ASPECT IN BONGGI

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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1994
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by

Michael E. Boutin
This work is dedicated to my father who taught me to work hard, be honest, and have integrity.

He also loaned me the money for my first linguistics course, and recognized that I enjoyed "book learning" long before I did.

If dad were still alive,

he would love to hear me say that he was right about the "book learning"

and find that his investment is bringing forth dividends.
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Abstract of Dissertation Presented to the Graduate School of the University of Florida in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

ASPECT IN BONGGI

By
Michael E. Boutin

August, 1994

Chairman: Haig Der-Houssikian
Major Department: Linguistics

This dissertation presents an analysis of aspect in Bonggi within the framework of Role and Reference Grammar (RRG). Bonggi is a Western Austronesian language of Sabah, Malaysia. The morphology of Bonggi distinguishes situation types: states, achievements, activities, and accomplishments. Because these four situation types are the starting point for a RRG grammatical analysis, there is a reciprocal harmony between the RRG model and Bonggi.

Bonggi verbs are classified semantically according to the relationships which exist between predicates and their arguments. These relationships are described in terms of logical structures which are linked to the verb morphology by a series of rules including the assignment of thematic relations, semantic macroroles, syntactic functions, case, and verbal cross-referencing.

Each situation type has a unique set of inherent aspectual properties (Aktionsart) which are reflected in the logical structures by predicates and a small set of operators such as BECOME and CAUSE.

The model highlights the distinction between Aktionsart and viewpoint aspect by treating viewpoint aspect as an operator. Whereas Aktionsart properties are determined from the logical structures in a constituent projection that accounts for argument structure, the assignment of viewpoint aspect belongs to an operator projection which includes viewpoint aspect, tense,
modality, negation, and illocutionary force. Unlike Aktionsart which is determined from the logical structure, viewpoint aspect is independent of the logical structure. Although each situation type has a unique logical structure and a unique set of Aktionsart properties, the same situation can be presented from different viewpoints. That is, the inherent Aktionsart properties do not change with a change in viewpoint aspect.

Viewpoint aspect in Bonggi is formally expressed in: 1) the verb morphology, 2) a system of free form auxiliaries, 3) a system of enclitic particles, and 4) a system of temporal adverbs.

Although aspect, tense, and modality all belong to the operator projection, they modify different layers of the clause. For example, viewpoint aspect is an operator modifying the clause nucleus. This model not only provides a framework for treating aspect independently of modality and tense but also for treating the interrelationship of aspect with modality, tense, and other verbal categories.
CHAPTER 1
INTRODUCTION

This chapter briefly answers two questions which arise from the title of this dissertation. The first question, 'Who are the Bonggi?' is answered in §1.1, while the second question, 'Why study aspect in Bonggi?' is addressed in §1.2. Finally, a condensed sketch of Bonggi is provided in §1.3.

1.1. The Bonggi Language and People

Bonggi is a Western Austronesian language spoken by approximately 1,400 people on Banggi and Balambangan islands in the Kudat District of Sabah, Malaysia. (See Figure 1 for the location of Banggi and Balambangan in Southeast Asia.) Outsiders usually use the exonym 'Banggi' or 'Banggi Dusun' to refer to the people, while the Bonggi refer to themselves by the autonym Bonggi. The term 'Banggi' is somewhat derogatory in nature as banggi means 'corpse' and is used in the curse, Banggi nu! which is equivalent to the English phrase 'Drop dead!'

The term 'Dusun' is a misnomer from a linguistic point of view. Linguistically, the term Dusun refers to a group of languages in Sabah. The majority of the indigenous languages of Sabah belong to one of three groups: Dusunic, Murutic, or Paitanic.1 Bonggi is a linguistic isolate which does not fit into any of these three groups. In fact, the Murutic languages are more closely related to the Dusunic languages than Bonggi is to either group. Thus, calling the Bonggi Dusunic as opposed to Murutic or Paitanic is a linguistic error. However, 'Dusun' has become a highly politicalized term in Sabah, and it is in this sense that the label 'Banggi Dusun' is often used. I use

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1These groups are based solely on lexicostatistics from Smith (1984). Previous groupings based on lexicostatistics were proposed by Dyen (1965) and Prentice (1970). The most well-known subgrouping argument dealing with any of the languages of Sabah is Blust (1974).
the term 'Bonggi' to refer to both the language and the people, and the term 'Banggi' to refer to the island.²

![Diagram of Southeast Asia showing the location of Banggi and Balambangan](image)

**Figure 1:** Location of Banggi and Balambangan in Southeast Asia

On the basis of lexicostatistics, the closest linguistic relative of Bonggi is the Molbog language spoken on Balabak and Ramos islands in the Philippines south of Palawan Island. A comparison of basic wordlists indicates that Bonggi and Molbog are only about 50% cognate. Furthermore, the two languages are far from being mutually intelligible. There are some Molbog speakers on Banggi Island who are referred to as Belobog by the Bonggi. Many Bonggi speakers living near the two Molbog villages on Banggi island have learned to speak Belobog. On the other

²For a discussion of the origin of the term 'Dusun' see Lebar (1972:148). For a recent discussion of problems associated with the term 'Dusun' see Lasimbang and Miller (in press). For a general discussion of nomenclature problems in Borneo see Appell (1968), Blust (1974), and Lebar (1972).
hand, only a couple of Molbog speakers who have married Bonggi women have learned Bonggi. This is typical of the sociolinguistic situation on Banggi and Balambangan islands.

 Besides Bonggi and Molbog, there are four other language communities on these two islands: Suluk (known in the Philippines as Tausug) and three languages from the Sama language family: Bajau, Ubian, and Kagayan. All of the languages, with the exception of Bonggi, have their geographical center in the Philippines. That is, Molbog, Suluk, Bajau, Ubian, and Kagayan speakers are relatively recent arrivals in Sabah compared to the Bonggi. On the other hand, there are no Bonggi speakers in the Philippines.

 The general sociolinguistic picture pertaining to the Bonggi is as follows: Bonggi villages are somewhat scattered over the two islands, but group into village clusters consisting of at least two geographically close villages belonging to the same ethnic group. For example, the Limbuak cluster in the southwest portion of Banggi Island includes the following Bonggi villages: Limbuak Darat (Pega' Diaa), Batu Layar Darat (Liag Diaa), Lumanis Darat (Lemeis Diaa), and Kuda-Kuda (Kuda'-Kuda'); the Palak cluster in the southeast portion of Banggi Island includes Palak Darat (Giparak Diaa) and Memang (Milimbiaa).

 In general, with the exception of a few people who marry into a Bonggi community, speakers of other languages do not learn Bonggi. It is the Bonggi who have learned to speak the languages of the other ethnic groups. The other ethnic groups are also scattered around the islands in villages which tend to cluster in groups. For example, the primary ethnic group near the Limbuak cluster is

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3 However, Bajau are known to have lived on Banggi island since at least as early as 1769 (Dalrymple 1769:65). For a discussion of relationships among the languages in the Sama language family see Pallesen (1985). For an overview of relationships among Philippine languages see Walton (1979). For an overview of the language situation and distribution of languages on Banggi and Balambangan see Boutin and Boutin (1985).

4 The term *bunua* 'community' is used refer to a hamlet, village, or village cluster. For a discussion of the importance of the term *bunua* in Bonggi society see Boutin (1990).

5 Village names are given in Malay, the national language, with Bonggi names provided in parentheses.
Bajau who live in the two Bajau villages of Limbuak Laut (Pega’ Loud) and Batu Layar Laut (Liang Loud), while the primary ethnic group near the Palak cluster is Kagayan who live in the two Kagayan villages of Palak Laut (Giparak Loud) and Laksian (Leksiadn).

As a general rule, the Bonggi learn the language of the outside community which is geographically closest to their cluster. Thus, most Bonggi speakers over thirty years of age who have lived in the Limbuak cluster speak Bajau, while those who have lived in the Palak cluster would speak Kagayan due to their respective exposure to these two languages. The older a Bonggi and the longer he or she has lived in a village cluster, the more likely he can speak the language of the nearby outside community. Among younger speakers from different ethnic groups there is a greater tendency to use Malay because: 1) Malay is the language of the schools; 2) the young people have been increasingly exposed to Malay via radio and television; and 3) relationships between Bonggi children and children from other language groups often begin during their school years where they are required to speak Malay to each other.

Very few Bonggi are monolingual; most Bonggi over thirty are trilingual (speaking Bonggi, Malay, and the language of the geographically closest outside community). It is not uncommon to find Bonggi who speak four or five languages. In terms of language use, Bonggi is always spoken between Bonggi speakers, except in cases where a speaker may use a few phrases from another language. When a Bonggi meets a non-Bonggi, the language of the non-Bonggi is used if the Bonggi has sufficient knowledge of the language; otherwise, Malay is spoken. This accommodation strategy fits a possible sociolinguistic universal suggested by Quakenbush (1986:242):

In a multilingual setting where language groups are of markedly different social status, the group on 'bottom' will accommodate to the group on 'top' by using that group's first language in face-to-face interaction, regardless of other components of the social situation such as role relationships, location, formality, etc.

Despite the fact that few Bonggi are monolingual, Bonggi is not being replaced by a different language. Bonggi children are learning the language as their first language, except in some cases
involving mixed marriages. The Bonggi have borrowed a number of words from Malay and some words from English. The majority of English borrowings are nouns, although a few verbs have also been borrowed (Boutin 1994).

There are differences in the Bonggi language spoken in different areas. However, these differences are not great enough to cause any difficulty in communication. According to Bonggi folk linguistics, the most important dialect variation is between the Bonggi spoken on Banggi Island and that spoken on Balambangan Island. However, I have found that 'alleged differences' tend to be exaggerated. Bonggi speakers have a very ethnocentric perspective of their own dialect. The home village cluster dialect is always best, and the "Bonggi over there" are always the ones who kiara youk 'have an accent'. The majority of Bonggi on Banggi Island have never been to Balambangan. They tend to stereotype the Balambangan Bonggi and attribute to them a number of noncognate lexical items. I have found in talking to Balambangan Bonggi that many of the lexical items attributed to them are either archaic or unknown.

The vast majority of the Bonggi data presented in this book is from either the Limbuak village cluster or the Palak village cluster on Banggi Island. There are some regional differences on Banggi Island as illustrated by variation in the use of [e¹] and [o¹] in a small set of words.

<table>
<thead>
<tr>
<th>Limbuak Darat</th>
<th>NW part of island</th>
<th>Palak Darat</th>
<th>Gloss</th>
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<tr>
<td>/soid/</td>
<td>['so¹d']</td>
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<td>/oid/</td>
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<td>['o¹d']</td>
<td>['o¹g']</td>
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The language variation which does exist is primarily phonetic. There are a few lexical differences such as the use of the Bajau term angat 'said' by Bonggi in the Limbuak cluster.

6Although few Bonggi are monolingual, this is not meant to suggest that there is a high level of bilingualism. Without having measured for degrees of bilingualism, my assumption is that the level of bilingualism is not sufficient to pose any threat to the viability of Bonggi at this point.
However, *angat* is never used by speakers in the Palak cluster except in ridiculing the people from Limbuak. No morphosyntactic differences have been observed between dialects.

The Bonggi are primarily subsistence farmers and fishermen. Subsistence agriculture is based on cassava (*Manihot esculenta Crantz*). The actual origin of the Bonggi and the time period in which they arrived in their present location are unknown. Early Bonggi settlers to Banggi and Balambangan probably settled along the coast at estuaries, initiating a pattern which has persisted to this day. Later, with the arrival of further immigrants, the Bonggi, being the weaker community, were displaced into the interior. The only published record of the Bonggi language before the 1980s was a wordlist taken in 1937 (Schneeberger 1937). Several short Bonggi folktales appeared in an English newspaper in 1923 (Agama 1923a, 1923b, 1923c, 1923d). They were probably told in Malay and translated into English. Previous linguistic work on Bonggi which is most relevant to the topic of this dissertation is Boutin (1991a) and Boutin (1992).

1.2. Aspect in Bonggi

In beginning an examination of aspect in Bonggi, it is important to realize that one structural feature in a language often predicts, implies, or constrains the distributional possibilities of another feature. My goal is to demonstrate how certain structural features in Bonggi predict and constrain the distributional possibilities of aspect. Specifically, this dissertation answers two general questions with respect to aspect in Bonggi: 1) what are the aspectual possibilities in Bonggi? and 2) how are they constrained?

The term 'aspect' has been used to refer to two related, but distinct, phenomena:

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7For an overview of Bonggi social organization see Boutin (1990).

8Many of the village names are a reflection of this pattern, *diaa* 'inland' (Malay: *darat*) and *laut* 'sea' (Malay: *laut*) are a reflection of this pattern; e.g. Limbuak Darat (*Pega' Diaa*) an interior Bonggi village, and Limbuak Laut (*Pega' Loud*) a coastal Bajau village. For a discussion of Bonggi history see Boutin (in press).
(a) Aspect refers to ways in which languages mark notions such as duration, frequency, and completion in verbs. Simply speaking, from this standpoint, aspect is a matter of the speaker's perspective or viewpoint on a situation. For example, the speaker may choose to depict a situation as beginning, ending, continuing, repeating, or completed.

(b) Aspect refers to the inherent features of situations or verbs; that is, whether the situation or verb is static or dynamic, punctual or durative, telic or atelic. This second use of the term aspect has been called situation aspect or Aktionsart 'kind of action' (from German).

The distinction between (a) viewpoint aspect and (b) situation aspect (Aktionsart) is often blurred in studies on aspect. My analysis of aspect in Bonggi shows that this distinction is fundamental. Briefly speaking, each situation type has a specific situation aspect (Aktionsart) associated with it, and given any situation type, there are constraints on the viewpoint the speaker can have. That is, situation types have an inherent aspect (referred to here as situation aspect) which constrains viewpoint aspect.

I provide a brief overview of situation types which are described in detail in Chapter 2. The semantic notions which are discussed in this paper are interrelated and it is very difficult to discuss one notional category such as aspect without discussing all the other categories which interact with it and thus, effect the form in which aspect is realized. For example, past tense is marked differently depending upon the situation type and which argument is selected as subject.

Following Lyons (1977:483), Smith (1983:481), and others, I use situation as a cover term for both events and states. Vendler (1967) devised a universal four-way semantic distinction in situation types: 1) states; 2) achievements; 3) accomplishments; and 4) activities. These four types of situations correspond to major verb classes which are encoded in the verbal morphology of Bonggi. In the remainder of this section, I provide a brief example of the four basic situation types using data from both English and Bonggi.

---

9 Situations are comparable to States of affairs (e.g. Dik 1981:32-36).
States are static situations. Several sub-classes of states are elaborated in Chapter 2. Only condition states are discussed in this overview. The English sentence in (1) illustrates a condition state.

(1) It is dry.

English condition states such as (1) are primarily realized by a form of the verb be followed by an adjectival complement. Bonggi does not have a verb comparable to English be. Instead, condition states like (1) are realized as a stative verb derived from an adjective root.10 This is illustrated in (2) by the stative verb ngkorikng which is derived from the adjective root korikng 'dry'.11

(2) Sia ngkorikng.
   it dry
   'It is dry.'

Achievements are nonvolitional changes of state which are inception-oriented. Sentence (3) illustrates an achievement in English, while (4) illustrates the Bonggi achievement verb kimorikng which is derived from the adjective root korikng 'dry'.12

(3) It became dry.

(4) Sia kimorikng.
   it become.dry
   'It became dry.'

Accomplishments refer to changes of state which are brought about by a volitional actor and have a final endpoint. Sentence (5) illustrates an accomplishment in English, while (6) illustrates the Bonggi accomplishment verb ngorikng which is derived from the root korikng 'dry'.

(5) She dries coconuts.

10States whose complement is an adjective as in (1) are often referred to as attributive clauses.

11The morphological processes resulting in the Bonggi surface forms are elaborated in Chapter 2.

12Chapter 2 describes subclasses of achievements, accomplishments, and activities.
(6) *Sia ngorikng piasu.*  
    she dry coconut  
    'She dries coconuts.'  

Activities involve a volitional actor and are activity-oriented referring to events which often have no clear endpoint. Sentence (7) illustrates an activity in English, while (8) illustrates the Bonggi activity verb *ngkapak* which is derived from the root *kapak* 'sing'.

(7) She sings.

(8) *Sia ngkapak.*  
    she sing  
    'She sings.'

The Bonggi root *korikng* 'dry' was used to contrast states, achievements, and accomplishments resulting in respective surface contrasts between: *ngkorikng* (2), *kimorikng* (4), and *ngorikng* (6). This root can also occur unaffixed as illustrated in (9).

(9) *Bakng kiou meiti na, korikng.*  
    if wood dead - dry
    'If wood is dead, it is dry.'

However, an activity verb cannot be derived from *korikng* 'dry'. Thus, the Bonggi data provided so far do not sufficiently illustrate a surface contrast between activities and the other situation types. However, there are other roots such as *uru* 'medicine' which can be used to derive both an activity (*ngguru*) and an accomplishment verb (*nguru*) as in (10).

(10) *Ama' Numpang ngguru tina robi. Sia nguru n Daya*.  
    father Numpang medicate later night he medicate NPIV Daya  
    'Numpang's father is medicating people later tonight. He will medicate Daya.'

---

13 In this section '-' is used to gloss certain grammatical morphemes which are described in Chapter 2 and not relevant to the current discussion.

14 The roots *korikng* 'dry' and *kapak* 'sing' were chosen since both are /k/ initial roots. The initial phoneme of the root is important in determining surface contrasts in Bonggi (cf. Chapter 2). Although the paucity of data described in this overview may not convince the skeptical reader that the primary function of the verbal morphology described here is to indicate situation type, detailed evidence for my analysis is provided in Chapter 2.

15 The medicating described by the verbs *ngguru* and *nguru* in (10) refers to a treatment performed by a local spiritualist. Other types of medical treatment involve either a herbalist or western medicine from a clinic (cf. Boutin & Boutin 1987). Sentence (10) is from a recorded text.
Dowty (1979) and Cooper (1985) state that it is sentences as a whole which belong to the various situation classes and the classes are not determined simply by the verb that the sentences contain. Thus, sentences (11a) and (12a) are activities, whereas sentences (11b) and (12b) are accomplishments.\(^{16}\)

(11)  
\begin{itemize}
  \item a. She ate fish.
  \item b. She ate the fish.
\end{itemize}

(12)  
\begin{itemize}
  \item a. She walked.
  \item b. She walked to the store.
\end{itemize}

Dowty's and Cooper's claim that situation type is not determined by the verb holds for English. For example, the activity verb *walked* in (12a) can become an accomplishment *walked to the store* when a definite goal is added (cf. FVV 1984:39). In English, the verb morphology of *ate* and *walked* does not change whether they occur in activity or accomplishment situations.

However, this is not always the case in Bonggi, as seen in (10), where the verb morphology distinguishes the activity verb (*ngguru* 'medicate') from the accomplishment verb (*nguru* 'medicate').

Some Bonggi verbs, such as the verb 'to walk' (*mpamu*), are lexically an activity verb, and can occur in either activity clauses similar to (12a) or accomplishment clauses similar to (12b). However, in either case, the verb *mpamu* 'to walk' always appears with activity verb morphology, which is described in Chapter 2. Other Bonggi verbs, such as the verb 'to cut down a tree' (*nobokng*), are lexically an accomplishment, and only occur in accomplishment clauses similar to (5) and (6). Verbs which are lexically an accomplishment only occur with accomplishment verb morphology which is also described in Chapter 2. Still other Bonggi verbs, such as the verb 'to move', can be lexically either an accomplishment verb, in which case it occurs with accomplishment verb morphology (*nguhad*), or an activity verb, in which case it occurs with activity verb morphology (*muhad*).

---

\(^{16}\)As noted by Van Valin (1990:225, footnote 4), the contrast between (11a) and (11b) cannot be reduced to the presence or absence of articles.
In Bonggi, the verbal morphology distinguishes whether a verb is lexically an activity or an accomplishment, regardless of the presence or absence of verbal arguments or adjuncts. In fact, one of the primary functions of verbal morphology in Bonggi is to indicate the lexical situation type. This means that situation types are much more transparent in Bonggi than in English, and that contrary to Dowty's and Cooper's claim, verbs can determine the situation type, at least lexically in some languages.

As stated earlier, the four-way distinction in situation type corresponds to major verb classes: 1) states; 2) achievements; 3) accomplishments; and 4) activities. A number of semantic features can be used to delimit the four different situation types and the corresponding verb classes. Some semantic features such as dynamicity are associated with aspect, while others such as the thematic role of the argument(s) are less directly relevant to aspect. In fact, certain aspectual features such as dynamicity are essential in the classification of verbs. It is in this sense that Dowty uses aspect to distinguish the inherent meaning of verbs (Dowty 1979:52).

Table 1.1 characterizes the salient aspectual features which distinguish the four situation types.

