ) is in the position of *x* but not *y* in the logical structure. So, (4.94) is revised as (4.95) to incorporate this derivational possibility:

**(4.95) Lexical rule of *-um-* + nominal root  $\alpha$  (revised)**

a. Rule

LS of <i>-um-</i>	<b>do’</b> (x, [ <b>pred’</b> (x, (y))])
Input	Nominal ( $\alpha$ ), selected qualia role: agentive role
Output 1	<b>do’</b> (x, [ <b>pred’</b> <sub>Qa</sub> (x, ( $\alpha$ ))]) Function(s) of <i>-um-</i> : classifying and changing
Output 2	<b>do’</b> (x, [ <b>pred’</b> <sub>Qa</sub> ( $\alpha$ ))]) ( $\alpha$ =inanimate) Function(s) of <i>-um-</i> : classifying and changing

<sup>69</sup> This interpretation might sound unnatural for some examples such as *t-um-ireng* ‘stand’. However, if we conceive this new interpretation as ‘bringing about a support’, it will not sound like an exception to the lexical rule. The evidence of such a conception is from the *pa-* form of *tireng*, which means ‘to stand something up by giving a support’.

b. Example for output 1

LS of <i>-um-</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))])
Input	<i>suwal</i> '(spoken) words', selected qualia role: agentive role
Output	<i>s-um-uwal</i> 'say': <b>do'</b> (x, [ <b>say'</b> (x, ( <i>suwal</i> ))])

a. Example for output 2

LS of <i>-um-</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))])
Input	<i>teraq</i> 'a drop of liquid', selected qualia role: agentive role
Output	<i>t-um-eraq</i> 'drip': <b>do'</b> (x, [ <b>drip'</b> ( <i>teraq</i> )])

The rule in (4.95a) states that when *-um-* attaches to a nominal root, it will derive an activity predicate that selects the agentive role of the root, with the root serving either as the patient-argument (y), if the derived predicate has two arguments, or the effector (x), if the derived predicate has only one argument. Notice that, based on the examples collected, the second output is only possible when the derived predicate does not need an animate effector. Such a kind of *-um-* predicate is rather sporadic, though.

Finally, let us examine activity verbs prefixed by the *ma-* (AV or neutral), exemplified in (4.96):

(4.96) *ma-* + nominal root → activity

Root	<i>ma-</i> Form (AV or neutral)
<i>kro</i> 'dance'	<i>ma-kro</i> (or <i>ma-sa-kro</i> ) 'dance'
<i>tayal</i> 'work'	<i>ma-tayal</i> 'work'
<i>'etut</i> 'gas'	<i>ma-'etu</i> 'bloat'
<i>kimad</i> 'story'	<i>ma-kimad</i> 'tell story'
<i>kerker</i> 'shiver'	<i>ma-kerker</i> 'shiver'
<i>faha</i> 'cough'	<i>ma-faha</i> 'cough'

The examples in (4.96) show that the combination of *ma-* and a nominal root also chooses the agentive qualia role of the nominal, as the derived forms all involve in the process of “bringing about” the object/entity. However, unlike *-um-* verbs, the root never appears in the x slot in the logical structures of *ma-* verbs; it only shows up as the y argument of the derived *pred'*. Another possible outcome for such a derivation is that the

*pred'* is the same as the root; that is, the derived activities contain the same semantic content of the roots (e.g. *cough* (n.) and *cough* (v)), though the root can also be conceived as the generic product produced by the activity. The two possible derivations are represented by the lexical rule in (4.97):

**(4.97) Lexical rule of *ma-* (activity, AV or neutral) + nominal ( $\alpha$ )  $\rightarrow$  activity**

a. Rule

LS of <i>ma-</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))])
Input	Nominal ( $\alpha$ ), selected qualia role: agentive role
Output 1	<b>do'</b> (x, [ <b>pred'</b> <sub>qa</sub> (x, ( $\alpha$ ))]) Functions of <i>ma-</i> : classifying and changing
Output 2	<b>do'</b> (x, [ <b>pred'</b> <sub>qa</sub> (x)]), <b>pred'</b> = $\alpha$ Function(s) of <i>ma-</i> : classifying and changing

b. Example for output 1

LS of <i>ma-</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))])
Input	<i>kimas</i> 'story', selected qualia role: agentive role
Output 1	<i>ma-kimad</i> 'tell a story': <b>do'</b> (x, [ <i>tell.a.story</i> ' (x, ( <i>kimas</i> ))])

c. Example for output 2

LS of <i>ma-</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))])
Input	<i>faha</i> 'cough', selected qualia role: agentive role
Output	<i>ma-faha</i> 'cough': <b>do'</b> (x, [ <i>cough</i> ' (x)])

In addition to deriving an activity predicate, *ma-* can also derive a state predicate from a nominal root. Some examples are given below:

**(4.98) *ma-* + nominal root  $\rightarrow$  state**

Root	<i>ma-</i> Form (AV or neutral)
<i>kapah</i> 'youth'	<i>ma-kapah</i> 'beautiful; good'
<i>duka</i> 'wound'	<i>ma-duka</i> 'wounded'
<i>kuli</i> 'bone'	<i>ma-kuli</i> 'thin; bony'
<i>ludis</i> 'wave'	<i>ma-ludis</i> 'wavy'
<i>fali</i> 'wind'	<i>ma-fali</i> 'windy'

As illustrated in (4.98), the prefix *ma-* tends to select the formal qualia role of a nominal



to form a state predicate;<sup>70</sup> and the derived states can be roughly rendered as ‘have the quality denoted by the root’. Most of the derived predicates seem to be transient or result states. Such a derivation can be represented in (4.99):

**(4.99) Lexical rule of *ma-* (plain state, AV or neutral) + nominal ( $\alpha$ )  $\rightarrow$  state**

a. Rule

LS of <i>ma-</i>	<b>pred'</b> (x, (y))
Input	Nominal ( $\alpha$ ), selected qualia role: formal role
Output	<b>have.<math>\alpha_{Qr}</math>'</b> (x, (y)) Function(s) of <i>ma-</i> : classifying and changing

b. Example

LS of <i>ma-</i>	<b>pred'</b> (x, (y))
Input	<i>duka</i> ‘wound’, selected qualia role: formal role
Output	<i>ma-duka</i> ‘wounded’: <b>wounded'</b> (x)

The following table summarizes the voice affixes, the qualia roles they tend to select from a nominal root in the derivation, and the types of predicates they derive from a nominal root.

**Table 4.15 Voice Affixes and the Selection of Qualia Roles from Nominal Roots in the Derivation**<sup>71</sup>

Voice Affix	Qualia Role Selected	Type of Derived Predicate
<i>mi-</i>	telic or agentive	(motional/purposive) activity
<i>-um-</i>	agentive	activity
<i>ma-</i> (AV or neutral)	agentive	activity
<i>ma-</i> (AV or neutral)	formal	state

#### 4.5.2 Deriving a Predicate from a State Root

There are at least four types of state roots: attribute/non-episodic, episodic/transient, result, and psych-state. The most common derivational process from these state roots is via the affixation of *ma-*. However, as discussed earlier, there are at least four logical

<sup>70</sup> As mentioned in Footnote 67 of this chapter, there are some exceptions in the derivation that cannot be explained by the qualia theory. For example, it is difficult to conceive the relation between *ma-kapah* ‘beautiful’ from the root *kapah* ‘youth’ as a relation specified by the formal qualia of *kapah*. Some cultural or metaphorical factors might have been involved in such exceptions.

<sup>71</sup> The lexical rule of the UV marker *-en* + a nominal root is similar to that of *mi-*; the only difference is that *-en* has a DO component and a telic in its LS

structures of *ma-*, repeated in (4.100):

(4.100) The Logical Structures of *ma-*

<i>ma-1</i> activity (AV or neutral)	<b>do'</b> (x, [ <b>pred'</b> (x, (y))])
<i>ma-2</i> result state (AV or neutral)	(INGR/BECOME) ( <b>pred'</b> (x, (y)))
<i>ma-3</i> active/causative accomplishment (UV)	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ....BECOME ( <b>pred'</b> (y))
<i>ma-4</i> transient or plain state (AV or neutral)	<b>pred'</b> (x, (y))

Not every *ma-* is compatible with a state root. The activity *ma-1* never co-occurs with a state root; it either attaches to a nominal root or an activity root. Result state *ma-2* and transient or plain state *ma-4* are the *ma-* forms most frequently found with state roots.

When *ma-2* attaches to a non-result state root (e.g. an attribute or a transient state), it adds the (INGR/BECOME) part to the LS of the roots; when this prefix attaches to a result state root, it simply derives a predicate without any addition of any component to the LS of the root. The lexical rule of *ma-2* + a state root can be formulated as follows:

(4.101) Lexical rule of *ma-2* (result state, AV or neutral) + state root  $\alpha \rightarrow$  result state

a. Rule 1

LS of <i>ma-2</i>	(INGR/BECOME) ( <b>pred'</b> (x, (y)))
Input	Result State Root ( $\alpha$ ): (INGR/BECOME) ( <b>pred'<math>_{\alpha}</math>'</b> (x, (y)))
Output	(INGR/BECOME) ( <b>pred'<math>_{\alpha}</math>'</b> (x, (y))) Function(s) of <i>ma-2</i> : classifying

a'. Example for Rule 1

LS of <i>ma-2</i>	(INGR/BECOME) ( <b>pred'</b> (x, (y)))
Input	<i>ruhem</i> 'ripe': (INGR/BECOME) ( <b>ripe'</b> (x))
Output	<i>ma-ruhem</i> 'ripe': (INGR/BECOME) ( <b>ripe'</b> (x))

b. Rule 2

LS of <i>ma-2</i>	(INGR/BECOME) ( <b>pred'</b> (x, (y)))
Input	Attribute State Root ( $\alpha$ ): <b>be'</b> (x, [ <b>pred'<math>_{\alpha}</math>'</b> ])
Output	(INGR/BECOME) ( <b>pred'<math>_{\alpha}</math>'</b> (x, (y))) Function(s) of <i>ma-2</i> : classifying and changing

b'. Example for Rule 2

LS of <i>ma-2</i>	(INGR/BECOME) ( <b>pred'</b> (x, (y)))
Input	<i>kuhting</i> 'black': <b>be'</b> (x, [ <b>black'</b> ])
Output	<i>ma-kuhting</i> 'become black' (INGR/BECOME) ( <b>black'</b> (x))

c. Rule 3

LS of <i>ma-2</i>	(INGR/BECOME) ( <b>pred'</b> (x, (y)))
Input	Transient or Plain State ( $\alpha$ ): <b>pred'<sub><math>\alpha</math></sub>'</b> (x, (y))
Output	(INGR/BECOME) ( <b>pred'<sub><math>\alpha</math></sub>'</b> (x, (y))) Function(s) of <i>ma-</i> : classifying and changing

c'. Example for Rule3

LS of <i>ma-2</i>	(INGR/BECOME) ( <b>pred'</b> (x, (y)))
Input	<i>lasang</i> 'drunk': <b>drunk'</b> (x)
Output	<i>ma-lasang</i> '(become) drunk': (INGR/BECOME) ( <b>drunk'</b> (x))

The three rules in (4.101) state the derivational possibilities when *ma-2* attaches to a result state, an attribute state, or a transient/plain state. However, as the INGR/BECOME part in *ma-2* cannot be easily referred to, it is sometimes difficult to tell whether a given *ma-* + state root has a *ma-2* or a *ma-4* in the logical structure. Nevertheless, it seems that the result state *ma-2* does not commonly show up with an attribute state root; when an attribute state appears with *ma-*, the derived predicate is more likely to be a *ma-3* predicate, the causative accomplishment (UV). For example:

- (4.102)a. *fa'edet* 'hot'  
b. *ma-fa'edet* 'heat up (UV)'

The root form in (4.102a) is an attribute state root, and its *ma-* form in (4.102b) is rendered as a causative accomplishment (i.e. a *ma-3* predicate (UV)). As this derivation is similar to that of *mi-* + an attribute root, I will discuss these two together later in this section.