<table>
<thead>
<tr>
<th>Feature</th>
<th>state</th>
<th>achievement</th>
<th>activity</th>
<th>accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>dynamic</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>telic</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>causative</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

17The absence of '+' or '-' means that the feature is not relevant to the situation type.
Situation is a cover-term for states and events. In terms of the typology of situations presented above, events include achievements, activities, and accomplishments. States are static and do not involve change over time, while events are dynamic and involve change (cf. Chung & Timberlake 1985:214).

A situation which is telic has an endpoint or definite limits. Only events, not states, can be telic. **Telicity** is often described in terms of the boundedness of events. Achievements and accomplishments are telic or endpoint-oriented whereas activities are atelic and activity-oriented. Accomplishments have a causal predicate, whereas achievements and activities do not. The causal predicate links an activity to a resulting achievement (cf. §2.4). Thus, the feature causative distinguishes accomplishments from other events.

Duration is an aspectual feature which is sometimes used to delimit situation types. That is, some situations are punctual (momentary), while others are durative. However, duration is not a salient aspectual feature of situations in Bonggi. States by definition are durative and this is reflected within the feature dynamism. Achievement and accomplishment verbs are not limited to punctual situations or to situations of short duration (e.g. (4), (6)). Some verbs can be viewed as inherently punctual (e.g. break), whereas others are inherently durative (e.g. soften), but this distinction is not encoded in Bonggi. Chapter 3 provides evidence that there are durative and punctual verbs of the same situation type.

Thus, for each of the four situation types, there are corresponding aspectual features which are referred to as **situation aspect** (*Aktionsart*). The aspectual features in Table 1.1 are not language particular. Although reference was made to duration as a possible situation aspect feature, the three features provided in Table 1.1 are sufficient to delimit the four situation types and they are considered universal situation aspect features.

Van Valin (1993:34) refers to the four situation types (states, achievements, activities, and accomplishments) as *Aktionsart* classes. His use of the term *Aktionsart* varies from the traditional use of the term where *Aktionsart* refers to the inherent aspectual meaning of a verb (Dahl 1985:26). On the other hand, the term aspect is traditionally a strictly grammatical category. I use
the terms situation aspect and Aktionsart synonymously to refer to the salient aspe}

tual features found in Table 1.1 which distinguish the different situation types in Bonggi.

One property of aspect is that the same concepts are relevant at different levels (Chung & Timberlake 1985:214). For example, telecty is not only important for differentiating situation types, but also for constraining the way in which situations can be viewed.

Situations can be viewed from different points in order to highlight different phases of the situation. For instance, the situation described in (5) can be viewed from an iterative perspective as shown in (13), or an inceptive perspective as shown in (14).

(13) He always breaks the seal.

(14) He started to break the seal.

The viewpoint(s) available for referring to a particular type of situation depends upon the properties of that situation (Smith 1983:491). For example, the stative situation described in (1) cannot be viewed from an inceptive perspective as in (15).

(15) *He started to be tall.

Viewpoint possibilities reflect aspechual characteristics at the sentence level and are described in terms of viewpoint aspect. In Bonggi viewpoint aspect is often encoded in aspectual words which are part of the verb phrase. Viewpoint aspect is constrained by situation type. Thus, while the accomplishment situation described in (6) can occur with continuous viewpoint aspect which is marked by kahal 'still' as in (16), achievement situations such as that in (4) are not compatible with continuous viewpoint aspect.

(16) Sia kahal ngorikng piasu.
    she still dry  coconut
    'She still dries coconuts.'

One difference between situation aspect and viewpoint aspect is a distinction in formal expression. Situation aspect correlates with situation type, which is formally expressed by the verb morphology. On the other hand, viewpoint aspect is expressed by either verb morphology, as in the use of meg- 'frequentative' in (17), or periphrasis, as in the use of kahal 'still' in (16).
(17) *Sia pandi meg-meikap.*  
she know DIS-make.up  
'She uses make up all the time.'

Although situation aspect and viewpoint aspect can both be expressed by derivational verb morphology, they are in complementary distribution in terms of the affixes employed. Other correlations between formal expression and aspectual type are explored in Chapter 3. These include the use of partial reduplication of verb roots to express continuous (durative) activity and full reduplication of verb roots to express iterative activity. Chapter 3 also shows that some aspectual notions must be studied outside the verb system in the adverbials; for example, habituals.

The conceptual framework for this study of aspect draws on the work of Carlota Smith (1991) and Role and Reference Grammar. The major influence of Smith on my thinking is the distinction between viewpoint and situation aspect (*Aktionsart*). The major points of difference between Smith and me are: (1) her view of aspect is sentential, whereas my own view is that aspect is not strictly sententially governed; and (2) whereas Smith claims that viewpoint aspect is generally indicated morphologically and situation aspect (*Aktionsart*) is generally indicated syntactically, I show that situation aspect in Bonggi is indicated morphologically and viewpoint aspect is indicated morphosyntactically, suggesting that her claim is premature and based on insufficient data.

My approach to the study of aspect focuses on overt grammatical forms, as well as semantic features of aspect. The data sources for this dissertation are a working dictionary (3,200+ roots with multiple forms), recorded and transcribed texts (200+ pages, including glosses), and field notes which my wife Alanna and I collected in Sabah between November 1982 and May 1992.18

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18 My wife and I had a house in Limbuak Darat on Banggi Island between November 1982 and December 1985. During that period, about 60% of our time was spent in Limbuak Darat and 40% in the city of Kota Kinabalu on the mainland. Afterwards, we resided in the United States from April 1986 - July 1987. Upon returning to Malaysia we had a house in Palak Darat from November 1987 to April 1992. During that period, about 40% of our time was spent in the village of Palak Darat and 60% in the city of Kota Kinabalu. Although Kota Kinabalu is outside of the language area in which Bonggi is spoken, we almost always had Bonggi speakers living with us whenever we were outside the village between August 1987 and May 1992.
Although much of the data presented is from texts, I have not excluded other types of data, including elicited verb paradigms.

The theoretical model used for discussing aspect in Bonggi is Role and Reference Grammar (RRG) as described by Robert Van Valin, Jr., editor (1993). From the perspective of RRG, situation aspect results from inherent properties of situations which are defined in terms of lexical semantics; on the other hand, viewpoint aspect is treated as an operator over the clause nucleus. Before discussing Bonggi from the perspective of RRG (cf. Chapter 2), the remainder of this chapter provides a brief overview of some of the linguistic features found in Bonggi.

1.3. Basic Descriptive Sketch of Bonggi

1.3.1. Simple Clauses

In terms of common word-order typology, Bonggi is a SVO language. Basic word-order in simple transitive clauses with two arguments is SVO, as illustrated in (18), (19), (20), (21), and (22).

(18) S V O
    Ou ng-atad diha.
    I AS-take you
    'I take you there.'

(19) S V O
    Sia ng-atad diaadn.
    he AS-take me
    'HE takes me there.'

(20) S V O
    Ou etad-adn nya.
    I take-US him
    'I am taken there by him.'

---

19 This brief overview of clauses only includes simple, transitive, verbal clauses. Chapter 2 distinguishes transitive and intransitive clauses as well as verbal and nonverbal clauses, and provides a more detailed analysis.

20 The subject of the sentence is capitalized in the free translation.
Actor and undergoer are the two primary arguments of a transitive predicate, either one of which may be the subject. Actor refers to the entity which instigates or controls the action expressed by the verb. Undergoer refers to the entity affected by the action or state expressed by the verb. For example, the subject is an actor in (18), (19), and (21), whereas the subject is an undergoer in (20) and (22). One NP in every verbal clause is indexed by the morphology of the verb. Within Philippine linguistics, the indexed NP has been called various names including: subject, topic, focus, pivot, and trigger. Although I use the term 'subject' in this overview, the term pivot is used in the remaining chapters in keeping with the theoretical framework described in Chapter 2. Also, within Philippine linguistics, the role of the verb morphology is usually considered as encoding the semantic role of the indexed NP (or subject). Although I argue later that encoding the semantic role of the subject is not the primary function of verbal morphology in Bonggi, for ease of exposition in this overview, I have glossed the grammatical morphemes above as 'AS' (actor subject) and 'US' (undergoer subject) to indicate the primary semantic function of the subject.

In (22) the undergoer (siidn 'money') is subject and the actor (ku 'me') is labeled as 'O' (object). Note that the actor is not marked as an oblique argument in (22) as in English passives where the agent is marked with the preposition by. This raises an interesting question regarding the syntactic status of the actor in Bonggi.21 If we avoid the typological parameter 'O', word order in simple Bonggi clauses is: Subject - Verb - Nonsubject core argument.

21This question is briefly addressed below.
There are three partially distinct sets of personal pronouns which are referred to as nominative, accusative, and genitive case pronouns. Table 1.2 contrasts the three sets of pronouns in Bonggi.

Table 1.2: Bonggi Pronouns

<table>
<thead>
<tr>
<th></th>
<th>NOMINATIVE</th>
<th>GENITIVE</th>
<th>ACCUSATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 singular</td>
<td>ou</td>
<td>ku</td>
<td>diaadn</td>
</tr>
<tr>
<td>1 dual</td>
<td>kita</td>
<td>ta</td>
<td>dihita</td>
</tr>
<tr>
<td>1 plural-inclusive</td>
<td>kiti</td>
<td>ti</td>
<td>dihiti</td>
</tr>
<tr>
<td>1 plural-exclusive</td>
<td>ihi</td>
<td>mi</td>
<td>dihi</td>
</tr>
<tr>
<td>2 singular</td>
<td>aha</td>
<td>nu</td>
<td>diha</td>
</tr>
<tr>
<td>2 plural</td>
<td>uhu</td>
<td>nyu</td>
<td>dihu</td>
</tr>
<tr>
<td>3 singular</td>
<td>sia</td>
<td>nva</td>
<td>nya(^{22})</td>
</tr>
<tr>
<td>3 plural</td>
<td>sigelama</td>
<td>sigelama</td>
<td>sigelama</td>
</tr>
</tbody>
</table>

Nominative case pronouns occur as subjects (e.g. ou 'I' in (18) and (20), and sia 'he/she' in (19) and (21)). Genitive case pronouns occur as the possessor in possessive NPs (e.g. ku 'my' in (21)) and nonsubject actor (e.g. ku 'me' in (22)). Accusative case pronouns occur as nonsubject undergoer (e.g. diha 'you' in (18), diaadn 'me' in (19), and nya 'him' in (20)) and following certain oblique markers such as dii 'to' (e.g. diaadn 'me' in (21) and diha 'you' in (22)). Bonggi does not have a pronominal dative case form, but expresses the notion of indirect object using prepositions (e.g. dii 'to' in (21)).

\(^{22}\)The contrast between 3s genitive and accusative case pronouns is neutralized as nya, and there is no contrast in case in third person plural sigelama.
Bonggi is a nominative-accusative language with the grammatical subject being in the nominative case. Every Bonggi verbal clause contains one and only one nominative argument. The nominative argument can be either an actor (e.g. ou 'I' in (18), and sia 'he/she' in (19) and (21)) or an undergoer (e.g. ou 'I' in (20)). Sentences such as (20) and (22) are different from passives in English. Like English passives, the undergoer is the subject (e.g. siidn 'money in (22)); however, unlike in English, the actor (e.g. ku 'me' in (22)) is not marked as an oblique argument. The syntactic status of arguments like ku 'me' in (22) has been widely debated for Philippine-type languages with the primary question being the argument status of these agents. According to Bell (1983), nonsubject agents are nonterms (nonarguments), while Kroeger (1992a) claims they are always terms (arguments). RRG also takes the position that they are terms (cf. Chapter 4). At any rate, in the active voice as in (18), (19), and (21), the verb root atad 'take' has two direct core arguments; one, the actor, occurring in the nominative case, and the other, the undergoer, occurring in the accusative case. Direct core arguments are defined as arguments which are not preceded by a preposition (oblique case marker); for example, diadn 'me' in (19) is a direct core argument.

Although every verbal clause has a nominative argument, it may not be realized due to ellipsis, as in (23) (cf. (22)).

(23) \textit{Etad-adn ku gulu.}  
\textit{take-US me first}  
'IT is taken there by me first.'

Ellipsis of the subject as in (23) is common in Bonggi. In fact, in many instances, especially imperative clauses, both core arguments are elided as in (24).

\begin{itemize}
\item \textit{Etad-adn ku gulu.}  
\textit{take-US me first}  
'IT is taken there by me first.'
\end{itemize}

---

23 Common nouns such as siidn 'money' in (22) are not case marked (cf. below).

24 Some people have argued that constructions like (22) are nominal, not verbal, since the agent is treated in the same way as the owner in possessive NPs. See Dahl (1984) for an argument against this nominal construction position. One argument against the nominal hypothesis is that the verbal element in constructions like (22) can be inflected for tense.

25 Cf. English, where the subject of transitive clauses, but not the object, is elided in imperatives.
The semantic role of the nominative argument can be determined from the verbal affixation. Thus, the verb affix functions like a placeholder for the subject nominal. For example, the suffix \( a' \) in (24) indicates imperative mood and that the subject is the undergoer, in this case 'the thing being taken'.

Besides the morphological distinctions described for pronouns, Bonggi distinguishes personal names and common nouns. Common nouns which are direct core arguments are not case marked. Instead, word-order is used to encode the syntactic function subject. In (25) the common nouns \( ama' \) 'father' and \( siidn \) 'money' are not marked because they are direct core arguments, but the common noun \( indu' \) 'mother' is marked by \( dii \) 'to', indicating that it is an oblique argument.

\[
(24) \quad \text{Etad-a' bal!} \\
\quad \text{take-IMP.US EMPH} \\
\quad \text{'Take IT there!}
\]

\[
\text{The semantic role of the nominative argument can be determined from the verbal affixation. Thus, the verb affix functions like a placeholder for the subject nominal. For example, the suffix \( a' \) in (24) indicates imperative mood and that the subject is the undergoer, in this case 'the thing being taken'.}
\]

\[
\text{Besides the morphological distinctions described for pronouns, Bonggi distinguishes personal names and common nouns. Common nouns which are direct core arguments are not case marked. Instead, word-order is used to encode the syntactic function subject. In (25) the common nouns \( ama' \) 'father' and \( siidn \) 'money' are not marked because they are direct core arguments, but the common noun \( indu' \) 'mother' is marked by \( dii \) 'to', indicating that it is an oblique argument.}
\]

\[
(25) \quad \text{Ama' nya ng-atad siidn dii indu' nya.} \\
\quad \text{father her AS-take money to mother her} \\
\quad \text{'HER FATHER takes money to her mother.'}
\]

In (26) \( Butak \) is preceded by \( si \), indicating that \( Butak \) is a personal name and the clause subject; \( Tagi \) is preceded by \( ni \) (realized as [n]), indicating that \( Tagi \) is a personal name and nonsubject.\(^\text{26}\)

\[
(26) \quad \text{Si Butak ng-atad siidn dii n Tagi.} \\
\quad \text{PIV Butak AS-take money to NPIV Tagi} \\
\quad \text{'BUTAK takes money to Tagi.'}
\]

\( Si \) marks nouns as both personal names and clause subject.\(^\text{27}\) Thus, one function of \( si \) is to mark nominative case. However, \( ni \) is not a case marker because \( dii \) 'to' (an oblique marker)

\text{\(^{26}\)The grammatical markers \( si \) and \( ni \) have phonologically conditioned variants. \( Si \) and \( ni \) do not occur with names beginning with /s/. \( Ni \) is reduced to [n] before names beginning with /t/ or /d/; it is reduced to [n] before names beginning with a vowel; and it is reduced to [i] elsewhere.}
governs the case of *Tagi* in (26). Furthermore, *ni* can occur with accusative case nouns (e.g. *Tagi* in (27)) and genitive case nouns (e.g. *Tagi* in (28)).

(27)  
\[
\text{Si } \text{Butak ng-atad } n \text{ Tagi.}  \\
PIV \text{Butak AS-take NPIV Tagi}  \\
\text{‘BUTAK takes Tagi there.’}
\]

(28)  
\[
\text{Si } \text{Butak ng-atad siidn } n \text{ Tagi.}  \\
PIV \text{Butak AS-take money NPIV Tagi}  \\
\text{‘BUTAK takes Tagi’s money there.’}
\]

The use of word-order instead of case-marking with common nouns to encode the syntactic function subject is illustrated in (29) where the subject precedes the verb and the nonsubject core argument follows the verb. This contrasts with most Philippine-type languages, including the languages of Sabah which tend to be verb-initial and whose nominal forms are generally marked by prepositional particles (Shibatani 1988:88). However, verb-medial languages like Bonggi do not typically have case markings on NPs to establish their grammatical relations; instead, the grammatical relations are signalled with word-order (cf. Bybee, et al. (1990:15)).

(29)  
\[
\text{Asu nya bas } na \text{ ng-ohol asu ku.}  \\
dog his PST PFT AS-bite dog my  \\
\text{‘HIS DOG bit my dog.’}
\]

To summarize, the subject is the prominent nominal in a clause. In Bonggi, subject NPs are marked in one of three ways: (a) by the special particle *si* for personal names and nominals which are treated like personal names (cf. footnote 27), (b) by nominative case pronouns, or (c) by word-order. All three of these techniques for indicating the clause subject (i.e. the prominent nominal) mask the semantic role of the subject NP. The subject depends on the verbal affix for its semantic

---

27Nicknames, death-names, teknonyms, the indefinite reference term *anu* ‘so-and-so’, and certain kinship terms are treated morphosyntactically as personal names (Boutin 1991b). For example, the kinship terms *ama’* ‘father’ and *indu’* ‘mother’ in (25) are marked as personal names when the speaker is referring to his/her own parents, as in (i).

(i)  
\[
\text{Si } \text{ama’ ngatad siidn } d\text{ii ny indu’}.  \\
PIV \text{father take } \text{money to NPIV mother}  \\
\text{‘FATHER takes money to mother.’}
\]
role. If word-order is included as a form of marking, subjects are marked twice: once on the verb to indicate the semantic role of the subject, and once on the subject argument (by either si, or a nominative case pronoun, or word-order). The different nominal categories show different degrees of merger in form. Personal pronouns have three surface forms with accusative case and oblique NPs distinguished on the basis of the presence or absence of an oblique marker. However, personal names have two surface forms and common nouns have only one surface form with oblique arguments in each instance being distinguished by an oblique marker. The different forms of each nominal category are illustrated in Table 1.3.

Table 1.3: Nominal arguments

<table>
<thead>
<tr>
<th></th>
<th>Direct core</th>
<th></th>
<th></th>
<th>Noncore</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subject</td>
<td>Nonsubject</td>
<td>Noncore</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actor</td>
<td>NonActor</td>
<td>Actor</td>
<td>NonActor</td>
<td></td>
</tr>
</tbody>
</table>
| Nominative     | ou 'I'      | ku 'me'       | diaadn 'me'   | dii diaadn 'to me' | koon ku 'my food'
| Genitive       | si Tagi     | n Tagi        | n Tagi        | dii n Tagi 'to Tagi' | koon n Tagi 'Tagi's food'
| Accusative     | asu 'dog'   | asu 'dog'     | asu 'dog'     | dii asu 'to (a) dog' | koon asu '(a) dog's food'

Table 1.3 shows that: (a) oblique NPs are always marked by prepositions; (b) in possessive NPs, the possessor always follows the possessed item; (c) the distinction between nonsubject actors and nonsubject nonactors only exists for pronominal NPs; and (d) direct core arguments (subject and nonsubject) are distinguished on the basis of case if they are pronominal, by the choice of si versus ni if they are personal names, and by word-order otherwise.
In the transitive clauses illustrated by (18) - (29), all of the nonsubject direct core arguments are either actors or undergoers. However, this is not always the case; that is, nonsubject direct core arguments are not necessarily actors or undergoers. For instance, clauses which are traditionally described as dative-shift constructions have two nonsubject direct core arguments, but only one is an undergoer. Sentence (30) illustrates the ditransitive predicate mori 'give' in a clause without dative-shift, and (31) illustrates the same verb in a clause with dative-shift. There are two nonsubject direct core arguments in (31), but only one, diaadn 'me', is an undergoer.

(30) Sia m-ori siidn dii diaadn.
PIV AS-give money to me
'SHE gives money to me.'

(31) Sia m-ori diaadn siidn.
PIV AS-give me money
'SHE gives me money.'

Chapter 2 describes certain intransitive clauses that have direct core syntactic arguments which are neither actors nor undergoers. According to case-marking principles in Van Valin (1990:241), the default case for direct core arguments which are neither actor or undergoer is dative. However, as shown in Table 1.3, Bonggi does not have unique dative case forms; instead, all nonsubject direct core arguments which are not actors occur in accusative case.

1.3.2. Simple Nominal Phrases

The head of nominal phrases is either a pronoun or a noun. Pronominal heads are either personal pronouns (as shown in Table 1.2) or demonstrative pronouns. Noun heads can be simple nouns such as *apu'*grandfather' in (32), compound nouns such as *apu'-odu'*ancestors' in (33), and personal names such as *Butak* in (34) (cf. (28)).