The prefix *ma-4* (the transient or plain state) will derive a transient or a plain state from an attribute or non-episodic state. An example is given in (4.103):

- (4.103)a. *lipahak* 'happy'  
b. *ma-lipahak* 'very happy (e.g. for remembering something happy)'

The root *lipahak* ‘happy’ can be used as a predicate through zero derivation (i.e. an unaffixed predicate) as seen in (4.103a), but it also has a *ma-* form. The *ma-* version of this predicate indicates a stronger, yet episodic state of happiness, compared with the unaffixed form in (4.103a). Notice that, however, the *ma-* form in (4.103b) can also be conceived as a result state. As I have pointed out, the distinction between a result state and a transient state is not very obvious, since it is difficult to refer to the process part entailed in a result state unless certain contexts are provided (e.g. the co-occurrence with a pace adverb). This *ma-* prefix can derive a state predicate that is irrelevant to a permanent/episodic feature (e.g. a psych-predicate) from a state or a nominal root. The lexical rule is stated below:

**(4.104) Lexical rule of *ma-4* (transient/plain state, AV or neutral) + state root  $\alpha \rightarrow$  transient/plain state**

a. Rule 1

LS of <i>ma-4</i>	<b>pred'</b> (x, (y))
Input	Attribute State Root ( $\alpha$ ): <b>be'</b> (x, [ <b>pred'<math>\alpha</math>'</b> ])
Output	<b>pred'<math>\alpha</math>'</b> (x, (y)) Function(s) of <i>ma-4</i> : classifying and changing

a'. Example for Rule 1

LS of <i>ma-4</i>	<b>pred'</b> (x, (y))
Input	<i>lipahak</i> : <b>be'</b> (x, [ <b>happy'</b> ])
Output	<i>ma-lipahak</i> ‘very happy (because of something)’: <b>happy'</b> (x)

b. Rule 2

LS of <i>ma-4</i>	<b>pred'</b> (x, (y))
Input	Transient/Plain State Root ( $\alpha$ ): <b>pred'<math>\alpha</math>'</b> (x, (y))
Output	<b>pred'<math>\alpha</math>'</b> (x, (y)) Function(s) of <i>ma-4</i> : classifying

b'. Example for Rule 2

LS of <i>ma-4</i>	<b>pred'</b> (x, (y))
Input	<i>inal</i> : <b>envious'</b> (x, (y))
Output	<i>ma-inal</i> ‘envious’: <b>envious'</b> (x, (y))

The derivational rule for *ma-3* (active/causative accomplishment, UV) is closely related to that of *mi-*. Both of them commonly derive a causative accomplishment predicate when attaching to a state root (e.g. *fa'edet* 'hot' → *mi-fa'edet* '(go to) heat up' and *ma-fa'edet* 'heat up (UV)'). However, it is also possible for *mi-* to derive an activity from a state root, especially a root denoting a psych-state, which I have already discussed in Section 4.4.2. The lexical rule of *mi-* plus a (non-psych) state root is stated in (4.105):

**(4.105) Lexical rule of *mi-* + (non-psych) state root  $\alpha$  → (motional) causative accomplishment**

a. Rule 1

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	Result State Root $\alpha$ : (INGR/BECOME) ( <b>pred'<math>\alpha</math>'</b> (x, (y)))
Output 1	[[ <b>do'</b> (x [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE BECOME [ <b>pred'<math>\alpha</math>'</b> (y)], x=animate Function(s) of <i>mi-</i> : classifying and changing
Output 2	[ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>pred'<math>\alpha</math>'</b> (y)]] Function(s) of <i>mi-</i> : classifying and changing

a'. Example for Rule 1

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	<i>ma-ruhem</i> 'ripe': (BECOME) <b>ripe'</b> (x)
Output 1	<i>mi-ruhem</i> '(go to) ripen': [[ <b>do'</b> (x [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE BECOME [ <b>ripe'</b> (y)], x=animate
Output 2	<i>mi-ruhem</i> 'ripen': [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>ripe'</b> (y)]]

b. Rule 2

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	Attribute State Root $\alpha$ : [ <b>be'</b> (x, [ <b>pred'<math>\alpha</math>'</b> ])]
Output 1	[[ <b>do'</b> (x [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE BECOME [ <b>pred'<math>\alpha</math>'</b> (y)], x=animate Function(s) of <i>mi-</i> : classifying and changing
Output 2	[ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>pred'<math>\alpha</math>'</b> (y)]] Function(s) of <i>mi-</i> : classifying and changing

b'. Example for Rule 2

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	<i>kuhting</i> 'black': <b>be'</b> (x, [ <b>black'</b> ])
Output 1	<i>mi-kuhting</i> '(go to) blacken': [[ <b>do'</b> (x [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE BECOME [ <b>black'</b> (y)], x=animate
Output 2	<i>mi-kuhting</i> 'blacken': [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>black'</b> (y)]]

c. Rule 3

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	Transient State Root $\alpha$ : <b>pred<sub><math>\alpha</math></sub>'</b> (x, (y))
Output 1	[[ <b>do'</b> (x [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE BECOME [( <b>pred<sub><math>\alpha</math></sub>'</b> (y))], x=animate Function(s) of <i>mi-</i> : classifying and changing
Output 2	[ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>pred<sub><math>\alpha</math></sub>'</b> (y)]] Function(s) of <i>mi-</i> : classifying and changing

c'. Example of Rule 3

LS of <i>mi-</i>	[[ <b>do'</b> (x, [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, y)])]
Input	<i>tuniq</i> 'soft': <b>soft'</b> (x)
Output 1	<i>mi-tuniq</i> '(go to) soften; (go to) tenderize': [[ <b>do'</b> (x [ <b>go'</b> (x)]) & INGR <b>be-at'</b> (z, x)] PURP) [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE BECOME [( <b>soft'</b> (y))], x=animate
Output 2	<i>mi-tuniq</i> 'soften; tenderize': [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>soft'</b> (y)]]

As shown in the rules above, whether or not the motional/purposive part can be retained in the derived predicates depends on the nature of the *x* argument; the *x* argument has to be animate so that he/she can carry out the motional/purposive component in the LS. If it is inanimate, then there will not be any motional/purposive reading in the derived causative predicates. This is illustrated in the following contrast between an inanimate effector (i.e. *kuwaq* 'papaya') and an animate/human one (i.e. *Mayaw*):

- (4.106)a. Mi-tuniq k-u kuwaq t-u titi  
AV-soft NOM-CN papaya DAT-CN meat  
'The papaya will tenderize the meat.'

a'. [**do'** (kuwaq, [**soften'** (kuwaq, titi)))] CAUSE [BECOME (**soft'** (titi))]

- b. Mi-fa'edet            Ø-ci            mayaw            t-u            dateng.  
 AV-hot            NOM-CN            Mayaw            DAT-CN            vegetable  
 'Mayaw is going to heat up the dish.'  
 'Mayaw is heating up the dish.'

- b.' ([do' (Mayaw, [go' (Mayaw)]) & INGR **be-at'** (z, Mayaw)] PURP) [do' (Mayaw, [**heat.up'** (Mayaw, dateng)])] CAUSE [BECOME (**hot'** (dateng))]

The rule for *ma-3* (active/causative accomplishment, UV) is similar to that of *mi-*.

However, there is no motional purposive part in the LS of *ma-3*, as stated in (4.107):

**(4.107) Lexical rule of *ma-3* ((active/causative) accomplishment, UV)+ state root  $\alpha \rightarrow$  causative accomplishment**

a. Rule 1

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ...BECOME ( <b>pred'</b> (x, y))
Input	Result State Root $\alpha$ : (INGR/BECOME) ( <b>pred<math>_{\alpha}</math>'</b> (x, (y)))
Output	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) CAUSE <i>BECOME</i> ( <b>pred<math>_{\alpha}</math>'</b> (y)) Function(s) of <i>ma-3</i> : classifying and changing

a'. Example for Rule 1

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ...BECOME ( <b>pred'</b> (x, y))
Input	<i>ma-ruhem</i> 'ripe': (BECOME) <b>ripe'</b> (x)
Output	<i>ma-ruhem</i> 'ripen' (UV): [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [ <i>BECOME</i> [ <b>ripe'</b> (y)]]

b. Rule 2

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ...BECOME ( <b>pred'</b> (x, y))
Input	Attribute State Root $\alpha$ : [ <b>be'</b> (x, [ <b>pred<math>_{\alpha}</math>'</b> ])]
Output	[ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>pred<math>_{\alpha}</math>'</b> (y)]] Function(s) of <i>ma-3</i> : classifying and changing

b'. Example for Rule 2

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ...BECOME ( <b>pred'</b> (x, y))
Input	<i>kuhting</i> 'black': <b>be'</b> (x, [ <b>black'</b> ])
Output	<i>ma-kuhting</i> 'blacken' (UV): [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>black'</b> (y)]]

c. Rule 3

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ...BECOME ( <b>pred'</b> (x, y))
Input	Transient State Root $\alpha$ : <b>pred<math>_{\alpha}</math>'</b> (x, (y))
Output	[ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <b>pred<math>_{\alpha}</math>'</b> (y)]] Function(s) of <i>ma-3</i> : classifying and changing

c'. Example of Rule 3

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ....BECOME ( <b>pred'</b> (x, y))
Input	<i>tuniq</i> 'soft': <b>soft'</b> (x)
Output	<i>ma-tuniq</i> 'soften; tenderize' (UV): [ <b>do'</b> (x, [ <b>pred'</b> (x, (y))])] CAUSE [BECOME [ <i>soft'</i> (y)]]

As mentioned, the *mi-* derivational rule for a psych-predicate is different from other state predicates. Both the motional/purposive activity and the causative predicates can be possible outputs when *mi-* attaches to a psych-state root, depending on whether the state is internally motivated or externally triggered. The motional/purposive interpretation only goes with the internally motivated mental states; that is, *mi-* will derive an activity that expresses or is triggered by the psychological state denoted by the root. Notice that the motional/purposive reading of *mi-* for psych-predicates is semantically more complicated than other similar derivations that have been discussed. The purpose is triggered by a specified mental state, and the result of such a purpose is to make the state known to someone. For a more precise description of this derivation, I would like to employ the following logical structure that is used for describing the “purposive” function of English *for* in RRG (VVLP 1997: 383):

(4.108) **want'** (x, LS<sub>2</sub>) ^ DO (x, [LS<sub>1</sub>...CAUSE...LS<sub>2</sub>])

The LS in (4.108) depicts the situation where “the participant denoted by *x* wants some state of affairs to obtain (LS<sub>2</sub>) and intentionally does LS<sub>1</sub> in order to bring LS<sub>2</sub> about” (VVLP 1997:383). In the Amis case, LS<sub>2</sub> is specified in the psych-state, and LS<sub>1</sub> is the motional part contributed by *mi-* (i.e. go to do something). The rule is formulated as (4.109):



**(4.109) Lexical rule of *mi-* + psych-state root  $\alpha \rightarrow$  motional/purposive activity**

a. Rule

LS of <i>mi-</i>	$(([\text{do}'(x, [\text{go}'(x)])] \ \& \ \text{INGR be-at}'(z, x)) \ \text{PURP}) \ [\text{do}'(x, [\text{pred}'(x, y)])]$
Input	Psych-State Root $\alpha$ : $\text{pred}_\alpha'(x, (y))$ , $\text{pred}_\alpha'$ = internally-generated psych-state
Output	$[\text{want}'(x, [\text{BECOME known}'(w, [\text{pred}_\alpha'(x, (w))])]) \wedge \text{DO}(x, [\text{do}'(x, [\text{go}'(x)])]) \ \& \ \text{INGR be-at}'(z, x) \ \& \ \text{do}'(x, [\text{pred}'(x, (y))]) \ \text{CAUSE BECOME known}'(w, [\text{pred}_\alpha'(x)])]$ Function(s) of <i>mi-</i> : classifying and changing

b. Example

LS of <i>mi-</i>	$(([\text{do}'(x, [\text{go}'(x)])] \ \& \ \text{INGR be-at}'(z, x)) \ \text{PURP}) \ [\text{do}'(x, [\text{pred}'(x, y)])]$
Input	ulah 'like': $\text{like}'(x, y)$ , $\text{pred}_\alpha'$ = internally-generated psych-state
Output	$[\text{want}'(x, [\text{BECOME known}'(w, [\text{like}'(x, w)])]) \wedge \text{DO}(x, [\text{do}'(x, [\text{go}'(x)])]) \ \& \ \text{INGR be-at}'(z, x) \ \& \ \text{do}'(x, [\text{pred}'(x, (y))]) \ \text{CAUSE BECOME known}'(w, [\text{like}'(x, w)])]$

The derivational rule in (4.109) says that the  $x$  argument goes to do something (LS<sub>1</sub>) to make his/her psych-state (LS<sub>2</sub>, e.g.  $\text{like}'(x, w)$  in the example) become known to someone (i.e.  $w$ ). Take *mi-ulah* 'go to express love to someone' as an example. Its logical structure shows that the  $x$  argument goes to do something to make his/her love known to someone. Notice that in this derivation, the  $x$  argument has to be agentive, which explains why the externally triggered psych-states do not easily appear with this derivation; the experiencer for such a psych-predicate tends to show little volition. Moreover, as these psych-states are stimulated externally, it is possible to make the stimulus an inanimate causer that brings about the psych-predicate by prefixing *mi-*, which is the derivation stated in the rule in (4.105) for non-psych states; the derived predicate is a causative accomplishment.