(32) *apu' nya
grandfather her
'her grandfather'

(33) *apu'-odu' nya
ancestors her
'her ancestors'
The primary word order within NPs whose head is a noun is: Determiner - Noun - Adjective - Determiner, with some overlap between the determiners which precede the head-noun and those which follow the head-noun. NPs with simply a noun and an adjective modifier are illustrated in (35).

(35) anak kaha'
    child eldest
'tochn baru'
    year new

Unlike English, which can string a series of adjectives together within a single NP, Bonggi NPs normally contain only one adjective. Even adjectives from different semantic domains such as color, quality, and size rarely cooccur. Instead, when a speaker desires to ascribe two attributes to a simple entity, he either uses two separate NPs (as in (36) where the first NP lama bulag 'blind person' is qualified by the second NP indu'Mual 'Mual's mother') or stative verbs (as in (37) where n-doot 'ST-bad' and m-pia 'ST-good' are stative verbs).

(36) Iketomu ou lama bulag, indu' Mual.
    met I person blind mother Mual
'I met a blind person, Mual's mother.'

(37) Ndara n-doot sia, asal m-pia baar-baar sia.
    not.exist ST-bad he surely ST-good true-true he
    'HE is not bad, surely HE is very good.'

Some adjective roots rarely occur as adjectives in NPs; they are far more likely to be realized as stative verbs. These include the stative verbs n-doot 'ST-bad' and m-pia 'ST-good' as in (37) and mi-gia 'ST-big' as in (38). However, other adjective roots (such as toyuk 'small' in (38)) occur more frequently as adjectives, even when stative verb forms are possible (e.g. n-toyuk 'ST-small').

---

28 In English conversation there is a tendency for speakers to avoid complex noun groups containing a series of adjectives and instead spread adjectives out over several clauses. This contrasts with English written language which is more dense (cf. Bygate 1987:62-63; Richards 1990:73).
(38) *Uubm nya, "Suhu ga toyuk tuni toyuk kei bagi,*
said he all CONTRAST little body little also share

*suhu mi-gia tuni mi-gia hei bagi."*
all ST-big body ST-big also share

'He said, "All small bodies get a small share, all big bodies a big share."'*

When the head of an NP is a noun, the noun can be followed by determiners which indicate
something about the definiteness and/or referentiality of the head noun. The set of determiners
which follow the head-noun include: possessors, as illustrated in (39) (cf. Table 1.3);
demonstratives, as illustrated in (40); and the definite article *na*, which is illustrated in (41).

(39) *bali ku*
house my
'my house'

(40) *bali nti*
house this
'this house'

(41) *bali na*
house DEF
'the house'

Demonstratives such as *nti* 'this' in (40) have a deictic function with the deictic center being
the speaker. Table 1.3 shows the demonstratives which can occur in Bonggi. The demonstratives
are distinguished on the basis of orientation with respect to the speaker/hearer. They can occur
alone as the head of a NP, in which case they are referred to as demonstrative pronouns. Each of
the three demonstratives has a shortened form which is also shown in Table 1.3.29

29The details regarding the conditioning factors for long versus short demonstrative forms have not
been worked out. Two factors which influence the occurrence of short versus long forms are the
phonological shape of the preceding head noun (shortened forms are more likely to occur when
contiguous segments are identical as shown below) and the speech style (shortened forms are more
likely to occur in fast/casual speech).

* tout:d nti 'this year'  bali nti 'this house'  bali ina 'that house'  bali inoo 'that house over
  yonder'
* tout:d ti 'this year'            bali na 'that house'  bali noo 'that house over
  yonder'
Table 1.4: Demonstratives

<table>
<thead>
<tr>
<th>Long Form</th>
<th>Short Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>nti</td>
<td>ti</td>
<td>'this' (near speaker)</td>
</tr>
<tr>
<td>ina</td>
<td>na</td>
<td>'that' (near hearer)</td>
</tr>
<tr>
<td>inoo</td>
<td>noo</td>
<td>'that' (not near speaker/hearer)</td>
</tr>
</tbody>
</table>

Ina 'that' also has anaphoric function, as illustrated in (42) where the anaphoric reference is to what has previously been said. In fact, ina na 'that', with the referent being an extended passage of text, is one of the major cohesive devices in Bonggi (cf. Halliday & Hasan 1976:67).

(42) Ina na susuad nya.
    that DEF say he
    'THAT is what he said.'

Nti 'this' has a cataphoric function as illustrated in (43) where the cataphoric reference pertains to what is said immediately following.

(43) Moro' sikng nti, ...
    tell like this ...
    'Tell them something like this, ...'

Nti 'this' also has an exophoric function whereby it is used to refer to current periods of time such as odu nti 'today', minggu nti 'this week', buaidn nti 'this month', and toudn nti 'this year' (cf. Halliday & Hasan 1976:61).

As stated previously, the three different types of determiners which follow the head noun (possessors, demonstratives, and the definite article na) all indicate something about the definiteness and/or referentiality of the head noun. Na 'definite' identifies a particular individual or subclass within the class designated by the noun. Possessors and demonstratives are semantically selective; they contain within themselves some referential element in terms of which the item in 

---

30In Bonggi, as in most systems, it is the intermediate term of the deictic series which is used as a general anaphoric element (Anderson & Keenan 1985:287).
question is to be identified. With the possessives, it is person (e.g. *bali ku* 'my house'); with the
demonstratives, it is proximity (e.g. *bali nti* 'this house'). But *na* 'definite' has no content; it merely
indicates that the item in question is specific and identifiable (e.g. *bali na* 'the house'). Somewhere
the information for identifying it is recoverable (cf. Halliday & Hasan 1976:71).

Possessive pronouns can cooccur with demonstratives, as illustrated in (44).

(44) *anak ku nti*
    child my this
    'this child of mine'

Determiners which precede the head noun include: (a) personal name markers as illustrated in
(26)-(28) and Table 1.3; (b) indefinite quantifiers as illustrated by *separu* 'some', *nentaadn na* 'all',
and *tiap-tiap* 'every' in (45); and (c) numerals, classifiers, and a linkage particle which
phonologically links numerals and classifiers as illustrated in (46).

(45) *separu lama*  *nentaadn na lama*  *tiap-tiap lama*
    some people   all -- people   every person
    'some people' 'all people' 'every person'

(46) *dua m batakng sikiou*
    two LINK long.thin.object cassava
    'two cassava plant stems'

1.3.3. Word Classes

Since aspect is a verbal category, discussion of aspect, verb morphology, and verb phrases is
not included in this sketch, but is delayed until Chapter 2. However, besides the brief descriptions
of clauses and nominal phrases which were provided in §1.3.1 and §1.3.2, a short discussion of
word classes or lexical categories is needed to round out this sketch since much of the verbal
morphology of Bonggi is conditioned by the lexical category of the root. Verbs can only be derived
from certain lexical categories, and the category of the root or base form often predicts the verbal
situation types which can occur; therefore, some understanding of lexical categories is ultimately
very important to an understanding of aspect. For example, given any root and knowing its lexical
category, we can predict whether or not verbs can be derived from that root and which verbal
situations are possible.
As pointed out in §1.2, situation types have an inherent situation aspect which constrains viewpoint aspect. Because the four types of situations (states, achievements, activities, and accomplishments) are primarily derived from verb, adjective, and noun roots, only these three words classes are considered here.\footnote{Verbs are not derived from the other word classes mentioned in §1.3.2. However, evidence for a class of directional verbs which are derived from spatial deictics is presented in §2.1.2. Evidence is also provided in Chapters 2 and 3 for a class of aspectual auxiliary words and a class of temporal adverbs.}

Hopper and Thompson (1984:703f.) describe three criteria which have been used in determining word classes or 'parts of speech': 1) morphological, 2) syntactic, and 3) semantic. Following Schacter (1985), I assume that the primary criteria for determining word classes are grammatical, not semantic. The grammatical properties which are relevant for classifying word classes include distribution, syntactic function, and structural characteristics, especially inflectional affixes.

**Nouns**

Bonggi nouns are divided into two main subclasses (personal names and common nouns) on the basis of whether or not the nouns occur with the grammatical markers si or ni (where si marks personal names in the nominative case (e.g. si Butak in (26)), and ni marks personal names which are not in the nominative case (e.g. n Tagi in (26)) (cf. Table 1.3 and discussion in §1.3.1)).

Common nouns are further subdivided on the basis of whether they are count nouns or mass nouns. Count nouns can cooccur with the quantifier barabm 'many', while mass nouns, such as beig 'water' and timus 'salt', are quantified with the stative verb migia 'large'. Verbs can only be derived from common nouns, not personal names.
Syntactically, nouns primarily function as arguments of verbs as in (47) where *sigu hu* 'my teacher' is the subject and *uubm Bonggi* 'Bonggi language' is the object. Nouns can also function as predicates in equational clauses as in (48) where *sigu hu* 'my teacher' is the predicate.32

(47) *Sigu hu nda' pandi uubm Bonggi.*
teacher my not know language Bonggi
'MY TEACHER does not know Bonggi.'

(48) *Sia sigu hu.*
he teacher my
'HE is my teacher.'

Morphological evidence for word classes is often established on the basis of inflectional morphemes alone. For example, only verbs are inflected for tense. However, Bonggi word classes cannot be determined from inflectional morphology alone because nouns and adjectives are not inflected.33 Although case is not marked morphologically, noncore arguments are marked syntactically by prepositions and are discussed in Chapter 2.

Verbs

I take the distinction between nouns and verbs to be a language universal (cf. Givón 1984; Hopper & Thompson 1984; Schacter 1985; Thompson 1989:247). Morphological categories associated with verbs include voice, tense, aspect, and mood. These categories are described in Chapter 2. Although only verbs are inflected for tense, stative verbs in Bonggi are not inflected for tense; thus, even tense inflection is not a definitive criteria for distinguishing verbs from nouns and adjectives.

32 Unlike English, there is no copula in Bonggi. Equational clauses are described in §2.1.1.

33 Cf. McCawley (1983) who argues that word classes can be learned from inflectional morphology regardless of any syntactic considerations.
Verbs usually function as predicates. However, both nouns (such as sigu hu 'my teacher' in (48)) and adjectives (such as Sega' 'red' in (49)) may also function as predicates.34

(49) Sega' mata nu.
red eye your
'YOUR EYES are red.'

Some roots are very difficult to classify in terms of lexical category. One of the most troublesome is kerai 'work' which can be a noun or a verb. This root is usually uninflected which is characteristic of nouns, but it can be inflected like a verb. Furthermore, its syntactic distribution can be either nominal (as in (50)) or verbal (as in (51)).

(50) Sia ndara kerai.
sh e not have work
'SHE does not have work.'

(51) Sia kerai deirdn na ga.
sh e work self DEF CONTRAST
'SHE is working alone.'

Because the verb in (51) is unaffixed, the form of the word kerai 'work' is the same in both (50) and (51). There is a functional shift from one part of speech to another. This is similar to English where a verb like walk can occur as a noun by using it in a syntactic position reserved for nouns, as in she took a long walk.35

Adjectives

Like nouns, adjectives are not inflected in Bonggi. Adjectives are distinguished from nouns and verbs on morphological grounds only with respect to some derivational morphology.36

34The adjective root sega' 'red' can function as an adjective or a stative verb. As a stative verb, it is either affixed (nsega') or unaffixed (sega'). Compare the discussion of the root bulag 'blind' in (52), (53), and (54).

35Unlike English, I am uncertain of the direction of the shift in Bonggi. In any case, it does not matter for this study.

36Dixon (1977:62-63) claims that adjectives are a class of lexical items distinguished on morphological and syntactic grounds from the universal classes noun and verb.
Chapter 2 shows how verbs derived from adjectives sometimes have a different form than those derived from nouns.

Adjectives usually function as nominal modifiers which follow the noun they modify, as was illustrated in (35). One of the biggest problems associated with adjectives in Bonggi is distinguishing them from stative verbs. In some cases the distinction is clear-cut, while in others it is not. For example, in (52) the adjective root *bulag* 'blind' follows its nominal head and is unaffixed. Thus, both syntactically and morphologically *bulag* is an adjective in (52). In contrast, the root *bulag* functions syntactically as a verb in (53) and is morphologically marked as a stative verb by the prefix *m*- . On the other hand, in (54) *bulag* functions syntactically as a verb, but looks like an adjective morphologically.

(52) *Sia lama bulag.*
    she person blind
    'SHE is a blind person.'

(53) *Mbulag mata nya.*
    blind eye her
    'HER EYES are blind.'

(54) *Bulag mata nya.*
    blind eye her
    'HER EYES are blind.'

To summarize, this section has provided an overview of the distributional, syntactic, and structural properties which are relevant for distinguishing noun, verb, and adjective roots in Bonggi. None of the properties are definitive, working for all instances of a particular category. Inflectional morphology is not very helpful, since nouns and adjectives are uninflected. Derivational morphology is discussed in Chapter 2 where it is argued that some morphemes are conditioned by the lexical category of the root to which the morpheme is affixed. Thus, derivational morphology provides evidence for lexical categories. The distributional and syntactic evidence discussed above provide the best evidence for the three categories: noun, verb, and adjective.
CHAPTER 2
SITUATION ASPECT IN BONGGI

Whereas §1.3 provided a broad outline of Bonggi clauses and nominal phrases while skirting issues related to verbs, this chapter focuses on the 'verbal group' and its involvement with aspect. Furthermore, whereas §1.3 was descriptive and atheoretical, this chapter approaches the verbal system of Bonggi from the perspective of Role and Reference Grammar (RRG). Specifically, it provides a RRG account of situation aspect (Aktionsart) in Bonggi.

RRG has been chosen as a model because the morphology of Bonggi lends itself to this framework. The primary descriptions of RRG are Foley and Van Valin (1984) and Van Valin (1993) which are referenced here as FVV (1984) and VV (1993) respectively.

RRG is a structural-functionalist theory concerned with the interplay of syntax, semantics, and pragmatics in grammatical systems. All of these factors are important in understanding aspect, as will be shown in Chapter 3. This chapter does not assume a basic knowledge of RRG on the part of the reader. Concepts from RRG are introduced as needed, and the reader is referred to VV (1993) for elaboration of the theory and model. I begin the description of the verb system with a discussion of verbal semantics which is fundamental for any discussion of aspect.

Verbal semantics is primarily concerned with the classification of verbs according to the relationships which exist between predicates and their arguments. The relationship between a predicate and its arguments is expressed by logical structures. It is important to keep in mind that the verb classes described here are semantically defined. Some approaches to verbal semantics attempt to account for the complete semantic content of the predicate, while others seek to identify only the relevant components required for classification. Following Dowty (1979), FVV (1984), and VV (1993), I pay attention to only those aspects of meaning relevant to the classification of
verbs (cf. FVV 1984:35; Jolly 1993:290). Verbs are classified on the basis of their inherent aspectual properties (*Aktionsart*).

RRG starts with the classification of verbs into situation types: states, achievements, activities, and accomplishments (VV 1993:34). As stated in Chapter 1, the notion of situation is basic to understanding Bonggi verb morphology. Other notions like aspect, tense, mood, and subject potential are restricted by the various situation types, and are secondary. The verbal system which is described in this chapter is built around the notion of situation type. Other notions are introduced as needed.

A fundamental distinction in situation types exists between events and nonevents (states). This distinction is captured in Figure 2.1 where events include achievements, activities, and accomplishments. Table 1.1 accounts for this basic distinction in terms of the aspectual feature dynamicity with states being [-dynamic] and events [+dynamic].

![Figure 2.1: Relationship between states and events](image)

RRG posits only a single level of syntactic representation. There is a direct linking between the semantic and syntactic representations. Semantic representations are based on Dowty's (1979) theory of verbal semantics in which verbs are classified into states, achievements, activities, and accomplishments. Each verb class is given a formal representation called its **Logical Structure**

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1Situation is neutral between event and state (Smith 1983:481).

2Cf. Van Valin (1990:222) for a brief overview. See §1.2 for a brief introduction to these four classes in Bonggi.
The inherent aspectual properties associated with each verb class are accounted for in the LSs by predicates and a small set of operators (cf. Dowty 1979:71; Van Valin 1990:223).

Dowty (1979:60) proposed a series of semantic and morphosyntactic tests to delineate each of the four major situation types (cf. Van Valin 1990:223; Van Valin 1991:155). Some of these tests are applicable to Bonggi and others are not.

Clause structure is viewed as hierarchically structured in RRG. The primary constituents of a clause are the nucleus, which contains the predicate, the core, which contains the nucleus and the arguments of the predicate, and the periphery, which is an adjunct to the core and includes nonarguments of the predicate (cf. Van Valin 1993:5). These three clause constituents are semantically motivated by two contrasts: a) between predicate and argument, and b) between arguments and nonarguments (adjuncts).

Although the predicate is usually a verb, there are nonverbal stative clauses in Bonggi whose predicate is either a nominal or a locative. The relationship between situation type and predicate type is summarized in Table 2.1.

<table>
<thead>
<tr>
<th>Predicate type</th>
<th>SITUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State</td>
</tr>
<tr>
<td>Nonverbal</td>
<td>Verb</td>
</tr>
<tr>
<td>nominal</td>
<td>locative</td>
</tr>
</tbody>
</table>

The following sections describe the four situation types, their inherent aspectual properties, and how these situation types and aspectual properties are reflected in Bonggi morphosyntax.
2.1. States

States are static situations with no activity. They last or endure through time, and are homogenous throughout the period of their existence. They are the most noun-like verbal situations in that they are time-stable. Stative situations are basic in the sense that the semantic structure of achievements, most accomplishments, and some activities are derived from states.³

Bonggi stative situations can be divided between verbal and nonverbal situations. Nonverbal stative situations are possible because of the time-stability associated with states and the absence of a copula verb. Nonverbal states include equational/identificational clauses (such as *He is my teacher* (cf. (1)) and certain locative clauses (such as *He is at his house* (cf. (8))). Nonverbal states differ from other states in that their predicate is not a verb. §2.1.1 deals with equational/identificational statives which are always nonverbal. §2.1.2 deals with locative statives, both nonverbal and verbal. §2.1.3 deals with condition statives, §2.1.4 with possession statives, and §2.1.5 with cognition statives.⁴

Dowty (1979:60) presents a number of syntactic and semantic tests used to differentiate the four situation types.⁵ Table 2.2 summarizes tests which have been found to be most useful in differentiating situation types (cf. Van Valin 1991:155). Some of the tests in Table 2.2 are not always useful cross-linguistically and can be very difficult to apply. In theory, these tests are very important because they provide independent criteria for determining situation types and their logical structures (LSs). However, in practice, any tests comparable to those in Table 2.2 which I use for differentiating situation types have been developed in a post hoc fashion. This is because Bonggi verb morphology is quite transparent with respect to situation type. If you know the meaning of the verb root and the verb morphology, the situation type is usually straightforward.

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³Dowty (1979) claimed that stative predicates were the only primitives in the LS, and that all other predicates are derived from statives by means of logical operators.

⁴Cf. FVV (1984:47-53) and VV (1993) for a discussion of the various sub-classes of stative verbs.
However, from an analytical point of view, verb morphology cannot be used to explain situation type because this leads to circular reasoning. That is, we cannot claim both (i) verb morphology determines situation type, and (ii) situation type determines verb morphology. In terms of language learning, Bonggi verb morphology is a very good indicator of situation type. In summary, I learned the verb forms and their function in distinguishing situation types. Then, given the situation types available in Bonggi, I asked what tests comparable to those in Table 2.2 could be established to distinguish the different situations.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>States</th>
<th>Achievements</th>
<th>Accomplishments</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Occurs with progressive</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Occurs with adverbs like vigorously, carefully, etc.</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>3. Occurs with $\phi$ for an hour, spend an hour $\phi$ing</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Occurs with $\phi$ in an hour, take an hour to $\phi$</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

In contrast to the tests used to distinguish situation types, there are no tests to distinguish the various subclasses of situations (cf. Van Valin 1994). The question - How do we know when we have a stative situation? - is answered by reference to the loose semantic notions mentioned at the beginning of this section. That is, states are static situations with no activity. One criterion which

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clearly distinguishes some states from events in Bonggi is whether or not the predicate is a verb. Nonverbal situations are always states; however, states are not always nonverbal.

2.1.1. Equational States

Equational/identificational clauses contain two nominals, as illustrated in (1) by sia 'he' and sigu hu 'my teacher'. The second nominal in equational clauses always identifies or attributes some characteristic to the referent of the first nominal.

(1) Sia sigu hu.
   3sNOM teacher 1sGEN
   'HE is my teacher.'

A general characteristic of states is that they attribute some property to an entity. The type of property which is attributed to the entity influences the type of clause that occurs in syntax. For example, when attributing a social role (such as sigu 'teacher' in (1)) or kinship relation (such as kuman 'uncle' in (2)) to a person (that is, a human entity), the social role or kinship relation is realized as a nominal in syntax and functions as the clause predicate. Thus, an equational/identificational clause can be defined syntactically as a clause with a nominal predicate and semantically as a clause which attributes a social role or kinship relation to an entity.