Finally, let us discuss the derivational rule for the combination of *the* UV suffix *-en* and a state root. This suffix will generate a causative accomplishment verb from a state root. Moreover, due to the agentive nature of *-en*, the derived verb is also agentive. The rule is given in (4.110):

**(4.110) Lexical rule of state root  $\alpha$ + *-en*  $\rightarrow$  agentive causative accomplishment<sup>72</sup>**

**a. Rule 1**

LS of <i>-en</i>	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) ... INGR/BECOME ( <b>pred'</b> (y))
Input	Result State Root $\alpha$ : (INGR/BECOME) ( <b>pred<math>_{\alpha}</math>'</b> (x, (y)))
Output	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) CAUSE <i>BECOME</i> ( <b>pred<math>_{\alpha}</math>'</b> (y)) Function(s) of <i>-en</i> : classifying and changing

**a'. Example for Rule 1**

LS of <i>-en</i>	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) ... INGR/BECOME ( <b>pred'</b> (y))
Input	<i>ma-ruhem</i> 'ripe': (BECOME) <b>ripe'</b> (x)
Output	<i>ruhem-en</i> 'ripen' (UV): DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) CAUSE [ <i>BECOME</i> [ <b>ripe'</b> (y)]]

**b. Rule 2**

LS of <i>-en</i>	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) ... INGR/BECOME ( <b>pred'</b> (y))
Input	Attribute State Root $\alpha$ : [ <b>be'</b> (x, [ <b>pred<math>_{\alpha}</math>'</b> ])]
Output	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) CAUSE [ <i>BECOME</i> [ <b>pred<math>_{\alpha}</math>'</b> (y)]] Function(s) of <i>-en</i> : classifying and changing

**b'. Example for Rule 2**

LS of <i>-en</i>	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) ... INGR/BECOME ( <b>pred'</b> (y))
Input	<i>kuhting</i> 'black': <b>be'</b> (x, [ <b>black'</b> ])
Output	<i>kuhting-en</i> 'blacken' (UV): DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) CAUSE [ <i>BECOME</i> [ <b>black'</b> (y)]]

**c. Rule 3**

LS of <i>-en</i>	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) ... INGR/BECOME ( <b>pred'</b> (y))
Input	Transient State Root $\alpha$ : <b>pred<math>_{\alpha}</math>'</b> (x, (y))
Output	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) CAUSE [ <i>BECOME</i> [ <b>pred<math>_{\alpha}</math>'</b> (y)]] Function(s) of <i>-en</i> : classifying and changing

**c'. Example of Rule 3**

LS of <i>-en</i>	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) ... INGR/BECOME ( <b>pred'</b> (y))
Input	<i>tuniq</i> 'soft': <b>soft'</b> (x)
Output	<i>tuniq-en</i> 'soften; tenderize' (UV): DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) CAUSE [ <i>BECOME</i> [ <b>soft'</b> (y)]]

### 4.5.3 Deriving a Predicate from an Activity Root

Recall that in the discussion of the *mi-* verbs, the {*paka-*} attachment test was applied to detect the inherent agency of the root forms. The discussion is summarized in

<sup>72</sup> This derivation often co-occurs with the intensifier prefix *sa-* (e.g. *sa-tuniq-en* 'make tender').

Table 4.16:

**Table 4.16 Degree of Agentivity Displayed in the Activity Roots**

Reading of { <i>paka</i> -} Types of Roots	<i>paka</i> - (abilitative)	<i>pa-ka</i> - (causative)	examples
1. with strong agentive implicature ( <i>mi</i> -, <i>-um</i> -)	yes	no	<i>paka-palu</i> ‘able to beat’ <i>paka-nengneng</i> ‘able to see’ <i>paka-ka’en</i> ‘able to eat’
2. agency-neutral, but non-agentive is the norm ( <i>-um</i> -, <i>ma</i> - (AV or neutral))	yes	yes (default )	<i>pa-ka-lingad</i> ‘ask sb. to plow’ <i>paka-lingad</i> ‘able to plow’ <i>pa-ka-tangic</i> ‘beseech’ <i>paka-tangic</i> ‘able to cry’ <i>pa-ka-futiq</i> ‘make sleep’ <i>paka-futiq</i> ‘dare to sleep’
3. involuntary activities ( <i>ma</i> - (AV or neutral))	no	no	*{ <i>paka</i> -} <i>suwaf</i> > <i>suwaf</i> ‘yawn’ *{ <i>paka</i> -} <i>’etut</i> > <i>’etut</i> ‘fart’

As shown in the table, some roots only get the agency canceling reading when they are affixed with {*paka*-}, and thus these roots carry strong agentive implicature. The second group gets the causative reading of {*paka*-} by default. However, if a proper context is provided, the agency canceling, abilitative reading is also possible. For example:

(4.111)a. {*paka*-}*lingad* ‘ask sb. to plow on the farm’ (default reading)

- b. {*Paka*-}*lingad*    *isu*                    *t-u*                    *lingad*?  
 ABLT-plow        2S.GEN            DAT-CN            plow  
 ‘Are you able to do the plowing job?’

c. {*paka*-}*tangic* ‘beseech’ (i.e. cause to show sympathy) (default reading)

- d. {*Paka*-}*tangic*    *kisu*                    *cingraan*?  
 ABLT-cry        2S.NOM            3S.DAT  
 ‘Are you able to mourn for him (in the funeral)?’

The unmarked reading of the form {*paka*-}*lingad* is *pa-ka-lingad* ‘cause to plow’.

However, if a specific undergoer is provided, and/or it occurs in an interrogative sentence with a second person effector, it is possible to construe the derived form as *paka-lingad* ‘able to plow’, as illustrated in (4.111b). A similar case is found with the root *tangic* ‘cry’. The default reading of {*paka*-}*tangic* is *pa-ka-tangic* ‘beseech; cause to cry’, but in

a context where the listener is questioned about the possibility of mourning in the funeral for someone that he/she does not have any affection of, the form *{paka-}tangic* can get the abilitative reading (i.e. ‘able to cry’). For this group of roots, the non-agentive reading is the norm, though the agentive interpretation is possible occasionally. Hence, they are neutral regarding agentive implicature, but the absence of such implicature is the normal. Notice that when *{paka-}* is interpreted as ‘be able to’ for the agency-neutral group, the meaning of the roots seems to be changed as well (i.e. *cry* → *mourn*). The acceptability for the agency-canceling reading for the second group may vary among speakers. In addition to the two groups that can appear with *{paka-}*, there is one more set of roots of which the *{paka-}* form is not accepted. This set is composed of the involuntary activities discussed earlier. If an involuntary activity is allowed to have a *pa-* causative form, it is either *pa-* or *pa-pi-*; the form *pa-ka-* has not been found with this group of roots so far.

The *{paka-}* test shows that activity verbs in Amis are unmarked for agency, though some of them may carry strong agentive implicature. Nevertheless, such implicature can be canceled in proper contexts (e.g. the co-occurrence with “unintentionally”); hence, it should not be treated as a lexicalized property. The situation of Amis follows the claim in RRG (based on Holisky (1987) and Van Valin and Wilkins (1996)) that most of the time, this so-called agent, as named in almost all of the previous studies in Amis, is actually just an “effector”, which is “a dynamic participant doing something in an event” (Van Valin and Wilkins 1996:288). As discussed in Van Valin and Wilkins (1996), there are three factors that may affect the determination of a given argument as an agent or not: “the lexical semantic properties of the verb, the inherent lexical content of the NP

argument, and the grammatical construction in which the verbs and the NP co-occur.”  
(Van Valin and Wilkins 1996:313)

The first factor can be illustrated by the observation summarized in Table 4.16; that is, the lexical content of the root forms (e.g. *palu* ‘beat’ vs. *futiq* ‘sleep’) helps foster the agentive reading of the actor argument. Second, the inherent lexical property of the NP may trigger the agentive implicature of a certain argument this NP denotes. The second factor subsumes a number of parameters,<sup>73</sup> which are allocated in two competing and interlinked hierarchies: animacy and empathy (or experiential salience) (Van Valin and Wilkins 1996:316). The first hierarchy is self-explanatory from its title, and the second one refers to the ability of a given argument to trigger agency attributions when occurring in an actional context. Some of the parameters (e.g. volitional, self-energetic, etc.) from the two hierarchies have been incorporated in the discussion of involuntary activities and the psych-predicates. Compared with the first two factors, the third factor has not been explored in the same depth, as commented in Van Valin and Wilkins (1996), and thus needs further investigation. .

Except for some motional activities (e.g. *tayni* (*ta-i-ni*) ‘come (here)’ and *tayra* (*ta-i-ra*) ‘go (there)’),<sup>74</sup> non-causative predicates deriving from an activity root are usually affixed by the AV markers *mi-*, *-um-*, or *ma-*. As seen in Table 4.16, activity roots usually appear with one of these affixes by default, and these roots vary among themselves in terms of the degrees of agentive implicature. Therefore, before the postulation of the derivational rules, it will be helpful to specify the various degrees of

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<sup>73</sup> Please refer to the figure in Van Valin and Wilkins (1996: 314-315) for the list of the parameters and how the two hierarchies are interlinked.

<sup>74</sup> These two predicates are pronounced as *tayni* and *tayra* respectively in normal speech.

agency implied in the activity roots. Generally speaking, there are three types of activity roots in terms of the strength of agentive implicature: those with strong agentive implicature, those with weak agentive implicature, and those with no agentive implicature. Tentatively, these three types are represented in the following manner:

- (4.112)a. activity roots with **strong** agentive implicature: (DO) **do'** (x, [**pred'** (x, (y))])  
 b. activity roots with **weak** agentive implicature: <DO> **do'** (x, [**pred'** (x, (y))])  
 c. activity roots with **no** agentive implicature: **do'** (x, [**pred'** (x, (y))])

As illustrated in (4.112), I use (DO) and <DO> to indicate the strong and weak agentive implicature carried by the activity roots. For those without such implicature, I will keep the original semantic representation for activity verbs. Morphologically speaking, the first group usually occurs with *mi-*, the second group is usually affixed by *-um-* or *ma-* (AV or neutral), and third group is marked by *ma-* (AV or neutral). The specification stipulated in (4.112) will be utilized in the derivational rules for activity verbs.