(2) Sia kuman ku.
   3sNOM uncle 1sGEN
   'HE is my uncle.'

In RRG, thematic relations are not primitives; instead, they are defined in terms of logical structures (LSs) (cf. VV 1993:39, 43). Thus, the assignment of LSs is prior to the assignment of thematic relations. The LS for equational clauses (e.g. (1) and (2)) is shown in (3) (cf. VV 1993:36).

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6Cf. §1.3.1 and §1.3.2 for a discussion of the types of nominals that can occur in Bonggi.

7In contrast to equational clauses, locative clauses occur when the property attributed to an entity is the location of that entity. The location is realized as either a deictic adverb, a locative phrase, or a locative stative verb. See §2.1.2 for a discussion of locative stative situations.
LS for equational states: \( \text{be}'(x,y) \)

The LS in (3) indicates that equational states are two-place stative verbs with 'x' and 'y' being the two arguments.\(^8\) The next step in the analysis of a clause is to assign thematic relations to any arguments in the LS (for instance, 'x' and 'y' in (3)). In RRG thematic relations are derived from the LS. Therefore, the assignment of thematic relations is independently motivated.

The question then becomes what are the thematic relations of 'x' and 'y' in (3) or, more specifically, what are the thematic relations of \textit{sia} 'he' and \textit{kuman ku} 'my uncle' in (2)?\(^9\) Schwartz (1993) takes (3) to be the LS for equational/identificational clauses, and claims the \( \theta \)-roles which are derived from (3) are locative and theme. She argues that in clauses such as (2), \textit{sia} 'he' is the locative argument and \textit{kuman ku} 'my uncle' the theme (cf. VV 1993:40). Thus, the theme argument is the attribute, and the locative argument is the bearer of the attribute (cf. Van Valin 1990:234).

In RRG, \( \theta \)-roles are said to be language independent; the first argument 'x' of two-place equational stative verbs being a locative, and the second argument 'y' a theme. I return to the question of \( \theta \)-roles after introducing the notion of macrorole.

RRG posits two tiers of semantic roles (VV 1993:39). \texttt{Actor} and \texttt{undergoer} are the two primary arguments of a transitive predicate, either one of which may be the single argument of an intransitive verb (VV 1993:43). \texttt{Actor} and \texttt{undergoer} correspond to 'logical subject' and 'logical object' (VV 1993:43, 46).\(^{10}\) \texttt{Actor} and \texttt{undergoer} are called macroroles because each subsumes a number of specific thematic relations. Macroroles are motivated by the fact that in grammatical constructions, groups of thematic relations are treated alike (VV 1993:43). The number of macroroles a verb takes is either 0, 1, or 2, and is largely predictable from the LS of the verb (VV 1993:46-47).

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\(^8\) FVV (1984) took the position that equational clauses are one-place stative verbs whose LS is \texttt{predicate}'(x). Van Valin (1990; 1993) has since revised this position.

\(^9\) Various solutions have been offered; see Schwartz (1993) for discussion.
The relationship between the macrorole tier and thematic relation tier is captured in the Actor-Undergoer Hierarchy in (4) (cf. FVV 1984:59; VV 1993:44). This double hierarchy states that the thematic relation that is leftmost on the cline and either agent, effector, experiencer, or source will be the actor, and the thematic relation that is rightmost and either patient, theme, goal, locative, or experiencer will be the undergoer. This is the unmarked situation; marked assignments to undergoer are possible.

(4) **Actor-Undergoer Hierarchy**

Macrorole tier: \[ \text{ACTOR} \rightarrow \text{UNDERGOER} \]

Thematic relation tier: Agent Effector Experiencer Locative Theme Patient \[ \text{Source} \quad \text{Goal} \]

\[ \rightarrow = \text{increasing markedness of realization of thematic relation as macrorole} \]

Recently, Van Valin (personal communication) has reformulated the Actor-Undergoer Hierarchy as (5) where reference is not made to thematic roles at all, only to LS argument positions.\(^{11}\)

(5) **Actor-Undergoer Hierarchy (Revised)**

Macrorole tier: \[ \text{ACTOR} \rightarrow \text{UNDERGOER} \]

Arg of DO Arg of do' 1st arg of \(\text{pred}'(x,y)\) 2nd arg of \(\text{pred}'(x,y)\) Arg of state \(\text{pred}'(x)\)

\[ \rightarrow = \text{increasing markedness of realization of argument as macrorole} \]

The revised Actor-Undergoer Hierarchy in (5) is based on the RRG position that \(\theta\)-roles are not independently motivated. In fact, according to the view in (5), \(\theta\)-roles are nothing more than mnemonics for argument positions (cf. VV 1993; Wilkins & Van Valin 1993). This alleviates the problem of \(\theta\)-role assignment which has plagued linguists since Fillmore (1968).

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\(^{10}\)Actor and undergoer are similar to Dowty's protoroles (VV 1993:154, footnote 25).

\(^{11}\)The LS argument positions in (5) are described later in this chapter.
Given: a) the revised hierarchy in (5), and b) the LS for equational clauses in (3), the question of thematic relations posed above does not even arise. The second argument of \textit{predicate}' (x,y) is the unmarked undergoer since it is rightmost on the cline in (5). However, given: a) the hierarchy in (4), b) the LS in (3), and c) the RRG claim that the first argument 'x' of two-place equational stative verbs is a locative, and the second argument 'y' a theme (Schwartz 1993; VV 1993), then the theme is the unmarked undergoer since it is rightmost on the cline in (4). Thus, in both instances, it is expected that in (2) \textit{kuman ku} 'my uncle' would be the undergoer, but this is not what happens in equational clauses. In equational/identificational clauses, the second argument (or theme) 'y' is incorporated into the predicate resulting in a nominal predicate (cf. Van Valin 1990:234; Van Valin 1993:40; Schwartz 1993:447). The second argument in the LS of equational clauses is never realized syntactically as an argument. This is captured by the rule in (6) (cf. Van Valin 1990:234; Schwartz 1993:447).\footnote{The rule in (6) is stated in terms of thematic roles and the Actor-Undergoer Hierarchy in (4). It could just as well be stated in terms of argument positions and the hierarchy in (5); i.e., \textit{be} + the 2nd argument of \textit{predicate}' (x,y) \xrightarrow{} \textit{predicate}.}

\footnote{I show later that some functionally marked undergoers are accompanied by corresponding morphological marking which is absent in equational clauses such as (1) and (2).}

\begin{itemize}
\item \begin{align*}
(6) \hspace{1cm} \text{EQUATIONAL PREDICATE CREATION:} \\
\text{be}' + \text{theme} \rightarrow \text{predicate}
\end{align*}
\end{itemize}

The result of (6) is that there is only one argument which can be the undergoer in both (1) and (2), the first argument (or locative argument) 'x'. This results in a marked linking in terms of the hierarchy in either (4) or (5). Stated another way, the undergoer is functionally marked.\footnote{I show later that some functionally marked undergoers are accompanied by corresponding morphological marking which is absent in equational clauses such as (1) and (2).}

Because the theme argument is incorporated into the predicate by (6), it is not available as a syntactic argument. Thus, \textit{sia} 'he' is linked to undergoer in both (1) and (2) (cf. Van Valin 1990:234).

To summarize what has been said with respect to LSs, argument positions, thematic roles, and the Actor-Undergoer Hierarchy, LSs are primitives, and semantic arguments such as 'x' and 'y' are
included in LSs. On the other hand, thematic roles are not primitives. Within RRG, thematic roles are traditionally defined in terms of LSs. This has been done by assigning semantic labels such as ‘theme’ to argument positions in the LS. Some thematic roles are then linked to macroroles (actor or undergoer) following the hierarchy in (4). More recently, Van Valin suggests doing away with thematic roles all together, and simply linking argument positions in the LS to the macroroles following the hierarchy in (5).

Normally, arguments in the LS are linked to argument positions in syntax. However, the analysis presented here requires that the second argument in the LS of equational states be incorporated into the predicate, so that only one of the two LS arguments is linked to an argument position in syntax. Restated in terms of thematic roles, the analysis presented here requires that the theme argument be incorporated into the predicate, so that only one of the two thematic roles is linked to an argument position in syntax (cf. Schwartz 1993:442). This analysis asserts that although nominals normally function as arguments, they can also function as predicates. Thus, nominals such as sigu hu ‘my teacher’ in (1) and kuman ku ‘my uncle’ in (2) are predicates which are neither assigned a thematic role nor linked to an argument position in syntax. In Bonggi equational clauses, the attribute functions as the predicate.

Once thematic roles have been assigned to macroroles, the next step is to assign actor and undergoer to specific morphosyntactic statuses (VV 1993:76). The most important syntactic function is the subject or pivot. The pivot is the primary argument in a syntactic construction. The highest ranking macrorole is assigned to the pivot. Bonggi is syntactically an accusative language. The Pivot Choice Hierarchy for syntactically accusative languages is shown in (7) with the leftmost item being the least marked pivot choice (cf. VV 1993:59).

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15Cf. Schwartz's (1993:443) discussion of Dakota. She uses the term 'identificational', whereas VV (1993:39) uses the term 'equational.' I use these terms interchangeably.
According to the hierarchy in (7), the undergoer *sia 'he' in both (1) and (2) is assigned the status of syntactic pivot since it is the only available macrorole.

Part of the process involved in assigning actor and undergoer to specific morphosyntactic statuses is case and preposition assignment. The pivot is always assigned nominative case. As pointed out in §1.3.1, pivots (subjects) are marked in one of three ways in Bonggi: (a) the special particle *si* for personal names, (b) nominative case pronouns, or (c) word-order. For example, because the pivot in (1) is a pronoun, it is assigned nominative case and the form is *sia 'he' (cf. Table 1.2). On the other hand, nominals such as *sigu hu 'my teacher' in (1) cannot be replaced by a pronoun and assigned case. The absence of pronominal forms and case strengthens the argument stated above that attribute nominals in equational clauses (e.g. *sigu hu 'my teacher' in (1)) are not linked to an argument position in syntax.

The pivot choice hierarchy in (7) claims that the actor is the unmarked choice for syntactic pivot in a clause. However, equational clauses have only one macrorole, an undergoer, which must be the syntactic pivot. Choosing a pivot other than the actor is only a marked pivot choice when there is also an actor macrorole.

In summary, equational states occur in Bonggi syntax as nonverbal clauses whose predicate is a nominal which refers to the attribute ascribed to the clause pivot. Unlike verbal predicates which index or cross-reference the clause pivot (subject) in the verb morphology,\(^\text{16}\) nonverbal predicates are not cross-referenced.

\(^{16}\text{See the discussion of verbal indexing (or cross-referencing) in §1.3.1, following examples (18), (19), (20), (21), and (22). The affixes involved in verbal cross-referencing are often referred to as voice affixes (e.g. de Guzman 1986:349). De Guzman concludes that identificational clauses in Tagalog are also nonverbal, and the predicate is nominal. However, her paper primarily deals with cleft constructions which are derived from equational/identificational clauses like those described in this section.}
The analysis of equational states presented in this section is dependent upon the lexical rule of argument incorporation found in (6). Although a claim has been made that incorporation takes place, what remains to be accounted for is evidence for incorporation. Evidence for incorporation includes: a) impossibility of case assignment to the incorporated argument; and b) impossibility of prepositions occurring with the incorporated argument.

2.1.2. Locative States

This section introduces locative states, whereas later sections show how some verbs are derived from these statives. There are two types of locative stative clauses in Bonggi, nonverbal and verbal. I begin with a description of nonverbal locative clauses followed by verbal locative clauses.

Nonverbal clauses are defined as clauses whose predicate is not a verb. The previous section showed that Bonggi equational statives are always nonverbal, and the predicate is a nominal. Like equational statives, many locative stative clauses in Bonggi are nonverbal.

As pointed out in the previous section, a general characteristic of states is that they attribute some property to an entity. When the property attributed to an entity is the location of that entity, the result is a locative clause. In nonverbal locative clauses, the location is realized in syntax as either a deictic adverb or a locative prepositional phrase, and the deictic or preposition functions as the clause predicate. Thus, a nonverbal locative clause can be defined as a clause with a deictic or prepositional predicate. A nonverbal locative clause with a locative prepositional phrase is illustrated in (8).

(8) Sia ddi bali nya.
   3sNOM at house 3sGEN
   'HE is at his house.'

Locative stative predicates have the two-place abstract predicate, be-at' (x,y) in their LS (Jolly 1993:277). The LS for locative statives (including (8)) is shown in (9).

(9) LS for locative statives: be-at' (x,y)
According to an RRG analysis in terms of thematic roles (cf. §2.1.1), the first argument 'x' of two-place locative stative verbs is a locative, and the second argument 'y' a theme (VV 1993:40). For example, in (8) bali nya 'his house' is a locative argument, sia 'he' a theme, and the predicate is the preposition dii 'at'.

As stated in §2.1.1, the number of macroroles a verb takes is either Ø, 1, or 2, and is normally predictable from the LS of the verb. That is, if there are two or more arguments in the LS of a verb, then the verb takes two macroroles in the default situation. The nature of the macroroles is also derived from the verb's LS. Macrorole assignment principles are summarized in (10) (cf. Van Valin 1990:227; Van Valin 1993:47).

(10) GENERAL MACROROLE ASSIGNMENT PRINCIPLES:

a. Number: the number of macroroles a verb takes is less than or equal to the number of arguments in its LS.
   1. If a verb has two or more arguments in its LS, it will take two macroroles.
   2. If a verb has one argument in its LS, it will take one macrorole.

b. Nature: for verbs which take one macrorole,
   1. If the verb has an activity predicate in its LS, the macrorole is actor.
   2. If the verb has no activity predicate in its LS, the macrorole is undergoer.

According to the default situation in (10a.1), (8) should have two macroroles since its LS in (9) has two arguments 'x' and 'y'. However, (8) is a nonverbal locative clause, and such clauses are an exception to (10a.1) in that they have only a single macrorole. That is, these clauses are an exception to the default situation in (10a.1), but they do not contradict the general principle in (10a). The nature of the single macrorole is predictable from (10b); that is, the single macrorole in (8) is an undergoer since there is no activity predicate in its LS in (9).17

Following the Actor-Undergoer Hierarchy in (4), the theme argument is the unmarked choice for undergoer since it is the rightmost of the two thematic relations (locative and theme). Thus, in (8) the theme argument (sia 'he') is assigned the macrorole status undergoer. Furthermore, because the undergoer is the only macrorole available, it is assigned to the pivot according to the Pivot

17 Activities and subclasses of activity predicates are described in §2.3. Activity predicates are defined as predicates with do' in their LS.
Choice Hierarchy in (7). As pointed out earlier, the pivot is always assigned nominative case. Therefore, because the undergoer-pivot in (8) is a pronoun, it is assigned nominative case and the form is sia 'he' (cf. Table 1.2).

It is important to keep in mind that the LSs described here provide only a partial semantic representation of the verb and clause structure. Furthermore, the LS in (9) represents the class of locative statives, and not simply the LS of (8). Thus, the presence of be-at' in (9) does not mean that surface syntax must contain a locative phrase introduced by dii 'at' as in (8). Instead, any member of certain sets of locative elements including dii 'at' can occur. Dii itself can be a preposition as in (8) or a locative adverb.18 There are two sets of spatial deictic adverbs in Bonggi. The first set, which includes dii 'there', refers to specific locations which are relative to the speaker as shown in Table 2.3.

Table 2.3: Specific spatial deictics

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>diti</td>
<td>'here' (near speaker)</td>
</tr>
<tr>
<td>dia</td>
<td>'there' (near addressee)</td>
</tr>
<tr>
<td>dioo</td>
<td>'there' (not near speaker or addressee, but usually visible)</td>
</tr>
<tr>
<td>dii</td>
<td>'yonder' (not visible)</td>
</tr>
</tbody>
</table>

The second set of spatial deictics, which are shown in Table 2.4, refer to nonspecific spatial deictics; that is, they are more vague or have more approximate locations than their counterparts in Table 2.3.

18Although locative adverbs and locative prepositional phrases belong to different word classes, they have the same function. Adverbs can be seen as abbreviated prepositional phrases.
Table 2.4: Nonspecific spatial deictics

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>kati'</td>
<td>'somewhere here' (near speaker)</td>
</tr>
<tr>
<td>kana'/kono'</td>
<td>'somewhere there' (near addressee)</td>
</tr>
<tr>
<td>kenoo</td>
<td>'somewhere there' (not near speaker or addressee, but usually visible)</td>
</tr>
<tr>
<td>kuii'</td>
<td>'somewhere wonder' (not visible)</td>
</tr>
</tbody>
</table>

The unmarked or basic locative preposition is *dii* 'at' which can be combined with other spatial prepositions to form more complex locative meanings as in (11) and (12).19

(11) *Sia dii soid bali nya.*
    3sNOM at inside house 3sGEN
    'HE is inside his house.'

(12) *Sia dii sodi diaadn.*
    3sNOM at beside IsACC
    'HE is beside me.'

Based on the analytical steps introduced above, (13) is a summary analysis of (11).

(13) a. LS :
    b. Assign thematic relations: *be-at' (x,y)*  
       x=locative, y=theme
    c. Assign semantic macroroles:  
       *bali nya* 'his house' ← locative20
       *sia* 'he' ← theme
    d. Assign syntactic functions:  
       pivot ← undergoer-*sia* 'he'
       oblique argument ← locative-*bali nya* 'his house'
    e. Assign case and prepositions:  
       pivot-*sia* 'he' ← nominative case
       locative-*bali nya* 'his house' ← oblique case

(13a) indicates that the LS for (11) is the same as that shown in (9) for (8). Furthermore, (13a) claims that, as always, the first argument 'x' of locative statives is a locative and the second 'y' a theme. (13b) assigns the thematic relations locative and theme to specific elements in (11).

19Cf. Jolly (1993:290) for references supporting the choice of 'at' as the basic locative.

20The symbol ← is used to mean 'assigned', with the assignment being in the direction of the arrow.
Nonverbal locative clauses (e.g. (8), (11), and (12)) have two thematic roles, but only one core syntactic argument position and one macrorole. This corresponds to the general principle in (10a), whereby a predicate can have fewer macroroles than it has arguments in its LS. The nature of the single macrorole is predictable from (10b); since there is no activity predicate in the LS in (13a), the single macrorole has to be an undergoer. (13c) claims that theme is assigned to undergoer which is the single macrorole. The assignment of theme to undergoer follows from the Actor-Undergoer Hierarchy in (4), since theme is the rightmost of the two thematic relations (locative and theme). (13d) assigns the undergoer (sita 'he') to the syntactic status of clause pivot according to the Pivot Choice Hierarchy in (7), and it assigns the locative argument to the syntactic status of oblique argument. Finally, (13e) shows that the pivot is assigned nominative case and the locative argument oblique case.

In locative stative situations the theme (the figure in gestalt terms) is located with respect to a point of reference (the ground or location) (cf. Talmy 1985:61). The point of reference (ground/location) does not have to be an inanimate object incapable of movement as shown by diaaddn 'me' in (12). A summary analysis of (12) would be the same as that provided for (11) in (13), with the exception of diaaddn 'me' being assigned the thematic relation locative in (13b) and the assignment of accusative case to diaaddn 'me'.

As stated above, dii 'at' is the basic locative preposition which combines with other spatial prepositions as shown in Table 2.5.

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21In nonverbal locative clauses the locative argument is always an oblique argument which is preceded by an oblique marker.

22The assignment of case and adpositions is discussed in more detail below. The locative elements dii 'at', dii soid 'inside', and dii sodi 'beside' in (8), (11), and (12) respectively function as both predicates and prepositions in these clauses.
Table 2.5: Locative preposition combinations

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>dii libuat</td>
<td>on top of</td>
<td>dii sidukng</td>
<td>below; underneath</td>
</tr>
<tr>
<td>dii sirib</td>
<td>below; underneath</td>
<td>dii soid</td>
<td>inside&lt;sup&gt;23&lt;/sup&gt;</td>
</tr>
<tr>
<td>dii ruar</td>
<td>outside</td>
<td>dii sodi</td>
<td>beside; in the vicinity of</td>
</tr>
<tr>
<td>dii tingguangan</td>
<td>in the face of</td>
<td>dii kimidiadn</td>
<td>behind; after</td>
</tr>
<tr>
<td>dii puguluadn</td>
<td>before; in front of</td>
<td>dii simbela'</td>
<td>on the side; on the other side</td>
</tr>
<tr>
<td>dii tenga'-tenga'</td>
<td>in the middle of</td>
<td>dii seborokng</td>
<td>on the other side of a body of water</td>
</tr>
</tbody>
</table>

Because the LS in (9) represents the class of locative statives, any of the spatial deixtics in Tables 2.3 or 2.4, or any of the prepositions in Table 2.5 could function as the predicate in a nonverbal locative clause. For example, the predicate in (14) is the spatial deictic *kati'* 'somewhere here'.

(14)  *Sia  kati*.
       3sNOM  here, somewhere
       'HE is somewhere here.'

The locative states discussed thus far have all been nonverbal (e.g. (8), (11), (12), and (14)). Nonverbal locative clauses are defined as clauses whose predicate is either a deictic adverb (e.g. (14)) or a locative preposition (e.g. (8), (11), and (12)). Verbal locative clauses are defined as clauses whose predicate is a stative verb. Such verbs are derived from adjective roots which have a locative meaning. Sentence (15) provides an example of the locative stative verb *mingad* 'ST-near'.

(15)  *Sia  m-ingad bali nya*.
       3sNOM  ST-near  house  3sGEN
       'HE is near his house.'

<sup>23</sup>*Dii soid* 'inside' is the correct pronunciation in the Limbuak Darat cluster, while *dii soig* 'inside' is the correct pronunciation in the Palak Darat cluster (cf. §1.1).
Thus far, I have discussed LSs as a general property of clauses; for example, be' (x,y) is the LS for equational stative clauses (cf. (3)), and be-at' (x,y) is the LS for locative stative clauses (cf. (9)).

A distinction is made between general LSs and clause-specific LSs. For example, the general LS for locative statives (e.g. (15) and (8), repeated here as (16)) is shown in (17a), whereas the clause-specific LS for (15) is provided in (17b) and the clause-specific LS for (16) in (17c).

(16) *Sia dii bali nya.*

3sNOM at house 3sGEN

'HE is at his house.'

(17) a. General LS for locative statives: be-at' (x,y)  

b. Clause-specific LS for (15): ingad 'near' (bali nya 'his house', sia 'he')

c. Clause-specific LS for (16): dii 'at' (bali nya 'his house', sia 'he')

A summary analysis of (15) is provided in (18).

(18) a. General LS for locative statives: be-at' (x,y)  

b. Clause-specific LS for (15): ingad 'near' (bali nya 'his house', sia 'he')  

bali nya 'his house' ← locative

sia 'he' ← theme

c. Assign semantic macroroles: undergoer ← theme  

d. Assign syntactic functions: pivot ← undergoer-sia 'he'  

direct core syntactic argument ← locative-bali nya

'his house'

e. Assign case and prepositions: pivot-sia 'he' ← nominative case  

direct core argument-bali nya 'his house' ← accusative case (Ø)

f. Cross-reference verb: ingad 'near' ← m- 'ST'

(18a) provides the general LS for all locative stative clauses, both verbal and nonverbal (cf. (13a)). (18b) repeats the clause-specific LS for (15) (cf. (17b)). (18c) assigns the thematic relations locative and theme to specific elements in (15). (18d) assigns the theme sia 'he' to undergoer following the Actor-Undergoer Hierarchy in (4). (18e) assigns the undergoer (sia 'he') to the syntactic status of clause pivot according to the Pivot Choice Hierarchy in (7), and it assigns

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24 Equational clauses are nonverbal stative clauses whose predicate is a nominal. Locative clauses are stative clauses whose predicate is either verbal (e.g. (15)) or nonverbal in which case the predicate is a deictic adverb (e.g. (14)) or a locative preposition (e.g. (8), (11), and (12)).

25 Cf. the summary analysis of (11) found in (13).

26 Common nouns such as bali 'house' are not case marked which is indicated by (Ø).
the locative argument to the syntactic status of direct core syntactic argument.\(^{27}\) (18f) assigns nominative case to the pivot, and accusative case to the other direct core argument. (18g) cross-references the verb with the prefix \(m\)-.

Previous discussion did not include cross-referencing the verb because the predicate of nonverbal clauses is not cross-referenced. However, verbal clauses such as (15) usually require verbal cross-referencing. The verbal cross-referencing system has traditionally been called a "focus" system within Philippine linguistics, with one NP in a clause indexed by the morphology of the verb as being "in focus." The role of the verb morphology is usually considered as encoding voice distinctions or the semantic role of the NP. Only one NP is cross-referenced and it is the pivot. The undergoer-theme in locative clauses is cross-referenced by the verbal prefix \(m\)- when the predicate is a stative verb.

Besides the distinction between general LSs and clause-specific LSs is the distinction between semantic arguments and syntactic arguments. Semantic arguments refer to arguments in the LS such as 'x' and 'y' in (17a). The arguments in the LS of a VERB provide a strict definition of core semantic arguments (VV 1993:40). In the simple case, there is a one-to-one correspondence between the number of arguments in the LS of a verb and the number of arguments in syntax. This is clearly the case in (18b) and (15), where there are two semantic arguments in the LS in (18b) and two syntactic arguments in (15).

In some instances, however, there are arguments in the general LS which do not occur in syntax. For example, the general and clause-specific LSs for (19) are shown in (20a) and (20b).

\(^{27}\)Cf. the assignment of the locative argument to the syntactic status of direct core argument in (18c), with the assignment of the locative argument to the syntactic status of oblique argument in (13d). Like nonverbal locative clauses, the locative argument in verbal locative clauses can be assigned the syntactic status of oblique argument. For example, in (15) the locative argument, \(bali\ nya\ 'his house', can be preceded by the oblique marker \(dii\ 'at'.\)
The predicate in (19) is \textit{dii} 'there',\(^{28}\) the theme is \textit{sia} 'he', and there is no locative argument present.

The absence of a locative argument in syntax is accounted for in the clause-specific LS of (20b), where the locative argument is unspecified being filled by "\textit{O}".\(^{29}\)

\begin{align*}
(19) & \quad \textit{Sia dii.} \\
& \quad 3s\text{NOM} \textit{there} \\
& \quad '\text{HE is there}'
\end{align*}

(20) a. General LS for locative statives: \textit{be-at} (x,y) \text{ x=locative, y=theme} \\
b. Clause-specific LS for (19): \textit{dii} 'there' (\textit{O}, \textit{sia} 'he')\(^{30}\)

To summarize, locative states occur in Bonggi syntax as either verbal or nonverbal clauses.

The locative is realized morphosyntactically as a stative verb in verbal clauses, and functions predicatively in nonverbal clauses.

\subsection*{2.1.3. Condition States}

The previous two sections have provided an overview of two types of stative situations in Bonggi. The former section showed that the function of equational/identificational clauses is to attribute a social role (including kinship relation) to an entity, whereas the latter showed that the function of locational clauses is to attribute a location to an entity. It was also pointed out that the predicate of the former is always realized as a nominal, whereas the predicate of the latter is realized as either a deictic adverb, a locative preposition, or a stative verb.

This section provides strong grounds, both semantically and morphosyntactically, for distinguishing locative statives from condition statives. It begins with a description of the simplest kind of verbal stative situations which are one-place condition stative clauses. The function of

\footnotesize

\(^{28}\)Recall that \textit{dii} 'there/at' can be either a spatial deictic as in (19) (cf. Table 2.3) or a preposition as in (16). In both of these instances, \textit{dii} functions as the predicate of a locative clause. For instances where \textit{dii} functions as a simple preposition see §1.3.1, examples (25) and (26).

\(^{29}\)Cf. VV (1993:156; fn. 46).

\(^{30}\)A similar clause-specific LS can be provided for (14).
condition stative clauses is to attribute a quality to an entity. The predicate of these clauses is always a stative verb. Sentence (21) illustrates a condition stative clause.

(21) Sia ng-korikng (m-koring).
3sNOM ST-dry
'T it is dry.'

The logical structure for condition statives is shown in (22).

(22) LS for condition statives: predicate' (x)

According to Van Valin (1993:39-40), the single argument of a one-place stative verb is a patient. Based on the analytical steps introduced in the previous two sections, (23) is a summary analysis of (21).

(23) a. General LS for condition statives: predicate' (x) x=patient
b. Clause-specific LS for (21): korikng 'dry' (sia 'it')
c. Assign thematic relations: sia 'it' ← patient
d. Assign semantic macroroles: undergoer ← patient 1 Macrorole
e. Assign syntactic functions: pivot ← undergoer-sia 'it'
f. Assign case and prepositions: pivot-sia 'it' ← nominative case
g. Cross-reference verb: korikng 'dry' ← m- 'ST'

---

31 Morphophonemic alternations in Bonggi verbs are complex. Roots and accompanying verbal affixes are enclosed in parentheses following the surface forms. Within roots, nasals are always homorganic with contiguous consonants. The following nasal assimilation rule makes nasal consonants homorganic with following nonsonorant consonants.

**Nasal assimilation:**

\[ C^{[+\text{nasal}]} \rightarrow [\text{\textalpha\text{-anterior}}] / \text{\textbeta\text{-coronal}] / [\text{\textalpha\text{-anterior}}] \]

The nasal assimilation rule is ordered after vowel epenthesis which inserts vowels between prefixes and certain consonants in order to avoid impermissible syllable structures. The vowel epenthesis rule is:

**Vowel epenthesis:**

\[ \emptyset \rightarrow [\text{\textalpha\text{-F}}] / [+\text{prefix}] + _{[+\text{sonorant}] [+\text{continuant}] } [\text{\textalpha\text{-F}}] \]

The vowel epenthesis rule is ordered before a prefix vowel harmony rule. The condition stative verb mi-gia 'ST-big' (m-gia) is an exception to the rule of vowel epenthesis. As shown in (24), roots whose initial consonant is /g/ such as garakng 'ferocious' are normally preceded by /ŋ/ 'ng'.

According to (10a.2), the verb takes one macrorole since it has only one argument in its LS. The nature of the single macrorole is predictable from (10b.2). Since there is no activity predicate in the LS in (23a), the single macrorole has to be an undergoer.\(^{32}\) (23c) assigns the thematic relation patient to the single argument in (21), and (23d) assigns the patient (*sia 'it') to undergoer. (23e) assigns the undergoer (*sia 'it') to the syntactic status of clause pivot according to the Pivot Choice Hierarchy in (7).\(^{33}\) (23f) assigns nominative case to the pivot, and (23g) cross-references the verb with the prefix *m*-.

Since the attributes which are attributed to entities by condition stative clauses are qualities, it is not surprising that many condition stative verbs are derived from adjective roots. For example, the root *koring* 'dry' in (21) is an adjective root. Other condition stative verbs which are derived from adjective roots are shown in (24). The roots are arranged according to how *m*- is realized.

\[
\begin{array}{llll}
\text{m-ayad} & \text{ST-pretty} & \text{n-dalabm} & \text{ST-deep} \\
\text{m-onta} & \text{ST-unripe} & \text{n-doot} & \text{ST-bad} \\
\text{m-ingi} & \text{ST-crazy} & \text{n-dupakng} & \text{ST-foolish} \\
\text{m-iskidn} & \text{ST-poor} & \text{n-duruk} & \text{ST-fast} \\
\text{m-omis} & \text{ST-sweet} & \text{n-sega'} & \text{ST-red} \\
\text{m-udap} & \text{ST-hungry} & \text{n-tiuhukng} & \text{ST-crooked} \\
\text{m-panas} & \text{ST-hot} & \text{n-togi'} & \text{ST-pregnant} \\
\text{m-pia} & \text{ST-good} & \text{n-took} & \text{ST-ripe} \\
\text{m-pagadn} & \text{ST-difficult} & & \\
\text{m-pala} & \text{ST-spicy} & & \\
\text{m-puti'} & \text{ST-white} & & \\
\text{m-basa'} & \text{ST-wet} & & \\
\text{m-basa} & \text{ST-generous} & & \\
\end{array}
\]

\[
\begin{array}{llll}
\text{n-/} & \text{mV-/} \\
\text{ng-garakng} & \text{ST-ferocious} & \text{me-lambat} & \text{ST-slow} \\
\text{ng-gitiukng} & \text{ST-dizzy} & \text{me-langgu} & \text{ST-long} \\
\text{ng-kapal} & \text{ST-thick} & \text{mi-libuat} & \text{ST-high} \\
\text{ng-korikng} & \text{ST-dry} & \text{mi-liug} & \text{ST-tall} \\
\text{ng-kotul} & \text{ST-hard} & \text{me-ramig} & \text{ST-cold} \\
\end{array}
\]

\(^{32}\)Condition statives are like equational statives (cf. §2.1.1) and nonverbal locative statives (cf. §2.1.2) in that they all have a single macrorole which is an undergoer according to (10b.2).

\(^{33}\)In one-place condition stative constructions, the undergoer is always the pivot which is the noun phrase that is crucially involved in a syntactic construction (Foley & Van Valin 1984:110).
Not all adjectives have the same status with respect to their potential for stative verb affixation. The adjective roots in (25) can occur as condition stative predicates, but there is no accompanying nasal prefix m-: 34

(25) alus 'fine'  arabm 'forbidden' baru 'new' biru 'blue' senang 'easy'

§2.1.2 pointed out that in some instances there are arguments in the general LS which do not occur in the syntax. Such arguments are unspecified in the clause-specific LS, being indicated by "Ø" (e.g. (20b)). In other instances, there are adjuncts in syntax which are not part of the LS of the verb, but are included in the clause-specific LS. For example, condition stative verbs such as ngkorikng 'ST-dry' in (21) have a single syntactic argument which is semantically a patient. 35

However, these clauses can have an optional adjunct such as ga' odu 'from the sun' in (26). 36

(26) Sia  ng-korikng (m-koring) ga' odu.
3sNOM  ST-dry  from sun
'IT is dry from the sun.'

The preposition ga' 'from' has an adjunct or predicative function in that it takes the entire LS of the verb as one of its arguments. According to Jolly (1987) and (1993), prepositions are divided into three classes within the RRG framework. Prepositions which have an adjunct function, such as ga' 'from', are not case-marking (Jolly 1993:275, 281). The preposition ga' 'from' has a causative meaning. 37 Causality is expressed either directly or indirectly. Accomplishment verbs

34 Perhaps the absence of a nasal prefix with alus 'fine' and arabm 'forbidden' arises from their being borrowed from Malay halus 'fine' and haram 'unlawful; forbidden'. /h/ is phonemic in Malay, but not in Bonggi. However, the presence of word-initial /h/ in the source language does not block affixation in all cases. See the discussion of achievement verbs in §2.2, especially kemalus 'become-fine' and kem-arabm 'become-forbidden' in (76). The presence of baru 'new' and biru 'blue' in Malay may also be the reason for the absence of nasal prefixes in the Bonggi forms.

35 See (22) for the general LS.


37 Cf. Jolly (1987:104-06) and (1993:293-97) for a discussion of the English preposition from in its adjunct or predicative function.
express causality directly which is reflected in their LS by the logical operator CAUSE (cf. §2.4). On the other hand, statives and achievements express causality indirectly, which is reflected in their LS by ga’‘from’ (cf. Jolly 1993:294).38

A summary analysis of (26) is provided in (27). Sentence (26) describes an antecedent cause (ga’ odu 'from the sun') and a resulting/consequent state (sia ngkorikng 'it is dry'). This is seen in (27b) where 'x' refers to the antecedent cause and predicate' (y) to the resulting state.39 As seen in (27a), the general LS for one-place condition statives does not contain an antecedent cause; however, (27b) indicates that there is an indirect cause in the clause in question. Two clause-specific LSs are provided in (27b). The latter is the same as the former with the exception that the Bonggi arguments and predicate are provided in the latter. In (27b) the preposition ga’‘from' takes the entire LS of the verb as one its arguments (cf. Jolly 1993:287). The first argument of ga’ ‘from' in (27b) is 'x' which is an antecedent cause, a subtype of effector.

(27) a. General LS for condition statives: \(\text{predicate'}(x)\)  \(x=\text{patient}\)

b. Clause-specific LS for (26): \(\text{from}'(x, [\text{predicate'}(y)])\)

\(x=\text{antecedent cause},\) \(y=\text{patient}\)

\(\text{resulting state,}\)

c. Assign thematic relations: ga’‘from’ (odu 'sun', [korikng 'dry' (sia 'it')])

d. Assign semantic macroroles: sia 'it' \(\leftarrow\) patient

odu 'sun' \(\leftarrow\) effector (antecedent cause)

e. Assign syntactic functions: undergoer \(\leftarrow\) patient

pivot \(\leftarrow\) undergoer-sia 'it'

f. Assign case and prepositions: oblique adjunct \(\leftarrow\) effector (antecedent cause)-odu 'sun'

pivot-sia 'it' \(\leftarrow\) nominative case

effector (antecedent cause)-odu 'sun' \(\leftarrow\) oblique ga’‘from'

g. Cross-reference verb: korikng 'dry' \(\leftarrow\) m- 'ST'

According to the Actor-Undergoer Hierarchy in (4), the antecedent cause should be assigned to actor since it is a subtype of effector, but it is not (cf. (27d)). The preposition ga’‘from' marks

38Cf. the discussion of cause satellites in Hokan languages in Talmy (1985:111-13).

39Jolly (1993:294) suggests that an analysis such as that provided in (27b) is provisional. She provides a more detailed interval analysis for similar clauses in English.
effectors which would be expected to occur as actor in terms of the hierarchy in (4), but do not (cf. FVV 1984:87; Jolly 1993:280). The antecedent cause cannot function as an actor because it is an adjunct, not an argument of the verb. Recall that actor and undergoer are arguments of the predicate. Since there is no actor, the undergoer is the pivot in (26) in accordance with the Pivot Choice Hierarchy in (7) (cf. (27e)). In fact, condition stative clauses cannot have an actor; thus, the pivot is always an undergoer. An explanation for the absence of an actor is found in the general LS for condition statives (cf. (27a)) where the single argument is a patient which is linked to undergoer. That is, condition stative verbs can only have an effector if it occurs as an optional adjunct; under no circumstance can the effector be linked to actor or become the clause pivot. The key point here is that the GENERAL MACROROLE ASSIGNMENT PRINCIPLES in (10) apply to verbs and not clauses. Thus, for example, the principles in (10) apply to (27a) and not (27b). According to (10a.2), the verb has one macrorole since there is only one argument 'x' in the LS in (27a). If the principles in (10) were to apply to (27b), one might be misled to conclude that there are two macroroles since there are two semantic arguments 'x' and 'y'. The application of principle (10b.2) to (27a) results in the single macrorole being an undergoer (cf. (27d)). The absence of an available actor explains why the antecedent cause cannot be linked to an actor (cf. above).

One function of logical structures is to show the relationship between a predicate and its arguments. In RRG the semantic representation of verbs is accounted for in terms of LSs, which are the main portion of the lexical entry for a verb (cf. VV 1993:39, 43). Thus, we can talk about the LS of clauses (which contain a predicate, its arguments, and adjuncts), or the LS of verbs (which are the most common type of predicate). In many cases the LS of the clause is equivalent to the LS of the verb of that clause. However, this is not necessarily so. For instance, optional adjuncts (nonarguments) such as time, manner, and in some instances causality, are not associated with the LS of verbs, but can occur as part of the LS of clauses. For example, antecedent cause is

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40 Or, stated another way, one function of LSs is to subcategorize verbs (cf. the introduction to this chapter).
not associated with the LS of the stative verb ngkorikng 'ST-dry' (e.g. (23b)), but it can occur as part of the LS of clauses (e.g. (27b)). The question arises as to how much of the semantic content of clauses should be accounted for in descriptions of LS. This study primarily attends to those aspects of meaning which are important for classifying verbs, since the hypothesis put forth in Chapter 1 is that verb classification constrains aspectual possibilities.

The stative verbs described thus far in this section are one-place condition statives whose single argument is a patient. There is a small class of stative verbs which have two semantic arguments (experiencer and theme) and one syntactic argument. They are referred to as experiencer statives and are illustrated in (28).41

(28) Rimig-adn (ramig-an) ou na.
cold-EXP IsNOM PFT
'I am cold.'

A summary analysis of (28) is provided in (29). As seen in (29a), experiencer statives have two semantic arguments. The first argument is an experiencer, the second argument (theme) is incorporated into the predicate by the same rule which was described earlier in (6) and repeated here as (30) (cf. Van Valin 1990:244). This rule incorporates the theme into the predicate in both equational clauses (cf. §2.1.1) and experiencer stative clauses.

(29) a. General LS for experiencer statives: be' (x, [predicate']) x=experiencer, predicate'=theme
    b. Clause-specific LS for (28): be' (ou 'I', [ramig 'cold'])
    c. Assign thematic relations: ou 'I' ← experiencer
    d. Create experiencer predicate by (30): be' + [ramig 'cold'] → predicate
    e. Assign semantic macroroles: undergoer ← experiencer 1 Macrorole
    f. Assign syntactic functions: pivot ← undergoer-ou 'I'
    g. Assign case and prepositions: pivot-ou 'I' ← nominative case
    h. Cross-reference verb: ramig 'cold' ← -an 'EXP'

(30) EQUATIONAL/ EXPERIENCER PREDICATE CREATION: (cf. Van Valin 1990:234)
be' + theme → predicate

41 Whereas patients are either animate or inanimate, an experiencer is defined as "An animate entity whose registering nervous system is relevant to the predication" (Longacre 1976:27).
According to the default situation described in (10a.1), experiencer statives should have two macroroles since they have two arguments in their LS. However, the incorporation of one of the two arguments into the predicate requires the default situation to be overridden and the verb to take one less macrorole than is expected. In RRG, when the number of macroroles cannot be predicted from the number of arguments in the LS, the number of macroroles is specified in the lexical entry of the verb. This is formalized in terms of the feature [+MR], with [+MR] meaning one macrorole and [-MR] meaning no macroroles (cf. Van Valin 1990:227). Use of this feature would result in the following partial lexical entry for the experiencer stative verb rimigadn 'cold': be' (x, [ramig 'cold']) [+MR]. One way to avoid specifying the number of macroroles in the LS of all experiencer stative verbs is simply to say that the application of rule (30) results in the default situation in (10a.1) being overridden and only one macrorole. Note that although the default in (10a.1) is overridden, the more general principle in (10a) is not violated since the number of macroroles is less than the number of arguments in the LS.