The prefix *mi-* can derive two types of predicates from activity roots, depending on whether the root is implied with agency or not. For those with an agentive implicature, the derived form either gets a plain activity reading or a motional/purposive activity reading. Notice that the plain activity reading is only possible if the root also appears with *mi-* by default (e.g. *mi-palu* '(go to) beat'). For such roots, the motional/purposive component in the LS is optional. However, for activity roots that appears with either *-um-* or *ma-* by default in the AV construction, their *mi-* form always gets the motional/purposive reading. This difference has been discussed in an earlier section of this chapter. The lexical rule of *mi-* + an activity root is given as (4.113):

**(4.113) Lexical rule of *mi-* + activity root  $\alpha \rightarrow$  activity**

a. Rule 1

LS of <i>mi-</i>	$[(\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{pred}'(x, y)])]$
Input	Activity Root $\alpha$ , with Strong Agentive Implicature: $(\text{DO}) \text{do}'(x, [\text{pred}_\alpha'(x, (y))])$
Output 1	$[(\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{pred}_\alpha'(x, y)])]$ , <b>pred<sub>α</sub>'</b> appears with <i>mi-</i> by default. Function(s) of <i>mi-</i> : classifying and changing
Output 2	$[\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{pred}_\alpha'(x, y)])]$ , <b>pred<sub>α</sub>'</b> appears with <i>-um-</i> or <i>ma-</i> by default. Function(s) of <i>mi-</i> : classifying and changing

a'. Example of Rule 1 Output 1

LS of <i>mi-</i>	$[(\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{pred}'(x, y)])]$
Input	<i>palu</i> 'beat': $(\text{DO}) \text{do}'(x, [\text{beat}'(x, y)])$
Output	<i>mi-palu</i> 'go to beat' $[(\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{beat}'(x, y)])]$

a''. Example of Rule 1 Output 2

LS of <i>mi-</i>	$[(\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{pred}'(x, y)])]$
Input	<i>ka'en</i> 'eat': $(\text{DO}) \text{do}'(x, [\text{eat}'(x, y)])$
Output	<i>mi-ka'en</i> 'go to have a banquet' $[\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{eat}'(x, y)])]$ ,

b. Rule 2

LS of <i>mi-</i>	$[(\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{pred}'(x, y)])]$
Input	Activity Root $\alpha$ , with Weak Agentive Implicature: <DO> $\text{do}'(x, [\text{pred}_\alpha'(x, (y))])$
Output	$[\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{pred}_\alpha'(x, y)])]$ , <b>pred<sub>α</sub>'</b> appears with <i>-um-</i> or <i>ma-</i> by default. Function(s) of <i>mi-</i> : classifying and changing

b'. Example of Rule 2

LS of <i>mi-</i>	$[(\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{pred}'(x, y)])]$
Input	<i>lingad</i> 'plow': <DO> $\text{do}'(x, [\text{plow}'(x, y)])$
Output	<i>mi-lingad</i> 'go to plow (for someone)' $[\text{do}'(x, [\text{go}'(x)]) \& \text{INGR be-at}'(z, x)] \text{PURP} [\text{do}'(x, [\text{plow}'(x, y)])]$

For the roots that have no agentive implicature (i.e. involuntary activities), *mi-* generates a causative activity. This is represented in (4.114):

**(4.114) Lexical rule of *mi-* + activity root  $\alpha \rightarrow$  causative activity**

a. Rule

LS of <i>mi-</i>	$(([\mathbf{do'} (x, [\mathbf{go'} (x)])] \& \text{INGR } \mathbf{be-at'} (z, x)] \text{ PURP}) [\mathbf{do'} (x, [\mathbf{pred'} (x, y)])]$
Input	Activity Root $\alpha$ , with No Agentive Implicature: $\mathbf{do'} (x, [\mathbf{pred}_\alpha' (x, (y))])$
Output	$\mathbf{do'} (x, [\mathbf{pred'} (x, \emptyset)]) \text{ CAUSE } \mathbf{do'} (y, [\mathbf{pred}_\alpha' (y, (z))])$ , x= inanimate or non-volitional Function(s) of <i>mi-</i> : classifying and changing

b. Example

LS of <i>mi-</i>	$(([\mathbf{do'} (x, [\mathbf{go'} (x)])] \& \text{INGR } \mathbf{be-at'} (z, x)] \text{ PURP}) [\mathbf{do'} (x, [\mathbf{pred'} (x, y)])]$
Input	<i>turu'uk</i> 'belch': $\mathbf{do'} (x, [\mathbf{belch'} (x, y)])$
Output	<i>mi-turu'uk</i> 'cause to belch' $\mathbf{do'} (x, [\mathbf{pred'} (x, \emptyset)]) \text{ CAUSE } \mathbf{do'} (y, [\mathbf{belch'} (y, (z))])$ , x= inanimate or non-volitional

This lexical rule states the possibility for *mi-* to co-occur with an involuntary activity; the outcome is a causative activity initiated by a non-agentive causer.

Roots that appear with the infix *-um-* are limited in number. Some of them may exhibit a strong agentive implicature (e.g. *ka'en* 'eat'), while others may have a weak agentive implicature (e.g. *tangic* 'cry'). The lexical rule for *-um-* is stated in (4.115):

**(4.115) Lexical rule of *-um-* + activity root  $\alpha \rightarrow$  activity**

a. Rule 1

LS of <i>-um-</i>	$\mathbf{do'} (x, [\mathbf{pred'} (x, y)])$
Input	Activity Root $\alpha$ , with Strong Agentive Implicature: $(\text{DO}) \mathbf{do'} (x, [\mathbf{pred}_\alpha' (x, (y))])$
Output	$(\text{DO}) \mathbf{do'} (x, [\mathbf{pred}_\alpha' (x, (y))])$ Function(s) of <i>-um-</i> : classifying

a'. Example for Rule 1

LS of <i>-um-</i>	$\mathbf{do'} (x, [\mathbf{pred'} (x, y)])$
Input	<i>ka'en</i> 'eat': $(\text{DO}) \mathbf{do'} (x, [\mathbf{eat'} (x, (y))])$
Output	<i>k-um-a'en</i> 'eat': $(\text{DO}) \mathbf{do'} (x, [\mathbf{eat'} (x, (y))])$



b. Rule 2

LS of <i>-um-</i>	<b>do'</b> (x, [ <b>pred'</b> (x, y)])
Input	Activity Root $\alpha$ , with Weak Agentive Implicature: <DO> <b>do'</b> (x, [ <b>pred'<sub><math>\alpha</math></sub></b> (x, (y))])
Output	<DO> <b>do'</b> (x, [ <b>pred'<sub><math>\alpha</math></sub></b> (x, (y))]) Function(s) of <i>-um-</i> : classifying and changing

b'. Example for Rule 1

LS of <i>-um-</i>	<b>do'</b> (x, [ <b>pred'</b> (x, y)])
Input	<i>tangic</i> 'cry': <DO> <b>do'</b> (x, [ <b>cry'</b> (x, (y))])
Output	<i>t-um-angic</i> 'cry': <DO> <b>do'</b> (x, [ <b>cry'</b> (x, (y))])

We can see that *-um-* does not change the semantic structure of the activity root; it just makes the root function as a predicate.

As for *ma-*, there are three possible derivations from the affixation of this form: activity, active accomplishment, and causative accomplishment; they are derived from different *ma-*s attaching to activity roots with various degrees of agentivity. The first one is found with *ma-1* (activity, AV or neutral) + roots with weak or no agentive implicature, the second one, the non-causative active accomplishment, is found with *ma-3* (causative/active accomplishment, UV) plus roots with agentive implicature, and the third one, the causative accomplishment, is found with *ma-3* (causative/active accomplishment, UV) plus roots with no agentive implicature. The last two derivations are the UV versions of the corresponding *mi-* verbs stated in (4.113) and (4.114). These three derivations are stated in (4.116), (4.117), and (4.118) respectively:

**(4.116) Lexical rule of *ma-1* (activity, AV or neutral) + activity root  $\alpha \rightarrow$  activity**

a. Rule 1

LS of <i>ma-1</i>	<b>do'</b> (x, [ <b>pred'</b> (x, y)])
Input	Activity Root $\alpha$ , with Weak Agentive Implicature: <DO> <b>do'</b> (x, [ <b>pred'<sub><math>\alpha</math></sub></b> (x, (y))])
Output	<DO> <b>do'</b> (x, [ <b>pred'<sub><math>\alpha</math></sub></b> (x, (y))]) Function(s) of <i>ma-1</i> : classifying

a'. Example for Rule 1

LS of <i>ma-1</i>	<b>do'</b> (x, [ <b>pred'</b> (x, y)])
Input	<i>tayal</i> 'work': <DO> <b>do'</b> (x, [ <b>work'</b> (x, (y))])
Output	<i>ma-tayal</i> 'work': <DO> <b>do'</b> (x, [ <b>work'</b> (x, (y))])

b. Rule 2

LS of <i>ma-1</i>	<b>do'</b> (x, [ <b>pred'</b> (x, y)])
Input	Activity Root $\alpha$ , with No Agentive Implicature: <b>do'</b> (x, [ <b>pred<math>_{\alpha}</math>'</b> (x, (y))])
Output	<b>do'</b> (x, [ <b>pred<math>_{\alpha}</math>'</b> (x, (y))]) Function(s) of <i>ma-1</i> : classifying

b'. Example for Rule 2

LS of <i>ma-1</i>	<b>do'</b> (x, [ <b>pred'</b> (x, y)])
Input	<i>туру'uk</i> 'belch': <b>do'</b> (x, [ <b>belch'</b> (x)])
Output	<i>ma-туру'uk</i> 'belch': <b>do'</b> (x, [ <b>belch'</b> (x)])

As shown in the rule, like *-um-*, the affixation of *ma-1* does not affect the semantics of an activity root; it simply derives a predicate from the root.

The rules in (4.117) state the derivation through the affixation of *ma-3* (causative/active accomplishment, UV). There are two possible inputs for this derivation from activity roots with strong and weak agentive implicature respectively. Notice that, however, the derivation from the second input is not very common, as the majority of activity roots with weak agentive implicature only have one core argument.

**(4.117) Lexical rule of *ma-3* (causative/active accomplishment, UV) + activity root  $\alpha$  → active accomplishment**

a. Rule 1

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ...BECOME ( <b>pred'</b> (x, y))
Input 1	Activity Root $\alpha$ , with Strong Agentive Implicature: (DO) <b>do'</b> (x, [ <b>pred<math>_{\alpha}</math>'</b> (x, (y))])
Input 2	Activity Root $\alpha$ , with Weak Agentive Implicature: <DO> <b>do'</b> (x, [ <b>pred<math>_{\alpha}</math>'</b> (x, (y))])
Output	<b>do'</b> (x, [ <b>pred<math>_{\alpha}</math>'</b> (x, (y))]) & BECOME ( <b>pred<math>_{\alpha}</math>'</b> (y)) Function(s) of <i>ma-3</i> : classifying and changing

b. Example for Input 1

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ....BECOME ( <b>pred'</b> (x, y))
Input	<i>palu</i> 'beat': (DO) <b>do'</b> (x, [ <b>beat'</b> (x, y)])
Output	<i>ma-palu</i> 'beat (UV)' <b>do'</b> (x, [ <b>beat'</b> (x, y)]) & BECOME ( <i>beaten'</i> (y))

c. Example for Input 2

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ....BECOME ( <b>pred'</b> (x, y))
Input	<i>tayal</i> 'work': <DO> <b>do'</b> (x, [ <b>work'</b> (x, y)])
Output	<i>ma-tayal</i> 'work; do (UV)' <b>do'</b> (x, [ <b>work'</b> (x, y)]) & BECOME ( <i>work.on'</i> (y))

The rule in (4.118) states the derivation in which *ma-3* attaches to an activity root with no agentive implicature (i.e. involuntary activity), and the derived predicate is a causative accomplishment (UV) with an inanimate causer that triggers the involuntary activity.