Given that there is only one macrorole, according to (10b.2), it must be an undergoer. Thus, like the condition statives described earlier in this section, experiencer statives have a single macrorole which is an undergoer.

According to the Actor-Undergoer Hierarchy in (4), the theme argument should be the undergoer. But the theme argument is incorporated into the predicate by rule (30) in (29d), so there is no theme to function as undergoer; instead, the experiencer argument is linked to undergoer (cf. (29e); Van Valin 1990:244). This is a marked linking between a thematic relation and a macrorole in terms of the Actor-Undergoer Hierarchy in (4). Experiencer stative verbs are cross-referenced by the suffix -an instead of the prefix m- (cf. (29h)).

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42 Van Valin (1990:227) points out that it is never necessary to indicate that a verb takes two macroroles.
semantically marked undergoers according to the Actor-Undergoer Hierarchy, but they also have a corresponding markedness in terms of both frequency and morphology with -an being the marked form.

Experiencer statives are similar to equational statives (cf. §2.1.1) in that both are two-place statives and both involve incorporation of the theme (second argument) into the predicate, resulting in a functional marked undergoer. However, experiencer statives differ from equational statives in that the former are also formally marked in the verb morphology by -an, whereas the latter exhibit no verbal cross-referencing since they are nonverbal.

As shown in Table 2.6, experiencer stative verbs are derived from a limited number of adjective roots and noun roots. Table 2.6 also indicates that some adjectives can occur as either condition stative verbs or experiencer stative verbs.44 For example, ramig 'cold' can occur as a condition stative or an experiencer stative. The condition stative (meramig) focuses on the stimulus and is used to describe something as being 'cold to touch', whereas the experiencer stative

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43 The morphophonemic processes involved here are quite complex (cf. Table 2.6 for other examples). They include vowel harmony, nasal harmony, and nasal preplosion. Vowel harmony operates in terms of the effects of root vowels on affixes. High vowels spread right-to-left as in (28) where the second vowel /i/ in the root /ramig/ replaces the first vowel /a/ when the suffix -an occurs. See Kroeger (1992b) for further discussion of VH in Bonggi.

Nasal harmony operates from left-to-right. Vowels are nasalized following nasal stops. Nasality spreads until it is blocked by a nonnasal consonant or the end of the word.

Word-final nasals are preplosed following oral vowels. Final /m/ becomes [bm], final /n/ becomes [dn], and final /ŋ/ becomes [kŋ]. For example, the final nasal of the underlying form /m-korij/ 'ST-dry' in (28) is preplosed, resulting in the phonetic form [ŋ'korikŋ] because the preceding vowel is oral. On the other hand, the final nasal of /më/ ['mëf] 'aunt' is not preplosed since the preceding vowel is nasal. See Boutin and Howery (1991) for further discussion of nasal preplosion in Bonggi.

44 The experiencer stative lupug-udn 'tired-EXP' is anomalous in two respects. Firstly, it is marked by [-udn] instead of [-adn] like other experiencer statives. Secondly, lupug 'tired' is the only adjective root that cannot occur as a condition stative; i.e. *mu-lupug 'ST-tired' is ungrammatical. This root only takes animate pivots.
(rimigadn) focuses on the experiencer and is used to describe someone as 'feeling cold' (cf. Talmy 1985:99ff.).

Table 2.6: Experiencer stative verbs

<table>
<thead>
<tr>
<th>ROOT</th>
<th>CONDITION STATIVE</th>
<th>EXPERIENCER STATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ramig 'cold'</td>
<td>me-ramig 'ST-cold'</td>
<td>rimig-adn 'cold-EXP'</td>
</tr>
<tr>
<td>panas 'hot'</td>
<td>m-panas 'ST-hot'</td>
<td>penas-adn 'hot-EXP'</td>
</tr>
<tr>
<td>lupug 'tired'</td>
<td></td>
<td>lupug-udn 'tired-EXP'</td>
</tr>
<tr>
<td>Noun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>umus 'sweat'</td>
<td></td>
<td>umus-adn 'sweat-EXP'</td>
</tr>
<tr>
<td>puri 'skin rash'</td>
<td></td>
<td>puri-adn 'skin.rash-EXP'</td>
</tr>
</tbody>
</table>

To summarize what has been said regarding condition stative verbs: (i) their LS is predicate' (x); (ii) the single argument 'x' is a patient; (iii) they have one macrorole which is an undergoer; and (iv) these verbs are normally marked with m- which cross-references an undergoer pivot (e.g. (21), (24); but cf. (25)).

To summarize what has been said regarding experiencer stative verbs: (i) their LS is be' (x, [predicate']); (ii) the first argument is an experiencer and the second a theme which is incorporated into the predicate; (iii) they have one macrorole which is an undergoer; and (iv) these verbs are marked with -an which cross-references a marked undergoer pivot (e.g. (28); cf. also Table 2.6).

It was pointed out that condition stative clauses can have an optional adjunct which is an antecedent cause (effector) as seen in (26). These adjuncts are marked for oblique case with ga' 'from' (cf. 27f). Optional adjuncts can also occur in experiencer stative clauses as seen in (31). As pointed out previously, the preposition ga' 'from' marks effectors which would be expected to occur as actor in terms of the hierarchy in (4), but do not because there is no actor to which the antecedent cause can be linked. Neither condition stative clauses nor experience stative clauses
have an actor, but for different reasons. In the case of condition statives (e.g. (26)), the absence of an actor is due to the fact that the LS of these verbs has only one argument and no activity predicate (cf. 27a). Thus, by (10), there must be a single macrorole which is an undergoer. On the other hand, in the case of experiencer statives (e.g. (31)), the absence of an actor is due to the fact that rule (30) applies which results in the default situation in (10a.1) being overridden and only one macrorole, an undergoer by (10b.2).

A summary analysis of (31) is provided in (32) (cf. (27) and (29)). Sentence (31) describes an antecedent cause (ga' dolok 'from rain') and a resulting/consequent experiencer state (rimigadn ou 'I am cold').

(31) Rimig-adn (ramig-an) ou ga' dolok.
cold-EXP IsNOM from rain
'I am cold because of the rain.'

(32) a. General LS for experiencer statives: be'(x, [predicate']) $x=$experiencer, $predicate'=$theme

b. Clause-specific LS for (31): [from' (x, [be' (y, [predicate'])]) $x=$antecedent cause, $be' (y, [predicate'])=$resulting state $y=$experiencer, $predicate'=$theme [ga' 'from' (dolok 'rain'), [be' (ou 'I', [ramig 'cold'])]

c. Assign thematic relations: ou 'I' $\leftarrow$ experiencer
d. Create experiencer predicate by (30): be' + [ramig 'cold'] $\rightarrow$ predicate
e. Assign semantic macroroles:
  f. Assign syntactic functions:
  g. Assign case and prepositions:
  h. Cross-reference verb:

As mentioned above, experiencer statives should have two macroroles since they have two arguments in their LS (cf. (10a.1)). However, the incorporation of the theme argument into the predicate by rule (30) in (32d) results in the default situation being overridden and the verb taking only one macrorole, an undergoer by (10b.2). Because the theme argument is incorporated into the predicate, it is not available to function as undergoer; instead, the experiencer argument is linked to undergoer in (32e) (cf. (29e)). This marked linking between experiencer and undergoer results in
the experiencer stative verb in (31) being cross-referenced by the suffix -an (cf. (32h)). (32f) assigns the undergoer (ou 1) to the syntactic status of clause pivot according to the Pivot Choice Hierarchy in (7).

Two types of stative verbs have been described thus far in this section: one-place condition statives (e.g. (21) and (26)) and two-place experiencer statives (e.g. (28) and (31)). Some of the one-place condition stative verbs in (24) can occur in clauses involving what has been called possessor ascension in Relational Grammar. The claim within Relational Grammar is that the possessor of a noun phrase (e.g. nya 'his' in (33)) can ascend to become a clause constituent (e.g. sia 'he' in (34)). Sentence (33) illustrates a condition stative verb without possessor ascension, whereas (34) illustrates the same condition stative verb in a clause with possessor ascension.

(33) N-doot (m-doot) guakng nya.
     ST-bad    spirit  3sGEN
     'HE is unhappy.' (Lit. 'His spirit is bad.')</n>

(34) Sia n-doot (m-doot) guakng.
     3sNOM ST-bad     spirit
     'HE is unhappy.'

Summary analyses of (33) and (34) are provided in (35) and (36) respectively. In a RRG analysis, (33) and (34) share the same general LS, predicate' (x), since they are both condition statives (cf. (35a) and (36a)); however, their clause-specific LS is different (cf. (35b) and (36b)). Because the macrorole assignment principles in (10) apply to verbs and not clauses, both (33) and (34) contain a single macrorole which is undergoer. According to Van Valin (1990:251), "[P]ossessor ascension is possible only if the possessed argument is an undergoer."

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45 Statives with an optional antecedent cause are included, e.g. (26) and (31).

46 Cf. the analysis in (35) to that provided in (23).
(35) a. General LS for condition statives: $\text{predicate'} (x)$  $x=\text{patient}$
   b. Clause-specific LS for (33):
      $\text{doot 'bad'} (\text{guakng nya 'his spirit'})$
      guakng nya 'his spirit' $\leftarrow \text{patient}$
   c. Assign thematic relations:
      undergoer $\leftarrow \text{patient}$ 1 Macrorole
   d. Assign semantic macroroles:
      pivot $\leftarrow \text{undergoer-guakng nya 'his spirit'}$
   e. Assign syntactic functions:
      pivot-guakng nya 'his spirit' $\leftarrow$ nominative case (O)
      doot 'bad' $\leftarrow$ m- 'ST'
   f. Assign case and prepositions:
   g. Cross-reference verb:

(36) a. General LS for condition statives: $\text{predicate'} (x)$  $x=\text{patient}$
   b. Clause-specific LS for (34):
      $\text{be-at'} (x, [\text{predicate'} (y)])$
      $x=\text{locative}, \text{predicate'} (y)=\text{condition state}$
      sia 'he' $\leftarrow \text{patient}$
      guakng 'spirit' $\leftarrow$ locative
   c. Assign thematic relations:
      undergoer $\leftarrow \text{patient}$ 1 Macrorole
   d. Assign semantic macroroles:
      pivot $\leftarrow$ undergoer-sia 'he'
      direct core syntactic argument $\leftarrow$ locative-guakng 'spirit'
   e. Assign syntactic functions:
      pivot-sia 'he' $\leftarrow$ nominative case
      guakng 'spirit' $\leftarrow$ accusative case (O)
   f. Assign case and prepositions:
      doot 'bad' $\leftarrow$ m- 'ST'
   g. Cross-reference verb:

Sentence (34) contains a locative adjunct, whereas (33) does not. (34) describes a state (sia ndoo't 'he is bad') and the location of that state (guakng 'spirit'). This is seen in (36b) where 'x' refers to the location and predicate' (y) to a condition state. This provisional LS is constructed on the analogy of be-at' (x, y), where x = the location and y = the located argument.\(^{47}\) As seen in (36a), the general LS for one-place condition statives does not contain a location; however, (36b) indicates that there is a location in the clause in question. Two clause-specific LSs are provided in (36b). The latter is the same as the former with the exception that the Bonggi data are provided in the latter. As always, the single argument of a condition stative verb is a patient which is linked to undergoer in (36d).

The locative adjunct is assigned core syntactic status in (36e). The number of direct core syntactic arguments need not be the same as the number of macroroles. Condition stative verbs have a single macrorole. Therefore, they are intransitive in RRG terms, where transitivity is

\(^{47}\)The LS in (36b) is provisional in that LSs are normally used to account for the relationship between a predicate and its arguments, not adjuncts.
defined in terms of the number of macroroles a verb takes. Single-macrorole verbs are intransitive and two-macrorole verbs are transitive (cf. Van Valin 1990:228). "The number of direct core arguments a verb takes says less about its syntactic behavior than its macrorole number" (Van Valin 1990:228).

Earlier in this section, a distinction was made between semantic arguments and syntactic arguments. Recall that direct core arguments (core syntactic arguments) were defined in §1.3.1 as arguments which are not preceded by a preposition (oblique case marker); for example, *sia* 'he' and *guakng* 'spirit' in (34) are core syntactic arguments.$^{48}$ On the other hand, *odu* 'sun' in (26) and *dolok* 'rain' in (31) are syntactically oblique since they are preceded by the preposition *ga*'from'.

Other than the clause pivot, the following can occur as direct core syntactic arguments in Bonggi:

(i) semantic arguments with macrorole status (e.g. the undergoer *diaadn* 'me' in (19) of §1.3.1); (ii) some semantic arguments without macrorole status (e.g. the locative argument *bali nya* 'his house' in (15) (cf. (18f)); and (iii) some semantic adjuncts which do not belong to the LS of the verb (e.g. *guakng* 'spirit' in (34)).

The distinction between semantic arguments and syntactic arguments can also be described in terms of valency. Recall that experiencer statives have two semantic arguments (experiencer and theme) and one syntactic argument (the pivot). Thus, they have a semantic valency of two (e.g. (29a)), but a syntactic valency of one (e.g. (28)). This difference in valency results from the incorporation of the theme argument into the predicate by rule (30). On the other hand, condition statives have a semantic valency of one (e.g. (35a)), but can have a syntactic valency of either one (e.g. (33)) or two (e.g. (34)).$^{49}$ Bonggi verb morphology is more concerned with semantic valency than syntactic valency.

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$^{48}$As stated earlier, arguments in the LS of a verb provide a definition of core semantic arguments.

$^{49}$Since syntactic arguments can be elided, both experiencer statives and condition statives can have a syntactic valency of zero. The discussion here of syntactic valency ignores the possibility of ellipsis.
The condition stative verbs which have been described thus far in this section (e.g. (21), (26), (33), (34)) and those listed in (24) are derived from adjective roots. In fact, the majority of condition stative verbs are derived from adjective roots. However, in a few cases, condition stative verbs appear to be derived from noun and verb roots. One such case appears to be the condition stative verb *me-lou* 'ST-embarrassed' in (37) which is derived from the noun root *lou* 'embarrassment'.

(37)  
*Sia*  
{\textit{me-lou (m-lou).}}  
\footnotesize{3sNOM ST-embarrassed}  
\footnotesize{'HE is embarrassed.'}

A summary analysis of (37) is provided in (38) (cf. (23), (35)).

(38)  
a. General LS for condition statives:  
\footnotesize{\textit{predicate'}} (x)  
b. Clause-specific LS for (37):  
\footnotesize{\textit{lou} 'embarrassed' (\textit{sia} 'he')}  
c. Assign thematic relations:  
\footnotesize{\textit{sia} 'he' \leftarrow \textit{patient}}  
d. Assign semantic macroroles:  
\footnotesize{\textit{undergoer} \leftarrow \textit{patient}}  
\footnotesize{1 Macrorole}  
e. Assign syntactic functions:  
\footnotesize{\textit{pivot} \leftarrow \textit{undergoer-sia} 'he'}  
f. Assign case and prepositions:  
\footnotesize{\textit{pivot-ou} 'I' \leftarrow \textit{nominative case}}  
g. Cross-reference verb:  
\footnotesize{\textit{lou} 'embarrassed' \leftarrow \textit{m- 'ST'}}

Like other condition stative verbs, *me-lou* 'ST-embarrassed' can occur with an optional adjunct indicating antecedent cause as in (39) (cf. (26)). A summary analysis of (39) is provided in (40) (cf. (27)).

(39)  
*Sia*  
{\textit{me-lou (m-lou) ga' ku.}}  
\footnotesize{3sNOM ST-embarrassed from 1sGEN}  
\footnotesize{'HE is embarrassed because of me.'}

(40)  
a. General LS for condition statives:  
\footnotesize{\textit{predicate'}} (x)  
b. Clause-specific LS for (39):  
\footnotesize{\textit{from'}} (x, [\textit{predicate'} (y)])  
c. Assign thematic relations:  
\footnotesize{\textit{ga'} 'from'} (\textit{ku} 'me', [\textit{lou} 'embarrassed' (\textit{sia} 'he')])  
\footnotesize{\textit{sia} 'he' \leftarrow \textit{patient}}  
d. Assign semantic macroroles:  
\footnotesize{\textit{undergoer} \leftarrow \textit{patient}}  
\footnotesize{1 Macrorole}  
e. Assign syntactic functions:  
\footnotesize{\textit{pivot} \leftarrow \textit{undergoer-sia} 'he'}  
f. Assign case and prepositions:  
\footnotesize{\textit{pivot-sia} 'he' \leftarrow \textit{nominative case}}  
\footnotesize{\textit{pivot-sia} 'he' \leftarrow \textit{genitive case}}  
\footnotesize{\textit{oblique ga'} 'from'}  
g. Cross-reference verb:  
\footnotesize{\textit{lou} 'embarrassed' \leftarrow \textit{m- 'ST'}}
Sentence (39) contains an antecedent cause (\textit{ga' ku 'because of me'}) and a resulting/consequent state which consists of a condition stative verb (me-lou 'is embarrassed') and a patient (sia 'he'). Condition stative verbs do not have an antecedent cause for an argument (cf. (40a)). By (10a.2), the verb has one macrorole since there is only one argument 'x' in the LS in (40a). Application of (10b.2) to (40a) results in the single macrorole being an undergoer (cf. (40d)). The antecedent cause cannot be linked to an actor because there is no actor. Thus, the antecedent cause, a subtype of effector, is assigned oblique adjunct status (cf. (40d)), and marked by the preposition \textit{ga'} 'from' (cf. (40f)).

The condition stative verb me-lou 'ST-embarrassed' can also occur in clauses with two core syntactic arguments (e.g. (41)). In (41), the nonpivot core argument, diaadn 'me' is semantically a stimulus which is both similar to and different from the antecedent cause in (39). (39) and (41) are similar in that both involve indirect causality. They are different in terms of the strength of the causal relationship with antecedent cause being stronger than stimulus.\textsuperscript{50} Antecedent cause and stimulus cannot cooccur in the same clause; that is, if a clause contains an optional adjunct indicating antecedent cause (e.g. \textit{ga' ku 'because of me'} in (39)), a nonpivot core syntactic argument such as \textit{diaadn 'me'} cannot also occur in the same clause.

(41) \textit{Sia me-lou (m-lou) diaadn.}
\hspace{1cm}3sNOM ST-embarrassed 1sACC
\hspace{1cm}'HE is embarrassed of me.'

Indirect causality (including antecedent cause and stimulus) is not associated with the LS of verbs. It is not a semantic argument of a verb, although it can be incorporated into the LS of clauses as in (27b), (32b), and (40b). Indirect causality occurs in syntax as either an optional

\textsuperscript{50}Although the free translation for (39) and (41) attempts to capture the difference in the strength of the causal relationship, Bonggi more clearly marks this difference than English.
adjunct (e.g. (26), (31), (39)) or a direct core syntactic argument (e.g. (41)). The difference in syntactic form reflects a difference in semantic function.\footnote{Direct causality, like indirect causality, also has contrastive syntactic forms representing different semantic functions (cf. §2.4).}

The condition stative verb *me-lou 'ST-embarrassed'* can occur in one other syntactic environment; that is, sentences which contain a preposed phrase that is set off from the clause by a pause (e.g. (42)).\footnote{Note that (42) does not involve extraposition; *diaadn* 'me' is clause external.}

\begin{verbatim}
(42) Diaadn, nd-ou me-lou (m-lou).\footnote{\textit{Diaadn}, nd-ou me-lou (m-lou).}^53
     1sACC  not-1sNOM ST-embarrassed
     'As for me, I'm not embarrassed.'
\end{verbatim}

The morphological behavior of the condition stative verb *me-lou 'ST-embarrassed'* in (37), (39), (41), and (42) is the same as that of condition stative verbs derived from adjective roots (cf. (24)). In each case, an undergoer-patient is cross-referenced by the verbal prefix *m*-.