**(4.118) Lexical rule of *ma-3* (active/causative accomplishment, UV) + activity root  $\alpha$  → causative accomplishment**

a. Rule

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ....BECOME ( <b>pred'</b> (x, y))
Input	Activity Root $\alpha$ , with No Agentive Implicature: <b>do'</b> (x, [ <b>pred<math>_{\alpha}</math>'</b> (x, (y))])
Output	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) CAUSE BECOME <b>do'</b> (y, [ <b>pred<math>_{\alpha}</math>'</b> (y)]) x= inanimate or non-volitional Function(s) of <i>ma-3</i> : classifying and changing

b. Example

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ....BECOME ( <b>pred'</b> (x, y))
Input	<i>uta</i> 'vomit': <b>do'</b> (x, [ <b>vomit'</b> (x, y)])
Output	<i>ma-uta</i> 'cause to vomit (UV)' <b>do'</b> (x, [ <b>pred'</b> (x, y)]) CAUSE BECOME <b>do'</b> (y, [ <b>vomit'</b> (y)]), x= inanimate or non-volitional

Based on the derivational processes discussed above, needless to say, the prefix *mi-* shows the most derivational possibilities when attaching to an activity root. This derivational power can be attributed to its complicated semantics. The first part of *mi-*

(i.e. the motion/purposive part) carries a strong agentive implicature and contains a goal in it, and only when the attached root also possesses an agentive implicature and a potential to take a specific goal, can the motional/purposive part be retained in the derived form. In other words, the activity roots must inherently contain animate, at least self-energetic and volitional, effectors in their logical structures. When the roots do not have a volitional effector, the motional/purposive part cannot be preserved in the derivation; only the activity part of *mi-* is left in the output. This activity component of *mi-* then is conceived as a causing event that brings about the activity denoted by the root (hence, causative activity), and for the state roots, this activity component of *mi-* brings about the state (hence, causative accomplishment).

In addition to the affixes (*mi-*, *-um-*, *ma-* (AV or neutral), and UV *ma-*) discussed above, the suffix *-en* is also commonly found with activity roots. There is only one derivational possibility: the agentive active accomplishment. The rule is stated below:

**(4.119) Lexical rule of *-en* (UV) + activity root  $\alpha \rightarrow$  agentive active accomplishment**

a. Rule

LS of <i>-en</i>	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) ... INGR/BECOME <b>pred'</b> (y)
Input 1	Activity Root $\alpha$ , with Strong Agentive Implicature: (DO) <b>do'</b> (x, [ <b>pred'<sub><math>\alpha</math></sub></b> (x, (y))])
Input 2	Activity Root $\alpha$ , with Weak Agentive Implicature: <DO> <b>do'</b> (x, [ <b>pred'<sub><math>\alpha</math></sub></b> (x, (y))])
Input 3	Activity Root $\alpha$ , with No Agentive Implicature: <b>do'</b> (x, [ <b>pred'<sub><math>\alpha</math></sub></b> (x, (y))])
Output	DO (x, [ <b>do'</b> (x, [ <b>pred'<sub><math>\alpha</math></sub></b> (x, y))]) ... INGR/BECOME ( <b>pred'<sub><math>\alpha</math></sub></b> (y)) Functions of <i>-en</i> : classifying and changing

b. Example for Input 1

LS of <i>-en</i>	DO (x, [ <b>do'</b> (x, [ <b>pred'</b> (x, y))]) ... INGR/BECOME <b>pred'</b> (y)
Input	<i>palu</i> 'beat': (DO) <b>do'</b> (x, [ <b>beat'</b> (x, y)])
Output	<i>palu-en</i> 'beat for sure (UV)' DO (x, [ <b>do'</b> (x, [ <b>beat'</b> (x, y))]) ... INGR/BECOME <b>beaten'</b> (y)

c. Example for Input 2

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ....BECOME ( <b>pred'</b> (x, y))
Input	<i>tayal</i> 'work': <DO> <b>do'</b> (x, [ <b>work'</b> (x, y)])
Output	<i>tayal-en</i> 'do a certain work (for sure) (UV)' DO (x, [ <b>do'</b> (x, [ <b>work'</b> (x, y)])]) .... INGR/BECOME <b>work.on'</b> (y)

d. Example for Input 3

LS of <i>ma-3</i>	<b>do'</b> (x, [ <b>pred'</b> (x, (y))]) ....BECOME ( <b>pred'</b> (x, y))
Input	<i>uta</i> 'vomit': <b>do'</b> (x, [ <b>vomit'</b> (x, y)])
Output	<i>uta-en</i> 'vomit something out (UV)' DO (x, [ <b>do'</b> (x, [ <b>vomit'</b> (x, y)])]) .... INGR/BECOME <b>vomited'</b> (y)

As shown in (4.119), the suffix *-en* supplies an agent to the activity roots regardless of their degrees of implied agency.

#### 4.5.4 *Pa-* Causativization

In addition to the voice affixes examined so far, the causative prefix *pa-* is also commonly found in verbal derivation. There are at least three types of causative verbs that are derived from the affixation of *pa-*, including plain *pa-* verbs (i.e. *pa-* + root), *pa-pi-* verbs, and *pa-ka-* verbs. These three types of *pa-* verbs will be discussed in this section. The discussion of plain *pa-* verbs will focus on the interaction of *pa-* and the categories of the root. This interaction is manifested through the readings of the derived *pa-* predicates. As for the *pa-pi-* causative verbs, I will argue that they involve weaker causation (i.e. a jussive reading), compared with the plain *pa-* counterparts. This weaker causation of *pa-pi-* verbs is related to the semantics of *pi-*, the morphological variant of *mi-*, as mentioned in Chapter 3. As I will show later, the semantics of *pi-* intensifies the volition of the causee in the derived causative verb and thus weakens the causing power from the causer. Regarding the *pa-ka-* verbs, a greater variety of their interpretations have been found in the data, and I suspect that this is due to heterogeneous semantics of

*ma-*, to which *ka-* is morphologically related. The agentive UV suffix *-en* also plays an important role in *pa-* causativization. In fact, the *pa-* forms suffixed with *-en* show up more frequently than the plain *pa-* forms based on my investigation, and this is also reported in Starosta (1974). For some predicates, in particular the state predicates, informants prefer the presence of *-en* with *pa-*.

#### 4.5.4.1 *Pa-* and the Categories of the Roots

The conjugation patterns of the plain *pa-* verbs are displayed in Table 4.17.

**Table 4.17 The Conjugation Patterns of Plain *Pa-* Verbs**

		<i>Verbal Affix</i>					<i>pa-</i>		
		Semantic Valence					2 or 3		
Affirmative	Declarative	Voice	Neutral					<i>pa-</i> or <i>mi-pa-</i>	
			AV					<i>pa-</i> or <i>mi-pa-</i>	
			UV	Plain	Past; ±Agentive				<i>ma-pa-</i>
					Future; +Agentive				<i>pa-...-en</i>
				Applicative	Instrument	Atemporal			<i>sa-pa-...-</i>
						Past			<i>ma-sa-pa-</i>
						Future and +agentive			<i>sa-pa-...-en</i>
					Locative	Goal			-----
				Patient				<i>pa-...-an</i>	
				Location				<i>pa-...-an</i>	
				Mood	Factual	AV or neutral			
		UV						<i>ma-pa-...-ay</i>	
		Irrealis	AV or neutral				<i>CaRED-pa-</i> (= <i>pa-pa-</i> )		
			UV				<i>CaRED-...-en</i>		
		Volitative	Optative <sub>1</sub> or timerative		AV or neutral		<i>mi-pa-...-aw</i>		
					UV		<i>pa-...-aw</i>		
			Optative <sub>2</sub>		AV		<i>sa-pa-...-an</i>		
					UV		<i>sa-pa-...-aw</i>		
		<i>pa-</i> Causative	AV				----( <i>cf. pa-pi-pa-</i> )		
			UV	Past				---( <i>cf. ma-pa-pi-pa-</i>	
				Future; +Agentive				---( <i>cf. pa-pi-pa-...-en</i> )	
		Imperative	Voice	Neutral				---	
	AV					<i>pi-pa</i> <sup>75</sup>			
	UV			Plain				<i>pa-...-en</i>	
				Applicative (only instrument)				<i>sa-(pi-)pa-...-en</i>	

<sup>75</sup> I am not sure if a plain *pa-* verb can be used in the AV imperative sentence without the prefix *pi-*. More investigation is required.

The following features of plain *pa-* verbs are shown in the table. First, unlike *mi-* or *ma-* verbs that will change their forms into *pi-* or *ka-* in some of their conjugation patterns, the prefix *pa-* is retained in every construction. Notice that it is also possible to attach *mi-* to a *pa-* verb (i.e. *mi-pa-...*), and such verbs will follow the paradigm of the *mi-* verbs. The affixation of *mi-* will add the motional/purposive reading to a plain *pa-* verb. Second, it is quite unlikely to causativize a plain *pa-* verb by attaching the causative prefix *pa-* again (i.e. *\*pa-pa-* for double causative).<sup>76</sup> However, it is possible to prefix *pa-* to a *mi-pa-* verb, and *mi-* will become *pi-* in the derivation (i.e. *pa-pi-pa-*). Finally, although a plain *pa-* verb follows the AV case marking pattern, its volitative-optative/timerative form (i.e. *pa-...-aw*) follows the UV case marking pattern. This feature is very different from the AV verbs marked by *mi-*, *-um-*, and *ma-*, as their corresponding volitative-optative/timerative forms (e.g. *mi-...-aw*) still follow the AV case marking pattern. More discussion about this feature is offered in Chapter 6.

In RRG, the LS for a causative construction is given as “ $\alpha$  CAUSE  $\beta$ , where  $\alpha$ ,  $\beta$  are logical structures of any type”. In such a representation, the prefix *pa-* can be conceived as the  $\alpha$  CAUSE part, and the attached root or stem supplies the  $\beta$  part. Nevertheless, the interpretations of the derived *pa-* predicates show an intriguing interaction with the categories of the root, as shown in Table 4.18 below:

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<sup>76</sup> Notice that the form *pa-pa-* is attested for the irrealis expression (i.e. Ca reduplication).

**Table 4.18 Types of Interpretations of *Pa-* + Root**

Root Category	Root	<i>pa-</i> Root interpretation	Examples
Object/Entity	<i>nanum</i> ‘water’ <i>fali</i> ‘wind’ <i>kilang</i> ‘tree’	cause to have	<i>pa-nanum</i> ‘give/add water’ <i>pa-fali</i> ‘inflate’ (cause to have air) <i>pa-kilang</i> ‘chop the wood and give the wood to sb.’
Attribute	<i>miming</i> ‘small’ <i>kuhting</i> ‘black’ <i>takaraw</i> ‘tall’	cause to have (in order to become)	<i>pa-mingming-en</i> (* <i>pa-mingming</i> ) ‘give sb. a small portion’ <i>pa-kuhting</i> ‘add black color’ <i>pa-takaraw-en</i> ‘stuff something under to make taller’)
Transient or Result State	<i>su’su</i> ‘fat’ <i>lasang</i> ‘drunk’ <i>keced</i> ‘shrunk’ <i>cinas</i> ‘torn’	cause to become (in order for sb. to have)	<i>pa-su’su</i> ‘fatten’ <i>pa-lasang</i> ‘cause to become drunk by offering more wine’ <i>pa-keced</i> ‘alternate the size to become smaller’ <i>pa-cinas</i> ‘tear something and give the torn portion to someone’
Activity	<i>rakat</i> ‘walk’ <i>nginguy</i> ‘bath’	cause to do	<i>pa-rakat</i> ‘drive; walk with’ <i>pa-nginguy</i> ‘help (the baby) bath’

We can see that when *pa-* attaches to a root denoting an object or an entity, the interpretation of the derived form tends to be “cause to have something denoted by the root”. Here, *pa-* picks up the formal qualia role of the root in the derivation. The derivational rule for *pa-* + a nominal root is formulated as:

(4.120) **Lexical rule of *pa-* + nominal ( $\gamma$ )  $\rightarrow$  cause to have**

a. Rule

LS of <i>pa-</i>	<b>do’</b> (x, $\emptyset$ ) CAUSE $\beta$
Input	Nominal ( $\gamma$ ), selected qualia role: formal role
Output	<b>do’</b> (x, $\emptyset$ ) CAUSE BECOME <b>have.</b> <i>γ<sub>of</sub></i> ’ (y, z), z=γ

b. Example

LS of <i>pa-</i>	<b>do’</b> (x, $\emptyset$ ) CAUSE $\beta$
Input	<i>fali</i> ‘wind’ selected qualia role: formal role
Output	<i>pa-fali</i> ‘inflat; cause to have air’: <b>do’</b> (x, $\emptyset$ ) CAUSE BECOME <b>have.</b> <i>air<sub>i</sub></i> ’ (y, z <sub>i</sub> )

As shown in the example, I use co-index to show that the z argument in the derived predicate is the same as the object/entity denoted by the root. Most of the time, this argument does not show up in the sentence, especially when it is generic. This is



illustrated by *pa-nanum* in (4.121). The LS of *pa-nanum* is given in (4.121a') and (4.121b'). However, this argument will show up if it is a specified example of the root (e.g. *sayta* 'soda' for *nanum* 'water' in (4.121c)); that is, this argument is not exactly the same as the root, but it preserves the formal qualia role of the root.

- (4.121)a. Ma-na'ay            kaku            **pa-nanum**    t-u            sayta.  
 AV-not.want        1S.NOM        CAU-water    DAT-CN        soda  
 'I don't want to add water to the soda.'

a'. **do'** (kaku, Ø) CAUSE BECOME **have.water<sub>i</sub>'** (sayta, z<sub>i</sub>)

- b. **Pa-nanum**            kaku            t-u            matu'asay.  
 CAU-water        1S.NOM        DAT-CN        old.man  
 'I gave the senior water to drink.' (AV)

b'. **do'** (kaku, Ø) CAUSE BECOME **have.water<sub>i</sub>'** (matu'asay, z<sub>i</sub>)

- c. **Pa-nanum**            kaku            t-u            wawa t-u            sayta.  
 CAU-water        1S.NOM        DAT-CN        child DAT-CN        soda  
 'I gave the child soda to drink.' (AV)

c'. **do'** (kaku, Ø) CAUSE BECOME **have.water'** (wawa, sayta)

When *pa-* attaches to a state root, the situation is much more complicated than the *pa-* derivations found with other root types. Generally speaking, there are four possible interpretations: (a) cause to have, (b) cause to have in order to become, (c) cause to become for someone, and (d) cause to become. To facilitate the discussion, I will label these four interpretation as (a) cause to have (b) cause to have + result state (c) cause to become + benefactive, and (d) cause to become. Each of them is illustrated with an example in (4.122):

- (4.122)a. *pa-mingming-en* 'give someone a small portion' (*mingming*: small)

b. *pa-takaraw-en* 'stuff something under to make it taller' (*takaraw*: tall)

c. *pa-cinas-en* 'tear something (and give the portion to someone)' (*cinas*: torn)

d. *pa-su'su'-en* ‘put on weight’ (*su'su'*: fat)

As one may notice, these *pa-* forms tend to appear with *-en*. As a matter of fact, plain *pa-* causative forms for states, especially attribute states, are rarely found. The more commonly attested causative forms for such state roots are either *mi-* or *-en*, especially *-en*. Even when there is a *pa-* causative form found with the (attribute) state roots, *-en* is preferred to co-occur with the *pa-* form, and the causative predicate tends to show up in the imperative mood.<sup>77</sup> The semantic complexity exemplified in (4.122) could be a possible influence from the attachment of *-en*, for which I do not have a good answer for the time being. Although it is difficult to generalize the causative interpretations based on the root types of the state, there are still traces of tendencies. To begin with, the *pa-* forms of the attribute state tend to get a reading of (a) or (b), both of which share the “cause to have” component. In terms of this observation, attribute states behave more like the nominal roots.<sup>78</sup> The derivational rule is constructed in (4.123):

**(4.123) Lexical rule of *pa-* + attribute state ( $\gamma$ )  $\rightarrow$  cause to become**

a. Rule

LS of <i>pa-</i>	<b>do'</b> (x, $\emptyset$ ) CAUSE $\beta$
Input	Attribute State Root ( $\gamma$ ): <b>be'</b> (y, [ <b>pred'</b> <sub><math>\gamma</math></sub> (y, (z))])
Output	<b>do'</b> (x, $\emptyset$ ) CAUSE BECOME <i>have.y'</i> (z), y=something $\gamma$
Output 2	[ <b>do'</b> (x, $\emptyset$ ) CAUSE BECOME <i>have'</i> (y, z)] PURP [BECOME <i>pred'</i> (y)] <b>pred'</b> = $\gamma$

b. Example 1 for Output 1

LS of <i>pa-</i>	<b>do'</b> (x, $\emptyset$ ) CAUSE $\beta$
Input	<i>kuhting</i> ‘black’: <b>be'</b> (y, [ <b>black'</b> (y)])
Output	<i>pa-kuhting</i> ‘add a little black color’ <b>do'</b> (x, $\emptyset$ ) CAUSE BECOME <i>have.black.color'</i> (z)

<sup>77</sup> The suffix *-en* is also used in a UV imperative sentence, as mentioned in Chapter 3.

<sup>78</sup> The similarity is not surprising. As mentioned earlier in Section 4.1.2.2, these two types of roots do share some similarities.

c. Example 2 for Output 2

LS of <i>pa-</i>	<b>do'</b> (x, Ø) CAUSE β
Input	<i>takaraw</i> : <b>be'</b> (y, [ <b>tall'</b> (y)])
Output	<i>pa-takaraw</i> 'stuff sth. under to make taller' [ <b>do'</b> (x, Ø) CAUSE BECOME <b>have'</b> (y, z)] PURP [BECOME <b>tall'</b> (y)]

The *pa-* forms of transient/plain states and result states tend to get readings (c) or (d).

The similarity of the two readings is the part “cause to become”. The lexical rules are postulated in (4.124) for transient/plain state and (4.125) for result state:

(4.124) Lexical rule of *pa-* + transient/plain state (γ) → cause to become

a. Rule

LS of <i>pa-</i>	<b>do'</b> (x, Ø) CAUSE β
Input	Transient/plain State Root (γ): <b>pred'</b> <sub>γ</sub> (y, (z))
Output	<b>do'</b> (x, Ø) CAUSE BECOME <b>pred'</b> (y, (z)), <b>pred'</b> =γ

b. Example

LS of <i>pa-</i>	<b>do'</b> (x, Ø) CAUSE β
Input	<i>su'su</i> 'fat': <b>fat'</b> (y)
Output	<i>pa-su'su</i> 'fatten up' <b>do'</b> (x, Ø) CAUSE BECOME <b>fat'</b> (y)

(4.125) Lexical rule of *pa-* + result state (γ) → cause to become + (benefactive)

a. Rule

LS of <i>pa-</i>	<b>do'</b> (x, Ø) CAUSE β
Input	Result State Root (γ): (INGR/BECOME) <b>pred'</b> <sub>γ</sub> (y, (z))
Output 1	<b>do'</b> (x, Ø) CAUSE BECOME <b>pred'</b> (y, (z)), <b>pred'</b> =γ
Output 2	[ <b>do'</b> (x, Ø) CAUSE BECOME <b>pred'</b> (y, (z))] PRUP [BECOME <b>have'</b> (w, y)], <b>pred'</b> =γ

b. Example 1 for Output 1

LS of <i>pa-</i>	<b>do'</b> (x, Ø) CAUSE β
Input	<i>cinas</i> '(become) torn': (INGR/BECOME) <b>torn'</b> (y)
Output	<i>pa-cinas</i> 'tear': <b>do'</b> (x, Ø) CAUSE BECOME <b>torn'</b> (y)

c. Example 2 for Output 2

LS of <i>pa-</i>	<b>do'</b> (x, Ø) CAUSE β
Input	<i>cinas</i> '(become) torn': (INGR/BECOME) <b>torn'</b> (y)
Output	<i>pa-cinas</i> 'tear something and give the torn portion to someone': [ <b>do'</b> (x, Ø) CAUSE BECOME <b>torn'</b> (y)] PRUP [BECOME <b>have'</b> (w, y)],

The sentence examples for the rules in (4.124) and (4.126) are provided in (4.126):

- (4.126)a. Pa-su'su'-en      k-u      fafuy!  
           CAU-fat-UV      NOM-CN      pig  
           'Fatten up the pigs!'
- b. Pa-cinas-en      k-u      wawa t-u      kami!  
           CAU-torn-UV      NOM-CN      child DAT-CN      paper  
           'Tear the paper and give a part for the child.'
- c. Pa-cinas      kaku      t-u      kami i      wawa.  
           CAU-torn      1S.NOM      DAT-CN      paper PREP child  
           'I took the paper to the child for tearing it.' (AV)

Notice that a goal or a recipient NP (e.g. *wawa* in (4.126c)) can be added to examples like *pa-cinas* 'cause to become torn', and thus more rules than the two postulated than (4.124) and (4.125) may be needed to account for an example like (4.126c). However, the "CAUSE BECOME" part is a component that is shared in the outputs of *pa-* + a result state, and it is also found in (4.126c).

Unlike the complicated situation found with the state roots, when *pa-* attaches to an activity root, the derived interpretation is simply "cause to do".<sup>79</sup> The rule is represented below in (4.127), with sentence examples given in (4.128):

(4.127) Lexical rule of *pa-* + activity root ( $\gamma$ )  $\rightarrow$  cause to do

LS of <i>pa-</i>	<b>do'</b> (x, $\emptyset$ ) CAUSE $\beta$
Input	Activity Root ( $\gamma$ ): <b>do'</b> (y, [ <b>pred'</b> (y, (z))])
Output	[ <b>do'</b> (x, $\emptyset$ )] CAUSE [BECOME <i>do'</i> (y, [ <i>pred'</i> (y, (z))])], <b>pred'</b> = $\gamma$

b. Example

LS of <i>pa-</i>	<b>do'</b> (x, $\emptyset$ ) CAUSE $\beta$
Input	<i>rakat</i> 'walk': <b>do'</b> (y, [ <b>walk'</b> (y)])
Output	<i>pa-rakat</i> 'drive (i.e. cause to walk)': [ <b>do'</b> (x, $\emptyset$ )] CAUSE [BECOME <i>do'</i> (y, [ <i>walk'</i> (y)])]

- (4.128)a. Pa-rakat      kaku      t-u      paliding.  
           CAU-walk 1S.NOM      DAT-CN      car  
           'I drive the car.' (AV)

<sup>79</sup> However, occasionally, there may be readings other than "cause to do" obtained in this derivation. I will discuss these readings in Chapter 5 when I discuss the undergoer selection for three-place predicates.

- b. Pa-ka'en kaku ci panay-an t-u pawli.  
 CAU-eat 1S.NOM PPN Panay-DAT DAT-CN banana  
 'I feed Panay banana.' (AV)

b'. [**do'** (kaku, Ø)] CAUSE BECOME [**do'** (Panay, [**eat'** (Panay, pawli)])]

In addition to attaching to different types of root discussed above to derive a causative verb, *pa-* is also frequently found in three-place transfer predicates such as *pa-fli* 'give', *pa-qaca* (or *pa-cakay*) 'sell', and *pa-caliw* 'lend'. The word *pa-fli* is derived from attaching *pa-* to a root also meaning 'give'. Consider:

- (4.129)a. Mi-fli kaku t-u paysu.  
 AV-give 1S.NOM DAT-CN money  
 'I am going to give money.'  
 'I am giving money.'
- b. Mi-fli kaku ci dongi-an.  
 AV-give 1S.NOM PPN Dongi-DAT  
 'I am going to give Dongi (something).'  
 'I am giving Dongi (something).'
- c. Pa-fli Ø-ci mayaw ci aki-an  
 CAU-give NOM-PPN Mayaw PPN Aki-DAT  
  
 t-u paysu  
 DAT-CN money  
 'Mayaw is going to give money to Aki.'

Although the root form *fli* can be used alone with *mi-* and *-en*, these forms do not occur as frequently as *pa-fli*. Furthermore, *mi-fli* is used as a two-place predicate; either the theme argument or the recipient argument can show up in a sentence, but rarely both of them, as shown in (4.129a-b). Furthermore, unlike other *mi-* verbs, which have a *pi-* counterpart, the form *\*pi-fli* is not found; the corresponding form is *pi-pa-fli*. These observations suggest that *pa-fli* might have become lexicalized.