On the other hand, their syntactic behavior is different. To begin with, *me-lou 'ST-embarrassed'* has a syntactic valency of either one (e.g. (37), (39), (42)) or two (e.g. (41)), whereas most condition stative verbs derived from adjective roots have a syntactic valency of one (e.g. (21), (26)). Except for a small group of condition stative verbs which can occur in clauses involving possessor ascension (e.g. (34)), the addition of another core syntactic argument in clauses with condition stative verbs derived from adjective roots results in an ungrammatical sentence. Both *melou 'embarrassed'* and condition statives derived from adjective roots can take activity verb complements (e.g. (43), (44)).

\begin{verbatim}
(43) Sia me-lou (m-lou) mpanu.
     3sNOM ST-embarrassed  walk
     'HE is embarrassed to go.'
\end{verbatim}
In terms of derivational potential, "me-lou 'ST-embarrassed'" is distinguished from condition statives derived from adjective roots. Activity verbs which are negated and in imperative mood can be derived from the former (e.g. (45)), but usually not the latter.\footnote{Negated pronouns are restricted to first and second person nominative case. Phonologically, negated pronouns are a single word. Syntactically, they function as the pivot and carry case. Morphologically, they are odd in that pronouns are not normally inflected for negation; however, \textit{nd}- is an affix and not a simple clitic (§3.2). The negation of pronouns is somewhat comparable to the English contracted negative \textit{n't} which Zwicky and Pullum (1983) show has all the signs of being an inflectional affix and none of the properties of a clitic. Botolan Sambal, a language of the northern Philippines (Luzon Island), also has a morphological negative which occurs with enclitic pronouns (cf. Antworth 1979:50f.).} Condition stative verbs that are derived from manner adjectives used to describe humans are an exception with respect to negative imperatives. Thus, from (24), \textit{n-doot} 'ST-bad', \textit{n-duruk} 'ST-fast', \textit{me-lambat} 'ST-slow', and \textit{mu-runggu} 'ST-sluggish' can be negated (e.g. (46)).

(45) \textit{Dei ke-lou (k-lou)!}
\textit{do not embarrassed}
'Don't be embarrassed!'

(46) \textit{Dei ku-runggu' (k-runggu')!}
\textit{do not sluggish}
'Don't be sluggish!'

\textit{M-olok} 'ST-scared' is another condition stative verb which is derived from a noun root (\textit{olok} 'fear') and has the same morphosyntactic behavior as \textit{me-lou} 'ST-embarrassed'. It can occur in clauses with a syntactic valency of one (e.g. \textit{Sia molok.} 'He is scared.'); cf. (37)). It can occur in clauses with an optional adjunct indicating antecedent cause (e.g. \textit{Sia molok ga'ku.} 'He is scared because of me.'); cf. (39)). It can occur in clauses with a syntactic valency of two (e.g. \textit{Sia molok diaadn.} 'He is scared of me.'); cf. (41)). It can occur in clauses with a preposed phrase (e.g.

\footnote{Cf. §2.3 for a discussion of activity verbs.}
D الواحد، ندو ملك. 'As for me, I'm not scared.'; cf. (42)). Finally, it can occur in clauses with activity verb complements (e.g. Sia molok mpanu. 'He is scared to go.'; cf. (43)).

I return to problems posed by stative verbs such as me-lou 'ST-embarrassed' and m-olok 'ST-scared', after discussing possession and cognition statives in the next two sections.

2.1.4. Possession States

Sentence (47) illustrates an English possessive stative verb. The general logical structure for possessive stative verbs is shown in (48a) and the clause-specific LS for (47) in (48b).

(47) He has a book.

(48) a. General LS for possession statives: have' (x,y)  \(x=\text{possessor}, y=\text{possessed}\)

   b. Clause-specific LS for (47): have' (he, book)

According to Foley and Van Valin (1984:48, 53) and Van Valin (1993:39), the first argument 'x' in the LS of a possession stative clause is a locative, while the second argument 'y' is a theme. More recently, Van Valin (1994) uses the terms possessor and possessed to refer to these two arguments with possessor = locative and possessed = theme. Whereas possessor and possessed are semantically more transparent names, locative and theme are more commonly used as names for thematic roles, especially if one is trying to keep the number of thematic roles to a minimum. The number of thematic role names used to describe semantic relationships is not a problem according to recent developments within RRG. These names are nothing more than mnemonics for argument positions in LS (Van Valin, 1994). As pointed out in §2.1.1, the revised Actor-Undergoer Hierarchy in (5) is based on the RRG position that thematic roles are not independently motivated.

As seen thus far in this chapter, thematic roles play no direct role in lexical representation. The semantic properties of verbs are expressed by LS representations, not a list of thematic roles (cf. Van Valin 1994). Throughout the remainder of this section, I use the transparent terms possessor and possessed to refer to the two arguments in possessive states. At the end of §2.1.5 I return to the relationship between these terms and argument positions in LSs.
The prefixes *ki-* and *nd-* mark verbs of possession. *ki-* marks the presence of possession, e.g. (49), and *nd-* marks the absence of possession, e.g. (50). Both *ki-* and *nd-* occur with the existential root *ara*, but only *ki-* occurs with possession stative verbs which are derived from noun roots, e.g. (51).

(49) *Sia ki-ara oig.*
3sNOM POS-exist boat
'HE has a boat.'

(50) *Sia nd-ara pa saa.*
3sNOM NEG-exist FPFT spouse
'HE is not married yet.'

(51) *Sia ki-saa.*
3sNOM POS-spouse
'HE is married.'

A summary analysis of (49) is provided in (52).

(52) a. General LS for possession statives: have' (x,y) x=possessor, y=possessed
b. Clause-specific LS for (49): *ara 'existential' (sia 'he', oig 'boat')*
c. Assign thematic relations:
   *sia 'he' ← possessor* 
   *oig 'boat' ← possessed*
d. Assign semantic macroroles:
   *undergoer ← possessor* 
   1 Macrorole
   *pivot ← undergoer-sia 'he'*
e. Assign syntactic functions:
   *direct core syntactic argument ← possessed-oig 'boat'*
f. Assign case and prepositions:
   *pivot-sia 'he' ← nominative case* 
   *core argument-oig 'boat' ← accusative case (Ø) g. Cross-reference verb:
   *ara 'existential' ← ki- 'POS'*

The analysis presented in (52) is straightforward with the exception of (52d). By (10a.1), possessive statives should have two macroroles since they have two arguments in their LS (cf. (52a)); however, according to (52d), Bonggi possessive statives have a single macrorole. A similar

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55 The prefix *nd-* comes from reduction of the negator *nda* 'not'. Historically, *nda* probably developed into a clitic *nd=*, which, in turn, was reanalyzed as a prefix. This is a case of morphologization (cf. Anderson 1988b:352; Joseph and Janda 1988:195-96). The negator *nda* also reduces to *nd-* before first and second person nominative case pronouns, e.g. *ou 'I*, *ndou 'not I*, *aha 'you (sg)'*, and *ndaha 'not you (sg)'*.

56 Possession stative verbs are derived from existential *ara* and noun roots. However, the use of *ki-* to derive possession stative verbs from noun roots is not extremely productive. More frequently, *kiara* occurs as in (49). The distinction between the use of *ki-* and *kiara* appears to correlate with inalienable versus alienable possession.
situation was described for experiencer statives in §2.1.3, where according to the default situation described in (10a.1), experiencer statives should have two macroroles. Instead, I suggested that the incorporation of one argument into the predicate requires the default situation to be overridden, and results in experiencer statives having only one macrorole.57 There are two reasons why incorporation was suggested as an explanation for experiencer verbs taking one macrorole instead of the expected two by (10a.1). First, incorporation provides a principled basis for overriding the GENERAL MACROROLE ASSIGNMENT PRINCIPLES in (10). Second, incorporation provides an explanation for a single macrorole without having to specify the feature [+MR] in the lexical entry of the verb. Although incorporation might be a good explanation for experiencer statives having only one macrorole, it cannot be used as an explanation for possessive statives since they do not involve incorporation.

What sort of evidence is needed to show that a verb with two core syntactic arguments has one macrorole instead of two? Van Valin (1990:240-48) uses case-marking as evidence in Georgian. He provides the two universal case-marking principles in (53) (Van Valin 1990:241).

(53) a. If a clause contains a single macrorole argument, it is nominative.
    b. The default case for direct core arguments which are not assigned macrorole status is dative.

In Bonggi, case-marking does not provide sufficient evidence to distinguish verbs with two core syntactic arguments and one macrorole from those with two core syntactic arguments and two macroroles. This is due to the fact that distinctions between accusative and dative arguments are neutralized in Bonggi, especially within core syntactic arguments (cf. Tables 1.2 and 1.3 in §1.3.1).58 Bonggi pronominal pivots occur in the nominative case, but there is no 'inversion' of case like that described for Georgian (Van Valin 1990; 1993) and Latin (Michaelis 1993). On the

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57Cf. the discussion following the analysis in (29), §2.1.3.

58This was stated slightly differently at the end of §1.3.1, where I pointed out that Bonggi does not have unique dative case forms; instead, all nonpivot direct core arguments which are not actors occur in accusative case.
other hand, as with inversion in Georgian, possessive statives in Bonggi are intransitive; i.e. they have a single macrorole argument.  

Although the Bonggi case-marking system does not distinguish verbs with a single macrorole from those with two macroroles, the syntax does. In terms of syntax, if an argument has macrorole status, it must be able to function as clause pivot. Or stated another way, an argument cannot have macrorole status if it cannot function as clause pivot. This is not meant to suggest that the clause pivot must always be a macrorole; in fact, I show in §2.4 that this is not always the case. That is, an argument can be the clause pivot without being linked to a macrorole, but an argument cannot be linked to a macrorole unless it can also be the clause pivot. The macrorole assignment principles in (10a) and (10b), repeated here as (54a) and (54b), are supplemented by the Bonggi-specific principle in (54c).  

(54) GENERAL MACROROLE ASSIGNMENT PRINCIPLES:  
a. Number: the number of macroroles a verb takes is less than or equal to the number of arguments in its LS.  
   1. If a verb has two or more arguments in its LS, it will take two macroroles.  
   2. If a verb has one argument in its LS, it will take one macrorole.  
b. Nature: for verbs which take one macrorole,  
   1. If the verb has an activity predicate in its LS, the macrorole is actor.  
   2. If the verb has no activity predicate in its LS, the macrorole is undergoer.  
c. Pivot potential: if a verb has two macroroles, either of them can function as the clause pivot.  

By (54c), possessive statives only have one macrorole since only the possessor can be the clause pivot, never the possessed item. By (54b.2), the single macrorole is an undergoer (cf. (52d)). The pivot in (49), (50), and (51) is *sia* 'he', which is an animate possessor. The possessor can also be inanimate, e.g. (55) and (56), where the possessor is *oig na* 'the boat'.

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59 Recall that in RRG, transitivity is defined in terms of the number of macroroles a verb takes. Single-macrorole verbs are intransitive, two-macrorole verbs are transitive. The number of macroroles a verb takes is more important than the number of direct core syntactic arguments it takes (cf. Van Valin 1990:228, 1993:48).

60 Van Valin (1993:48; 154, footnote 28) points out that the syntactic consequence of core arguments in syntax not being assigned to a macrorole is that they cannot occur as pivot.
(55) Oig na ki-ara saat.
   boat DEF POS-exist paint
   'THE BOAT has been painted.'

(56) Oig na nd-ara saat.
   boat DEF NEG-have paint
   'THE BOAT has no paint.'

Since only the possessor can be the pivot in possession statives, and since pivots precede nonpivots, the possessor must occur before the possessed entity. Sentence (57) is semantically ill-formed if 'paint' is interpreted as the pivot, since paint cannot possess a boat. However, (57) is syntactically ill-formed if 'boat' is interpreted as the pivot, since the pivot must precede the nonpivot.

(57) *Saat na nd-ara oig.
    paint DEF NEG-have boat
    *'THE PAINT has no boat.'

2.1.5. Cognition States

Cognition states are mental, internal, and nonvolitional, involving neither decision nor action on the part of the undergoer. The construction has two arguments as illustrated by the English cognition stative verb believe in (58). The LS for (58) is shown in (59). The first argument 'x' is an experiencer, while the second argument 'y' is a theme (VV 1993:39).

(58) He believes me.

(59) a. General LS for believe: believe (x,y)
    x=experiencer, y=theme
    b. Clause-specific LS for (58): believe (he,me)

Bonggi has only two cognition stative verbs, pisiaa 'believe' and pandi 'know' which are illustrated in (60) and (61). A summary analysis of (60) is provided in (62).

(60) Sia pisiaa diaadn.
    3sNOM believe 1sACC
    'HE believes me.'

61Givón (1984:21) points out that thematic roles in possessive clauses have atypical values.
(61)  Sia pandi uubm Sama.
   3sNOM know language Bajau
   'HE knows the Bajau language.'

(62) a. General LS for believe: believe' (x,y) x=experiencer, y=theme
    b. Clause-specific LS for (60): pisiaa 'believe' (sia 'he', diaadn 'me')
    c. Assign thematic relations: sia 'he' ← experiencer diaadn 'me' ← theme
    d. Assign semantic macroroles: undergoer ← experiencer 1 Macrorole
    e. Assign syntactic functions: pivot ← undergoer-s sia 'he'
    f. Assign case and prepositions: pivot-s sia 'he' ← nominative case
    g. Cross-reference verb: pisiaa 'believe' ← (0)

Cognition statives, like the possessive statives described in §2.1.4, have two core syntactic arguments, but only one macrorole. Only the experiencer can be the pivot in cognition stative clauses. Thus, by (54c) these statives have only one macrorole which, by (54b.2), must be an undergoer (cf. (62d)). Cognition stative verbs are morphologically unmarked; that is, the root is not cross-referenced (cf. (62g)).

Table 2.7 provides a summary of the types of states which have been described. They are: equational (§2.1.1), locative (§2.1.2), condition (§2.1.3), experiencer (§2.1.3), possession (§2.1.4), and cognition (§2.1.5). The second row contains the general LS for each subclass of state. The third row lists the thematic relations (or mnemonic labels) which have been used to describe the arguments in the LSs. The fourth row shows the number and nature of the macroroles occurring with each subclass of state, and it summarizes the linking relationship between macroroles and the thematic relations in row three. The fifth row lists the choices for clause pivot, the sixth lists the syntactic category of the clause predicate, and the last row summarizes the verbal cross-referencing.

Possession and cognition stative verbs are small closed classes, whereas condition stative verbs form a larger, more open class. Experiencer and locative statives fall somewhere in between
in terms of class size. All stative verbs are uninflected for tense, and cannot occur in imperative mood.\textsuperscript{62}

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<td>be' (x, [predicate'])</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>locative</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Preposition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal</td>
<td>m- (for</td>
<td>(m-)</td>
<td>(-an)</td>
<td>(ki-, nd-)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-</td>
<td>verbal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referencing</td>
<td>predicates only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The ability of different NPs to function as clause pivot is a well-known feature of Philippine-type languages. Many introductions to languages like Tagalog suggest that any NP in a clause can be the pivot.\textsuperscript{63} This is quite contrary to what is described here, where each stative subclass

\textsuperscript{62}The cognition stative verb \textit{pisiaa} can also be used as an imperative meaning 'believe!', in which case it is an activity verb and not a state. In fact, there is a corresponding activity verb form \textit{-um-} + \textit{pisiaa} > \textit{mpisiaa} (cf. §2.3). The root \textit{pandi} 'know', however, cannot be used as an imperative; thus, there is no corresponding activity form.

\textsuperscript{63}Usually some term other than pivot is used; e.g. focused NP, subject, topic, or trigger.
strongly constrains the pivot possibilities. In fact, as seen in Table 2.7, each subclass of state has only one pivot possibility.

I return now to the question of the relationship between θ-roles and LS argument positions that was raised in §2.1.1 and §2.1.4. According to the revised Actor-Undergoer Hierarchy in (5), θ-roles are nothing more than mnemonics for argument positions. The relationship between θ-roles and argument positions for the different subclasses of states is summarized in (63) (cf. (5); Van Valin 1994).

(63)

<table>
<thead>
<tr>
<th>Subclass</th>
<th>1st arg of predicate'(x,y)</th>
<th>2nd arg of predicate'(x,y)</th>
<th>Arg of state predicate'(x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equational state</td>
<td>locative</td>
<td>theme</td>
<td>patient</td>
</tr>
<tr>
<td>Locative state</td>
<td>locative</td>
<td>theme</td>
<td>(cf. §2.1.1)</td>
</tr>
<tr>
<td>Condition state</td>
<td>locative</td>
<td>theme</td>
<td>(cf. §2.1.2)</td>
</tr>
<tr>
<td>Experiencer state</td>
<td>experiencer</td>
<td>theme</td>
<td>(cf. §2.1.3)</td>
</tr>
<tr>
<td>Possession state</td>
<td>locative</td>
<td>theme</td>
<td>(cf. §2.1.4)</td>
</tr>
<tr>
<td>Cognition state</td>
<td>experiencer</td>
<td>theme</td>
<td>(cf. §2.1.5)</td>
</tr>
<tr>
<td>Existential state</td>
<td>locative</td>
<td>theme</td>
<td>(cf. below)</td>
</tr>
<tr>
<td>Emotional state</td>
<td>experiencer</td>
<td>theme</td>
<td>(cf. below)</td>
</tr>
</tbody>
</table>

The LS for all states can be generalized as either predicate' (x) or predicate' (x,y) (VV 1993:36). Variations among stative subclasses result from variations within these two LSs. For two-place statives, the first argument is either an experiencer or a locative, whereas the second argument is a theme (cf. Van Valin 1990:226). Thus, thematic roles can be defined in terms of argument positions. For example, patient is the argument in the LS configuration predicate' (x), and experiencer is the first argument in either: (i) an experiencer state LS configuration be' (x,[predicate']) or (ii) a cognition state LS configuration believe' (x,y), or (iii) an emotional state LS configuration love' (x,y).
If θ-roles are nothing more than mnemonics for argument positions, what is the function of verbal cross-referencing in Bonggi and other Philippine-type languages? Recall that within Philippine linguistics, the role of verbal cross-referencing is usually thought to encode the thematic role of the pivot (cf. §1.3.1). If, as is usually claimed, verbal cross-referencing encodes θ-roles, then θ-roles are certainly more than just mnemonics. To answer this question, we turn again to Table 2.7. To begin with, equational states and nonverbal locative states are excluded because they are nonverbal and therefore lack cross-referencing. Cognition states are also excluded because they are not cross-referenced.

Possession stative verbs are marked by either ki- or nd- (cf. Table 2.7). These prefixes indicate either the presence or absence of possession, not the thematic role of the pivot, which, in possessive clauses, is always the locative/possessor argument. It was pointed out in §2.1.4 that both ki- and nd- occur with the existential root ara. In fact, these prefixes can also indicate the presence or absence of existence in existential clauses. Whereas only possessive clauses were described in §2.1.4, (64) and (65) are examples of existential clauses (cf. (49) and (50)).

(64) Ki-ara lama dii bali nu.
    POS-exist person at house 2sGEN
    'There is SOMEBODY at your house.'

(65) Sia nd-ara kati'.
    3sNOM NEG-exist here
    'HE is not here.'

The LS of existential states is exist' (x,y), where x=locative/domain and y=theme/entity.

Existential states are closely related to locative states (cf. Van Valin 1994; Freeze 1992). Although the verb morphology of existential and possessive statives is identical, there are important differences between the two. Syntactically, the pivot always precedes the verb in

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64 The term "Philippine-type" language is used with both the linguistic and the political situation in mind. Bonggi has features which are commonly associated with Philippine languages in the linguistic literature, and thus, from the perspective of linguistics, could be called a Philippine language. However, from the perspective of politics, reference to Bonggi as a Philippine language is anathema to Malaysians. This is especially so since the Philippines refuses to relinquish its claim to Sabah.
possessive clauses (e.g. (49), (50), (51), (55), (56)), whereas in existential clauses indefinite pivots follow the verb (e.g. (64)) and definite pivots precede the verb (e.g. (65)). If we avoid transparent labels such as possessor to describe arguments, and instead use more generic labels such as locative, we find the circumstances given in (66).

(66) a. LS for possession states: have' (x,y) x=locative, y=theme pivot=undergoer-locative
    b. LS for existential states: exist' (x,y) x=locative, y=theme pivot=undergoer-theme

Both possession states and existential states are two-place stative verbs with identical thematic roles by (66). The difference is that existential states, like locative states, select the second argument of predicate' (x,y) as the undergoer pivot, whereas all other stative verbs select the first argument (cf. (63) and Table 2.7). If the function of verbal cross-referencing is to encode the \( \theta \)-role of the pivot, there is a contradiction with ki- cross-referencing the locative for possession stative verbs (e.g. (49), (55)) and the theme for existential stative verbs (e.g. (64)).

Experiencer states are marked by -\( an \) which cross-references a marked undergoer pivot (e.g. (28), (31)). This leaves condition states (e.g. (21), (24), (26), (33), (34), (37), (39), (41), (42), (43), (44)) and verbal locative states (e.g. (15)) which are both marked by \( m- \). For condition states, the undergoer-pivot is a patient, whereas for locative states, the undergoer-pivot is a theme. Furthermore, the class of emotional states mentioned in (63) has an undergoer-pivot which is an experiencer.