The other two three-place predicates are formed from affixing *pa-* to a transfer root and deriving another transfer predicate that changes the perspective on the event to

source as the initiator. This is exemplified in (4.130):

(4.130)a. *pa-caliw* ‘lend’ > (*mi-*)*caliw* ‘borrow’

b. *pa-cakay/pa-qaca* ‘sell’ > (*mi-*)*cakay/qaca* ‘buy’

Notice that like the observation of *mi-fli* ‘give’, the two predicates *mi-caliw* ‘borrow’ and *mi-cakay* ‘buy’ also show up with two arguments, as illustrated in (4.131):

(4.131)a. \**Mi-qaca* *kaku* *t-u* *cudad* *t-u* *wawa.*  
 AV-buy 1S.NOM DAT-CN book DAT-CN child  
 ‘I am going to buy the book for the child.’

a’. *Mi-qaca* *kaku* *t-u* *cudad* *sa-pa-fli*  
 AV-buy 1S.NOM DAT-CN book InA-CAU-give  
  
*t-u* *wawa.*  
 DAT-CN child  
 ‘I am going to buy the book and give to the child.’  
 ‘I am buying the book to give it to the child.’

b. *Pa-qaca* *kaku* *t-u* *cudad* *i/\*t-u*  
 CAU-buy 1S.NOM DAT-CN book PREP/DAT-CN  
  
*wawa.*  
 child  
 ‘I am going to the child’s place to sell the book.’  
 ‘I sell the book to the child.’

c. *Pa-qaca* *kaku* *t-u* *cudad* *i* *ci* *aki-an*  
 CAU-buy 1S.NOM DAT-CN book PREP PPN Aki-DAT  
 ‘I sold the book to Aki.’

Examples in (4.131a-a’) show that to mention the beneficiary participant, another predicate (i.e. *sa-pa-fli*) has to show up in the sentence.

These three-place predicates are all transfer verbs, and they are in general represented by the logical structure: “[**do**’ (x, Ø)] CAUSE [BECOME NOT **have**’ (x, z) & BECOME **have**’ (y, z)]” in RRG. Nevertheless, some three-place predicates such as *pa-aca/pacaky* ‘sell’ and *pa-caliw* ‘lend’ are formed by adding a causative morpheme to

a transfer root, which also involves causation. Hence, the derived predicate will have a causal chain in the logical structures. This is illustrated in (4.132):

- (4.132) a. *pa-fli* ‘give’:  
           [do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (x, z) & BECOME **have**’ (y, z)]
- b. *mi-qaca* ‘buy’  
           [do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (y, z) & BECOME **have**’ (x, z)]
- c. *pa-qaca* ‘sell’ (i.e. ‘cause to buy’)  
           [do’ (w, ∅)] CAUSE [[do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (y, z) &  
           BECOME **have**’ (x, z)]], y=w
- d. *mi-caliw* ‘borrow’  
           [do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (y, z) & BECOME **have**’ (x, z)]
- e. *pa-caliw* ‘lend’ (i.e. cause to borrow)  
           [do’ (w, ∅)] CAUSE [[do’ (x, ∅)] CAUSE [BECOME NOT **have**’ (y, z) &  
           BECOME **have**’ (x, z)]], y=w

Both *pa-qaca* (or *pa-cakay*) ‘sell’ and *pa-caliw* ‘lend’ are represented as causal chains in their logical structures in (4.132).<sup>80</sup> As one can see from the illustration, these three-place transfer predicates all have very similar logical structures. However, as I will show in Chapter 5, the undergoer selection patterns of these three-place predicates show some variation. There might be some subtle semantic difference among these predicates. However, such difference is beyond the explanation of the present decomposition model adopted here. More research is needed.

#### 4.5.4.2 The Analysis of *Pa-pi-...(-en)* and *Pa-ka-...(-en)* Verbs

Two more *pa-* causative constructions, *pa-pi-...(-en)* and *pa-ka-...(-en)*, will be discussed in this section. As mentioned in Chapter 3, the two affixes *pi-* and *ka-* appear

<sup>80</sup> The predicate *pa-fli* ‘give’ is not represented with a causal chain for the following reasons. First, the addition of the prefix *pa-* does not change the meaning of the root; it only licenses the presence of a third argument. Second, the derived *pa-* verb seems to become lexicalized or be becoming lexicalized. Hence, it does not seem necessary to stipulate a causal chain for *pa-fli*.

very frequently in the verbal constructions, such as negative and imperative constructions, and causativization. These two affixes are morphologically related to *mi-* and non-*mi-* verbs. That is, *mi-* verbs conjugate into *pi-* forms in the relevant inflections and derivations, while verbs taking affixes other than *mi-* (e.g. *ma-*, *-um-*, and unaffixed) conjugate into *ka-* forms. This analogy indicates that *pi-* and *ka-* may preserve the semantics of their corresponding affixes. That is exactly what we are going to see for the causative verbs *pa-pi-* and *pa-ka-*, as discussed below.

A semantic feature of *pa-pi-* causatives is that they all have a jussive reading that involves indirect causation. For instance:

- (4.133) a. Pa-pi-nanum      Ø-ci      ina      ci      mama-an.  
                  CAU-PI-water      NOM-PPN      mother PPN      father-DAT  
                  ‘Mother asked Father to drink water.’
- b. Pa-pi-ka’en-en      aku      Ø-ci      panay t-u      pawli.  
                  CAU-PI-eat-UV      1S.GEN      NOM-PPN      Panay DAT-CN      banana  
                  ‘I asked Panay to eat banana.’
- c. Pa-pi-cikay      kaku      ci      panay-an  
                  CAU-PI-run      1S.NOM      PPN      Panay-DAT  
                  ‘I ask Panay to run/join the race.’
- d. Pa-pi-cikay-en      aku      Ø-ci      panay-an  
                  CAU-PI-run-UV      1S.GEN      NOM-PPN      Panay-DAT  
                  ‘I will definitely ask Panay to run/join the race.’

The *pa-pi-* causative predicates are all interpreted with a jussive tone, rendered as ‘ask someone to (go to) do something’. Apparently the “go to do” part in the derived meaning is contributed by *pi-* (i.e. *mi-*). But, where does the jussive sense or indirect causative sense come from? Consider the following comparison of *pa-* and *pa-pi-*:

- (4.134) a. Pa-cumud-en      k-u      haku/\*wawa!  
                  CAU-enter-UV      NOM-CN      box      child  
                  ‘Bring the box/\*child in!’



- a'. Pa-pi-cumud-en                      k-u                      wawa/\*haku!  
      CAU-PI-enter-UV                      NOM-CN                      child    box  
      'Bring the child/\*box in!'
- b. Pa-rakat-en                      cingra/k-u-ni                      a                      paliding!  
      CAU-walk-UV                      3S.NOM/NOM-CN-this                      LNK                      car  
      'Walk with him!' (The causee is a child.)  
      'Drive this car!' (i.e. 'Make this car run!')
- b'. Pa-pi-rakat-en                      cingra/\*k-u-ni                      a                      paliding!  
      CAU-PI-walk-UV 3S.NOM/NOM-CN-this                      LNK                      car  
      'Ask him to go to walk!'  
      \*'Ask this car to go to walk!'
- c. Pa-radiw                      Ø-ci                      ina                      t-u                      wawa.  
      CAU-song                      NOM-PPN                      mother                      DAT-CN                      child  
      'Mother taught the child to sing (by singing along with the child).'
- c'. Pa-pi-radiw                      Ø-ci                      ina                      t-u                      wawa.  
      CAU-PI-song                      NOM-PPN                      mother                      DAT-CN                      child  
      'Mother asked the child to sing.'

As demonstrated in the examples, the causee in *pa-* verbs is not as “agentive” as the one in *pa-pi-* verbs. The causee in *pa-pi-* has to have the ability and volition to perform the caused action independently; this self-independent property is not found in the causee of *pa-* causatives. If we incorporate the LS of *mi-* into the LS of *pa-pi-*, then we can have a natural account for the difference illustrated in (4.134); the motional/purposive component in *mi-* gives the *pa-pi-* predicate a “CAUSE DO” instead of a “CAUSE **do**” in the derivation illustrated in (4.135):

**(4.135) The logical structure of *pa-pi-*:**

[**do**' (x, Ø)] CAUSE [DO (y, [**do**' (y, ...

Following CAUSE DO, the participant *y* has to be a true agent. The strong agentivity of *y* weakens the causation denoted by *pa-* and thus fosters the jussive reading. Nonetheless, with the presence of *-en* ‘the agentive UV marker’, the causation may become stronger, as we can see in the comparison between (4.133c) and (4.133d).

As for *pa-ka-*, the situation is not as straightforward as *pa-pi-*, as the derived form can have more than one interpretation, depending on the categories of the roots. The first derived interpretation is ‘cause to become’, which is further divided into two sub-types. The first sub-type carries a reading of “completeness” or “thoroughness” for the causative state, which can be roughly rendered as ‘cause to become thoroughly’. It is often associated with the combination of *pa-ka-* and the attribute/non-episodic state root. Some Examples are given in (4.136):

(4.136)a. *pa-tati’ih-en* ‘destroy’ (> *tati’ih* ‘bad’)

a’. *pa-ka-tati’ih-en* ‘destroy (to a greater degree)’

b. *pa-kuhting-en* ‘add a little black color’ > *kuhting* ‘black’

b’. *pa-ka-kuhting-en* ‘make it all black’

As one can compare the plain *pa-* forms and the *pa-ka-* forms in (4.136), the *pa-ka-* form carries a reading of “completeness” and “thoroughness” of a causative state. Moreover, recall that in the discussion of *pa-* plus different categories of the roots, I have mentioned that when *pa-* attaches to an attribute state root, the derived interpretation could be ‘cause to have’ (e.g. (4.136b)). However, when the affix *ka-* is added in the causative form, it is no longer ‘cause to have’; instead, the reading obtained is ‘cause to become’. The *ka-* here seems to correspond to the episodic state *ma-* or the result state *ma-*. This *pa-ka-* form often co-occurs with *-en*.<sup>81</sup> Its logical structure can be represented as (4.137):

**(4.137) The logical structure of *pa-ka-...(-en)***

[do’ (x, Ø)] CAUSE [BECOME pred’ (y)]

This “thoroughness” reading is also found with *pa-ka-* + an object root or an activity root

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<sup>81</sup> The *-en* is preferred there. Some informants do not accept the bare *pa-ka-* form (or even the *pa-* form), while others remark that the bare *pa-ka-* form is rarely used. Notice that the meaning of *-en* is not specified in the LS of (4.137).

with agentive implicature. The relevant examples are given in (4.138)

- (4.138)a. Pa-dateng-en                      k-u-ni!  
           CAU-vegetable-UV            NOM-CN-this  
           ‘Add vegetable to this (to cook)!’
- a’. Pa-ka-dateng-en                      k-u-ni  
           CAU-KA-vegetable-UV    NOM-CN-this  
           ‘Pick all of these vegetables!’
- b. Pa-ka-palu-en                      k-u-ni                      a            wawa.  
           CAU-KA-beat-UV            NOM-CN-this            LNK    child  
           ‘Beat the child more thoroughly.’
- c. Pa-ka-nengneng-en                      k-u-ra                      tamdaw.  
           CAU-KA-see-UV            NOM-CN-this            person  
           ‘Watch that person carefully.’  
           ‘Pay special attention to that man.’
- d. Ma-pa-ka-cefus                      aku                      k-u-ra                      hana.  
           UV-CAU-spray.water    1S.GEN            NOM-CN-that            flower  
           ‘I water that flower thoroughly.’

As shown in the examples, the *pa-ka-* forms also involve a sense of “thoroughness” or “completeness” in the interpretation. Moreover, unlike the derivation of *pa-* + an object root, in which the derived meaning is ‘cause to have’ (e.g. *pa-dateng* ‘serve the vegetable’), the derivation of *pa-ka-* + an object root is ‘cause to do’ (e.g. *pa-ka-dateng* ‘pick all the vegetables’); in other words, the addition of *ka-* seems to derive an activity from the object root, and the activity becomes the causative activity in the derived *pa-ka-* predicate. This function of *ka-* is similar to the UV *ma-* (i.e. the active/causative accomplishment *ma-*), as *ma-* can derive an activity from object root (e.g. *dateng* ‘vegetable’ → *ma-dateng* ‘pick vegetable (UV)’). In other words, the structure of *pa-ka-* + an object root or an activity root with agentive implicature can be interpreted as “cause something to be done thoroughly”. The only problem is that the causative reading does not seem to show up in such derivations based on the examples I have collected so far;

these forms are often used in the imperative context, as illustrated in (4.138a'), in which there is no clear involvement of a causer. Tentatively, I still treat such examples as causative predicates, based on the “thoroughness” reading that is shared between such predicates and the causative verbs in (4.136). However, future investigation is required regarding this analysis.

The other sub-type of the ‘cause to become’ derivation is illustrated by the examples in (4.139). In this sub-type, the “completeness” or “thoroughness” reading is not found:

- (4.139)a. Pa-ka-roray      Ø-ci      aki      kitanan  
CAU-KA-tried    NOM-PPN    Aki    1P.Incl.DAT  
‘Aki made us tried.’ (AV)

a'. [**do'** (aki, Ø)] CAUSE [BECOME **tired'** (kitanan)]]

- b. Pa-ka-ngudu      kaku      t-u      singsi.  
CAU-KA-embarrassed    1S.NOM    DAT-CN    teacher  
‘I made the teacher feel ashamed.’ (AV)

b'. [**do'** (kaku, Ø)] CAUSE [BECOME **embarrassed'** (singsi)]]

The *ka-* in the two *pa-ka-* verbs in (4.139) can be regarded a morphological variant of *ma-*, which the roots following *pa-ka-* appear with by default (e.g. *ma-roray* ‘tried’ and *ma-ngudu* ‘embarrassed; humbled; respect’). These *ma-* verbs are all state predicates.

The second type of derived interpretation of *pa-ka-* is ‘cause to do’. The examples are given in (4.140):

- (4.140)a. Pa-ka-tawa      Ø-ci      mayaw      t-u      wawa.  
CAU-KA-laugh    NOM-PPN    Mayaw    DAT-CN    child  
‘Mayaw made the children laugh.’ (AV)  
‘Mayaw told jokes to the children.’

a'. [**do'** (Mayaw, Ø)] CAUSE [**do'** (wawa, [**laugh'** (wawa)])]

- b. *pa-ka-tayal* ‘cause to do something’ (AV) > *tayal* ‘work’

This is found when *pa-ka-* attaches to an activity root with low agentive implicature. The

*ka-* in these *pa-ka-* verbs can also be regarded as a morphological variant of *ma-*, as these activity roots also appear with *ma-* by default (e.g. ***ma-tawa*** ‘smile; laugh (at)’ and ***ma-tayal*** ‘work’).<sup>82</sup>

The above-discussed semantic complexity of *pa-ka-* is just a reflection of complicated semantics of *ma-*, from which the meanings of *ka-* derive. Notice that, the affix *ka-* in Amis seems to behave quite differently from the *ka-* form found in some other Formosan languages. According to Zeitoun and Huang’s (2000) survey of four Formosan languages (not including Amis), *ka-* functions as a stativity marker. However, the function of *ka-* in Amis does not seem as straightforward. In some cases, *ka-* does make the verb more stative. For instance, the *ka-* in the *ka-...-en* form found with many psych-predicates seems to cancel the agency that *-en* carries, as now the

- (4.141)a. Ngudu-en          aku          k-u          matu’asay.  
                  humbled-UV      1S.GEN      NOM-CN      old.man  
                  ‘I will show respect to the old people.’
- a’. Ka-ngudu-en      n-u          singsi          kaku.  
                  Ka-humbled-UV   GEN-CN      teacher      1S.NOM  
                  ‘I am respected by the teacher.’
- b. Tawa-en          aku          kisu.  
                  laugh.at-UV      1S.GEN      2S.NOM  
                  ‘I will laugh at you.’
- b’. Ka-tawa-en      n-u          tao          kaku.  
                  KA-laugh.at-UV   GEN-CN      others      1S.NOM  
                  ‘I let people laugh at me.’

As illustrated in (4.141), while the bare *-en* form emphasizes the volition of the actor, the form *ka-...-en* highlights the saliency of the stimulus that triggers the psych-state or

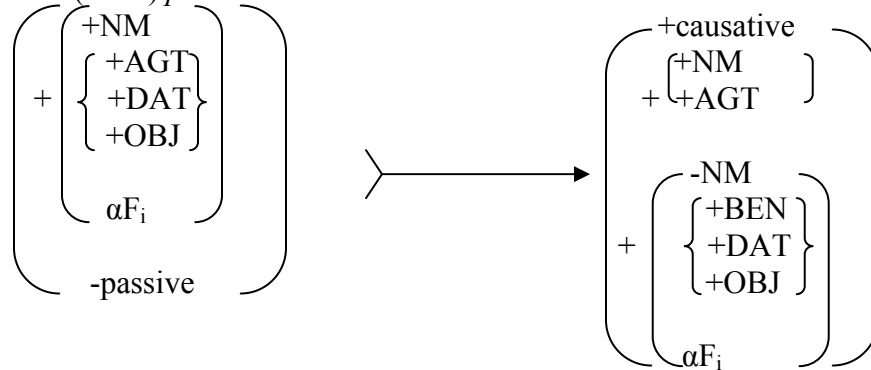
<sup>82</sup> Some of the *ma-* verbs in (4.139) and (4.140) can only take *pa-ka-* (e.g. *\*pa-tawa*), while others can have both *pa-* and *pa-ka-* causatives (e.g. *pa-talaw* ‘frighten (by performing some action)’ and *pa-ka-talaw* ‘cause to become afraid’), of which the informants cannot tell the differences very clearly, though some of them remarked that *pa-ka-* is more emphatic but less dynamic than *pa-*. More investigation is needed.

action. In other words, the presence of *ka-* seems to cancel or at least weaken the agency inherent in *-en*. This might be conceived as a function of a “stativity marker”. However, there are also examples such as *pa-ka-tayal* ‘cause to do’ and *pa-ka-tawa* ‘cause to laugh’, in which there is no clear evidence indicating that *ka-* is a stativity marker.<sup>83</sup>

#### 4.5.4.3 Comparison with Starosta’s (1974) Analysis

Starosta (1974) makes a survey of the causative verbs in Formosan languages, including Amis.<sup>84</sup> He mentions that there are several causative-related processes in Amis, such as *maka-* (termed resultative), *paka-* (termed abilitative), and *mi-/pi-* (termed transitive derivation), but he only discusses *pa-* causative verbs in his paper. He formulates the *pa-* causative derivation in the following within the lexibase model:<sup>85</sup>

(4.142) Starosta’s (1974) *pa-* causativization rule:



Starosta states that the rule in (4.142) derives active causative verbs from accusative active verbs with agent, dative, or object subjects (i.e. marked by nominative case). The causative version adds a new agent to the case frame. If the source verb already has an agent subject, the derived causative verb will be added with a corresponding benefactive

<sup>83</sup> Tsukida (2005b) also mentions that *ka-* is not a state marker in her investigation of Fata’an Amis.

<sup>84</sup> Starosta collected his data from Nataoran Amis, a northern dialect of this language.

<sup>85</sup> Please refer to Chapter 1 for a brief introduction to this framework in the review of Chen (1988).

constituent in the case frame. Consequently, this added benefactive is marked by the nominative case.

Starosta's discussion of the rule is summarized as follows, provided with the comparison with my findings. First, the rule stated in (4.142) only applies to active transitive verbs (verbs with an agent subject, e.g. *mi-* verbs). It is not directly applicable to verbs with an object or dative subjects. Most of such verbs are *ma-* verbs, and they in general correspond to *ma-* UV verbs (e.g. *ma-mɛlaw* 'see'), *ma-* activity verbs (e.g. *ma-rɛbaahoy* 'fly'), and *ma-* two-place state predicates (e.g. *ma-vaanaħ* 'know') in my discussion. The *pa-* causative form for these verbs is *pa-* + stem. However, as remarked by Starosta, simple *pa-* causatives are rather infrequent. Another possible and more common causative form for these verbs is *pa-pi-*, which is the causative verb derived from an active transitive verb. Hence, to derive a *pa-pi-* causative verb, ergative verbs (i.e. transitive verbs with an object subject, e.g. *ma-mɛlaw* 'see' (UV)) have to undergo a rule termed "transitivization" before being causativized. During transitivization, the prefix *mi-* (hence the *pi-* in the causative form) attaches to the ergative verb and derives an active transitive verb (e.g. *mi-mɛlaw* 'see'), which in turn serves as an input for the causativization. This derivation is illustrated in (4.143) with the example of *ma-mɛlaw* 'see' (Starosta 1974:309, emphasis mine):<sup>86</sup>

(4.143) *ma-mɛlaw* 'see' → *mi-mɛlaw* 'watch' → *pa-pi-mɛlaw* 'ask to look at'  
           ergative                   → active transitive   → causative

Regarding the point mentioned above, my investigation shows that the simple *pa-*

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<sup>86</sup> This is a simplified version of the derivation.

causative verbs are not as infrequent as reported in Startosta's study, though the possibility to find *pa-pi-* forms is higher than simple *pa-* causative forms. Furthermore, *pa-* and *pa-pi-* do not function in the same way in causativization, and their different functions offer important information concerning the classification of root forms in Amis. However, such difference and significance seem to be overlooked in Starosta (1974).

Second, he observes the fact that the simple *pa-* and *pa-pi-* verbs rarely occur, though they are grammatically possible forms. The more frequently obtained forms are *pa-...-en* and *pa-pi-...-en*. His finding is supported in my investigation. However, he treats *-en* as a passive derivation in Amis, which is also the analysis adopted by Chen (1987). In other words, *pa-...-en* and *pa-pi-...-en* are passivized causative verbs in his analysis. He notices that passive verbs may semantically differ from their active counterparts. For example, the verb *mɿlaw* means 'look after' in two passive forms *mɿlaw-en* and *pa-pi-mɿlaw-en*, but it can mean either 'look after' or 'see' in the active form *mi-mɿlaw*. He explains the difference by stating the assumption that *mɿlaw* has undergone a semantic shift and derives an agentive verb meaning 'look after', which makes it possible to consequently undergo the passivization. Obviously, this assumption is very different from the analysis; *-en* is treated as an agentive marker in this dissertation in addition to its voice-marking function. It will affect the agency of the root during the derivation, and this is why *-en* forms are always agentive. The prefix *mi-* has the possibility to appear with an effector and an agent, provided the fact that the motional/purposive part is optional. That is why *mi-* forms might get more readings. I will come back for more discussion on Starosta's rule when it comes to issue of case marking patterns of three-place predicates in Chapter 5.



## 4.6 Summary

The major analyses and claims made in this chapter are summarized as follows. First, I have demonstrated that the root forms in Amis can be at least categorized into object, activity, attribute state, transient, and result state in terms of their coding and interpretation in the ideophone-forming construction *X sa*. The analysis is represented in Table 4.2.

Second, by adopting the Aktionsart-based decompositional model of RRG, the lexical roots, the derived verbs, and the voice markers in Amis are decomposed and represented in the logical structures. The semantic features residing in the logical structures of the voice markers help us better understand the relevant verbal derivations and voice-related phenomena in Amis. The LS of each voice marker is summarized in Table 4.7. The Aktionsart tests for Amis verbs are given in Table 4.9.

Third, based on the logical structures proposed for root categories and voice markers, a set of lexical rules have been postulated to account for the derivation of a predicate from an object, an activity, and a state.

Finally, the *pa-* causativization and its related phenomena have been explored in this chapter. In particular, I have shown that the interpretation of *pa-* + root is related to the distinctions of root categories. The relation is displayed on Table 4.18. I have also argued that the form *pa-pi-* has a logical structure “CAUSE DO...”, which requires an agentive causee, instead of “CAUSE **do**’...” that is found in simple *pa-* verbs. The agentive causee requirement explains why *pa-pi-* verbs almost always get a jussive reading, as now the causer has less degree of control over the causee. As for another causative form *pa-ka-*, the affix *ka-* seems to be the morphological variant of the *ma-*

verbs that serve as the source verbs for causativization. It simply retains the semantics of source *ma-* during the causativization. Therefore, the derived *pa-ka-* verb can be “cause to do” or “cause to become”, depending on the types of *ma-* verbs that *pa-ka-* attaches to. The logical structures and lexical rules are very important for the discussion in the following two chapters, as frequent references to these structures and rules will be made upon the discussion of the case marking patterns and grammatical relations in Amis.