Emotional states are a small class of two-place stative verbs listed in (67), and illustrated by the verb \textit{musulaadn} 'hate' in (68). A summary analysis of (68) is provided in (69).

(67) \begin{tabular}{lll}
/m-/ & /mV-/ \\
\text{m-ingisiadn} & ST-have.pity.on & mi-siatadn & ST-like \\
\text{mu-sulaadn} & ST-hate & me-dataadn & ST-detest \\
\end{tabular}

(68) \textit{Sia} \textit{mu-sulaadn (m-sulaan) diaadn},
\textit{HE} hates \textit{me}.'

\( 3s \text{NOM} \) \textit{ST-hate} \( 1s \text{ACC} \)
(69) a. LS for emotional states: \( \text{hate} \) (x,y) x=experiencer, y=theme

b. Clause-specific LS for (68):
\[ \text{sulaadn 'hate'} \ (\text{sia 'he'}, \text{diaadn 'me'}) \]
c. Assign thematic relations:
\[ \text{sia 'he'} \leftarrow \text{experiencer} \]
\[ \text{diaadn 'me'} \leftarrow \text{theme} \]
d. Assign semantic macroroles:
undergoer \leftarrow \text{experiencer} \quad \text{1 Macrorole}
e. Assign syntactic functions:
pivot \leftarrow \text{undergoer-sia 'he'}
\[ \text{direct core syntactic argument} \leftarrow \text{theme-diaadn 'me'} \]
f. Assign case:
pivot-sia 'he' \leftarrow \text{nominative case}
\[ \text{diaadn 'me'} \leftarrow \text{accusative case} \]
g. Cross-reference verb:
\[ \text{sulaadn 'hate'} \leftarrow \text{m- 'ST'} \]

Emotional states are two-place statives with two core syntactic arguments, but only one macrorole (cf. possessive states §2.1.4; cognition statives §2.1.5). The first argument in the LS is an experiencer and the second a theme (cf. Van Valin 1990:244; 1993:79-80). Only the experiencer can be the pivot, so according to (54c) these statives have only one macrorole which, by (54b.2), must be an undergoer (cf. (69d)). Emotional states are cross-referenced by \( m \)- (cf. (69g)). In fact, emotional states are interesting in that they appear to be doubly marked. Note that all of the forms in (67) end in [adn], just like experiencer states (cf. Table 2.6). This is especially interesting in that, by the Actor-Undergoer Hierarchy in (4), the theme argument is the unmarked undergoer for both emotional and experiencer states. In the case of experiencer states, the theme argument is incorporated into the predicate, and the experiencer argument is linked to undergoer resulting in a marked linking between experiencer and undergoer in terms of (4) and a corresponding markedness in morphology with -an. In the case of emotional states, the theme argument is not incorporated into the predicate, and the experiencer argument is linked to undergoer also resulting in a marked linking between experiencer and undergoer in terms of (4).
However, although a corresponding markedness in morphology is expected, instead, unmarked \( m \)-occurs and all the verbs end in [adm], as if they were doubly marked with both \( m \) and -an.\(^{65}\)

Problems in analyzing two-place stative predicates were initially raised by the discussion of *melou* 'embarrassed' and *molok* 'scared' at the end of §2.1.3. The analysis of possession states (§2.1.4), cognition states (§2.1.5), existential states (§2.1.5), and emotional states (§2.1.5) has shown that there is a unified analysis for stative verbs. Although some stative verbs can have two core (nonoblique) syntactic arguments, they are all intransitive in RRG terms; i.e. they have only one macrorole. Furthermore, there is only one possible syntactic pivot for each subclass of stative verb, and the thematic role of the pivot is completely predictable.

I have also shown from the discussion of stative verb cross-referencing that the function of cross-referencing in Bonggi cannot be to simply encode the \( \theta \)-role of the pivot. This still leaves open the question of what function is fulfilled by cross-referencing. Two possibilities are suggested by Table 2.7, either the highest-ranking macrorole is cross-referenced or the pivot is cross-referenced (cf. Van Valin 1990:241).

### 2.2. Achievements

Achievements are situations which result from a nonagentive single change of state. Achievements contain an underlying stative in their LS. The LS for achievements varies depending upon the type of stative from which a particular achievement verb is derived. For example, (70) shows the LS for achievement verbs which are derived from condition stative verbs (cf. Table 2.7).

\(^{65}\)Perhaps the solution to the small leak in the data lies in emotional states being exceptions to (54b.2). Only the experiencer can be the pivot; therefore, emotional states have only one macrorole. The assumption here, based on (54b.2), is that the single macrorole must be an undergoer. The exception would involve a LS with two arguments and no activity predicate, but with a single macrorole which is an actor. Activity verbs can be derived from at least three of the roots in (67); i.e. *k-ingisiadn* 'have pity on', *ki-siatahd* 'like', and *ku-sulaadn* 'hate' (cf. (45) and (46)). The remaining word in (67) has a form *ke-deta-an* 'despised', suggesting the possibility of a root other than *datahd*. Emotional states and experiencer states are similar in that only the experiencer can be the pivot. The stimulus (theme) cannot be the pivot (cf. Talmy 1985:99ff.).
(70) LS for achievements with underlying condition stative verb: \textbf{BECOME predicate}'(x)

Achievements are derived from states by the addition of the logical operator \textbf{BECOME} which indicates inchoative aspect (cf. Walton 1983:23; Van Valin 1990:223). Because achievements are derived from states, states are considered basic. This section shows how the addition of the logical operator \textbf{BECOME} to different subclasses of states described in §2.1 effects both their semantic and morphosyntactic structure.

I begin by showing how achievement verbs can be derived from condition states (cf. §2.1.3). For example, (71) illustrates an English stative clause and its LS, whereas (72) illustrates the corresponding achievement clause and its LS.

(71) \textbf{It is dry.} \hspace{1cm} \textbf{dry}'(it)

(72) \textbf{It is getting dry.} \hspace{0.5cm} \textbf{BECOME dry}'(it)

The Bonggi clauses which correspond to (71) and (72) are (73) (cf. (21)) and (74). Whereas the difference between states and achievements is indicated paraphrastically in the English examples, the difference is indicated morphologically in Bonggi where \textit{m-} occurs with condition states and \textit{km-} (realized here as an infix /-m/) occurs with achievements.

(73) \textit{Sia ng-korikng (m-koring).}
\hspace{0.5cm} 3sNOM \hspace{0.5cm} \textbf{ST-dry}
\hspace{1cm} 'IT is dry.'

(74) \textit{Sia k-em-orikng (km-koring).}
\hspace{0.5cm} 3sNOM \hspace{0.5cm} \textit{@-ACH-dry}\textsuperscript{66}
\hspace{1cm} 'IT is getting dry.'

Both the condition stative verb \textit{ng-korikng} 'ST-dry' in (73) and the achievement verb \textit{kemorikng} 'ACH-dry' in (74) are derived from the adjective root \textit{koring} 'dry'. A summary analysis of (74) is provided in (75).

\textsuperscript{66}The '@' is used to indicate the first consonant of a root or stem which is separated from the rest of the root by an infix.
(75) a. General LS for achievements
with underlying condition state: 
BECOME predicate' (x) x=patient
b. Clause-specific LS for (74): 
BECOME korikng 'dry' (sia 'it')
c. Assign thematic relations: 
sia 'it' ← patient
d. Assign semantic macroroles: 
undergoer ← patient
1 Macrorole
e. Assign syntactic functions: 
pivot ← undergoer-s/a 'it'
f. Assign case and prepositions: 
pivot-s/a 'it' ← nominative case
  korikng 'dry' ← km- 'ARCH'
g. Cross-reference verb:

A comparison of (75) with (23) is instructive. The only difference is the addition of the logical operator BECOME in the LS of the achievement verb and a concomitant change in verbal cross-referencing. There is, however, no change in the assignment of thematic relations, macroroles, syntactic function, or case. Thus, the single argument 'x', in both instances, is a patient which is linked to undergoer.

Other achievement verbs derived from adjective roots which are used to form one-place condition stative verbs are shown in (76). They, too, are cross-referenced by km-, which is realized in different ways, as seen by the arrangement of roots in (76).

67 (23) is a summary analysis of (21), which is repeated here as (73).

68 km- is realized as /km-/ before vowel-initial roots and roots whose initial consonant is a bilabial. Then an epenthetic vowel /V/ is inserted to avoid impermissible syllable structures (cf. footnote 31). This vowel is subject to vowel harmony and vowel weakening. Bonggi is not unique in treating bilabial consonants differently than other consonants in terms of affixation. For example, see Kerr 1965:41, footnote 11; and Brewis (1992). If the initial consonant of the root is a bilabial nasal, e.g. mula 'old (things)' and mulak 'young', a rule of nasal deletion occurs deleting the nasal portion of the affix. (Evidence for mula 'old (things)' and mulak 'young' being nasal-initial roots is found in causative constructions where the nasal occurs in the causative stems, e.g. pu-mula 'make-old' and pu-mulak 'make-young'. Compare causative stems formed from vowel-initial roots, e.g. p-ingad 'make-near', and p-odu 'make-far'.)

In the elsewhere case, km- is realized as an infix, /-m-/ immediately following the root-initial consonant. Then an epenthetic vowel /V/ is inserted to avoid impermissible syllable structures. The infix /-m-/ cannot occur with vowel-initial roots and roots whose initial consonant is a bilabial, so /k/ appears to occur in order to provide the right phonological environment for infixing a /-m-/

In the past tense, the epenthetic vowel does not occur; instead, the vowel /i/ occurs in place of the epenthetic vowel indicating past tense. Thus, the past tense form of kemorikng 'getting dry' (cf. (74)) is kimorikng 'got dry'. I avoid past tense examples in this section in order to reduce the morphological complexity in the examples.
(76) | /km-/ | /-m-/ | 
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>kem-aal</td>
<td>ACH-expensive</td>
</tr>
<tr>
<td>kem-enta'</td>
<td>ACH-unripe</td>
</tr>
<tr>
<td>kem-onsobm</td>
<td>ACH-sour</td>
</tr>
<tr>
<td>kim-ingi</td>
<td>ACH-crazy</td>
</tr>
<tr>
<td>kim-iskidn</td>
<td>ACH-poor</td>
</tr>
<tr>
<td>kem-odobm</td>
<td>ACH-black</td>
</tr>
<tr>
<td>kem-odu'</td>
<td>ACH-far</td>
</tr>
<tr>
<td>kem-omis</td>
<td>ACH-sweet</td>
</tr>
<tr>
<td>kum-udap</td>
<td>ACH-hungry</td>
</tr>
<tr>
<td>kum-utakng</td>
<td>ACH-spoiled</td>
</tr>
<tr>
<td>kem-alus</td>
<td>ACH-fine</td>
</tr>
<tr>
<td>kem-arabm</td>
<td>ACH-forbidden</td>
</tr>
<tr>
<td>kem-panggar</td>
<td>ACH-stiff</td>
</tr>
<tr>
<td>kem-pesa'</td>
<td>ACH-broken</td>
</tr>
<tr>
<td>kem-puti'</td>
<td>ACH-white</td>
</tr>
<tr>
<td>kem-pagadn</td>
<td>ACH-hard</td>
</tr>
<tr>
<td>kem-panas</td>
<td>ACH-hot</td>
</tr>
<tr>
<td>kim-bisa</td>
<td>ACH-strong</td>
</tr>
<tr>
<td>kum-buha'</td>
<td>ACH-open</td>
</tr>
<tr>
<td>kem-baru</td>
<td>ACH-new</td>
</tr>
<tr>
<td>kim-biru</td>
<td>ACH-blue</td>
</tr>
<tr>
<td>kem-basa'</td>
<td>ACH-wet</td>
</tr>
<tr>
<td>kim-bilug</td>
<td>ACH-round</td>
</tr>
</tbody>
</table>

(77) /k-/ 
| ku-mula' | ACH-old (things) |
| ku-mulak | ACH-young |

Not all adjectives have the same status with respect to their potential for achievement verb affixation. All of the adjective roots in (24) and (25) have corresponding derived achievement verbs. That is to say, if an adjective root can occur as a condition stative predicate, it can also occur as a derived achievement verb. However, if adjective roots cannot occur as condition stative predicates, neither can they occur as derived achievement verbs.

§2.1.3 pointed out that condition stative verbs such as ng-korikng 'ST-dry' in (73) (cf. (21)) have a single core syntactic argument which is semantically a patient, but such clauses can have an optional adjunct which is an effector as was shown in (26) and described in (27). Similarly, achievement verbs such as kemorikng 'ACH-dry' in (74) have a single core syntactic argument which is semantically a patient (cf. (75a)), but such clauses can have an optional adjunct which is an effector as shown in (77). The effector is marked with ga' 'from', indicating that it is syntactically an oblique adjunct and semantically an effector.
§2.1.3 also pointed out that *ga* 'from' has a causative meaning, and only occurs with states and achievements. Achievements, like states, express causality indirectly as reflected in the LS of (78b) where one of the arguments of *ga* 'from' is \(\text{BECOME predicate } (y)\).

(77) \(\text{Sia k-em-orikng (km-koring) ga' odu.}\)
3sNOM @-ACH-dry from sun
'It is becoming dry from the sun.'

A summary analysis of (77) is provided in (78) (cf. (27)).

(78) a. General LS for achievements
with underlying condition state: \(\text{BECOME predicate } (x)\) \(\ x=\text{patient}\)
b. Clause-specific LS for (77): \(\text{[from } (x, \text{BECOME predicate } (y))]\) \(\ x=\text{antecedent cause},\ \ y=\text{patient}\)

c. Assign thematic relations: \(\text{sia 'it' } \leftarrow \text{patient}\)
\(\text{odu 'sun' } \leftarrow \text{effector (antecedent cause)}\)
d. Assign semantic macroroles: \text{undergoer } \leftarrow \text{patient} \ 1 \text{Macrorole}\)
e. Assign syntactic functions: \text{pivot } \leftarrow \text{undergoer-sia 'it'}\)
\text{oblique adjunct } \leftarrow \text{effector (antecedent cause)-odu 'sun'}\)
f. Assign case and prepositions: \text{pivot-sia 'it' } \leftarrow \text{nominative case}\)
\text{effector-odu 'sun' } \leftarrow \text{oblique ga' 'from'}\)
g. Cross-reference verb: \(\text{korikng 'dry' } \leftarrow \text{km- 'ACH'}\)

Achievement verbs can also be derived from the cognition stative roots described in §2.1.5.

For example, (79) illustrates the achievement verb *kem-pandi* 'ACH-know' (cf. (61)).

(79) \(\text{M-pagadn na kem-pandi (km-pandi) uubm Bonggi.}\)
ST-difficult PFT ACH-know language Bonggi
'IT is difficult to learn Bonggi.'

A summary analysis of the downstairs (or complement) clause in (79) is provided in (80).

Like their stative verb counterparts, achievement verbs which are derived from cognition stative roots have two arguments in their LS, both of which occur as direct core arguments in syntax, but only the experiencer is linked to a semantic macrorole.

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69 The phonological processes resulting from the affixation of *km-* to the root *pandi* 'know' and yielding the surface form *kem-pandi* 'ACH-know' are the same as those described in footnote 68 and exemplified in (76).
(80) a. General LS for \textit{know}: \\
\textit{know}'(x,y) \quad x=\text{experiencer}, \ y=\text{theme} \\

b. Clause-specific LS for (79): \\
\text{BECOME pandi} '\text{know}'(\emptyset, uubm Bonggi) \\
\text{ 'Bonggi language'} \\

c. Assign thematic relations: \\
\emptyset \leftarrow \text{experiencer} \\
uubm Bonggi 'Bonggi language' \leftarrow \text{theme} \\

d. Assign semantic macroroles: \\
\text{undergoer} \leftarrow \text{experiencer} \\
1 \text{ Macrorole} \\

e. Assign syntactic functions: \\
direct \text{core syntactic argument} \leftarrow \text{theme-uubm Bonggi} \\
\text{'Bonggi language'} \\

f. Assign case and prepositions: \\
core argument-uubm Bonggi \leftarrow \text{accusative case (}\emptyset\text{)} \\
pandi '\text{know'} \leftarrow \text{km- 'ACH'} \\

g. Cross-reference verb: \\

A third type of achievement verb has an underlying possession stative in its LS. The addition of the logical operator BECOME indicates a change of possession (cf. Jolly 1993:277). As pointed out in §2.1.4, the prefixes \textit{ki-} and \textit{nd-} mark verbs of possession. \textit{ki-} marks the presence of possession in both possession stative verbs (e.g. (49), (51), (55)) and achievement verbs with an underlying possession stative, e.g. (81). \textit{nd-} marks the absence of possession in both possession stative verbs (e.g. (50), (56)) and achievement verbs with an underlying possession stative, e.g. (82).70

\begin{tabular}{lllll}
\textbf{81} & Sia & \textit{ki-a-ardn (ki-ara-an)} & na & saa. \\
& 3sNOM & POS-exist-ACH & PFT & spouse \\
& 'HE just got married.' \\
\end{tabular}

\begin{tabular}{lllll}
\textbf{82} & Sia & \textit{nd-a-ardn (nd-ara-an)} & na & saa. \\
& 3sNOM & NEG-exist-ACH & PFT & spouse \\
& 'HE is no longer married.'71 \\
\end{tabular}

A summary analysis of (81) is provided in (83). A comparison of the analysis in (83) with the analysis of a possession stative in (52) is instructive. The two analyses are the same with the exception of the addition of the logical operator BECOME in the LS of the achievement verb in (83)

\footnotesize
70\text{Achievement verbs with an underlying possession stative are derived from the existential root \textit{ara}, never from noun roots (cf. §2.1.4).}

71\text{It is instructive to compare the meaning of the achievement clauses in (81) and (82) with the stative clauses in (51) and (50). The stative clause in (50) is used when speaking about someone who has never been married, while the achievement clause in (82) is used in speaking about someone who has been married, but is either recently divorced or whose spouse is recently deceased. Similarly, the stative clause in (51) is used when speaking about someone who has been married for a while, whereas the achievement clause in (81) is used in speaking about someone who has recently married. Thus, the achievement clauses are used to refer to a change in marital status which is normally interpreted as being 'recent'.}
and a concomitant change in verbal cross-referencing by the additional affix -an. There is no change in the assignment of thematic relations, macroroles, syntactic function, or case. In both instances, the possessor argument is the pivot.

(83) a. General LS for achievement with underlying possession statives:
    \[ \text{BECOME have'}^{(x,y)} \quad x=\text{possessor}, \ y=\text{possessed} \]
b. Clause-specific LS for (81):
    \[ \text{BECOME ara' existential'}^{(sia \ 'he', \ saa \ 'spouse')} \]
c. Assign thematic relations:
    \[ \text{sia 'he' } \leftarrow \text{possessor} \]
    \[ \text{saa 'spouse' } \leftarrow \text{possessed} \]
d. Assign semantic macroroles:
    \[ \text{undergoer } \leftarrow \text{possessor} \]
    \[ 1 \text{ Macrorole} \]
    \[ \text{pivot } \leftarrow \text{undergoer-sia 'he'} \]
    \[ \text{direct core syntactic argument } \leftarrow \text{possessed-saa 'spouse'} \]
e. Assign syntactic functions:
    \[ \text{pivot-sia 'he' } \leftarrow \text{nominative case} \]
    \[ \text{core argument-saa 'spouse' } \leftarrow \text{accusative case (θ)} \]
f. Assign case and prepositions:
    \[ \text{pivot-sia 'he' } \leftarrow \text{nominative case} \]
    \[ \text{core argument-saa 'spouse' } \leftarrow \text{accusative case (θ)} \]
g. Cross-reference verb:
    \[ \text{ara' existential'}^{(ki- 'POS', \ -an' 'ACH)} \]

Unlike other achievement verbs which are cross-referenced by a form of the infix -m-, achievement verbs with an underlying possession stative are cross-referenced by the suffix -an.\(^{72}\)

§2.1.4 stated that possessors can be inanimate, e.g. (55) and (56). Sentence (84) illustrates an inanimate possessor in an achievement possessive clause. The verb is marked with -an indicating that this is an achievement. Example (84) is used if the boat is recently painted, while (55) is used if a boat has an older paint job.

(84) Oig na \( ki\-a\-ardn \) (ki-ara-an) na saat.
    \[ \text{boat DEF POS-exist-ACH PFT paint} \]
    \[ 'THE BOAT has been painted.' \]

A fourth type of achievement has an underlying existential state in its LS. The addition of the logical operator \text{BECOME} indicates a change in existential circumstance. The prefixes \text{ki-} and \text{nd-} indicate the presence or absence of existence in existential clauses. Affixation in achievement

\(^{72}\)\text{ki-} derives possessive states; \text{-an} derives achievement verbs from possessive states.

\(^{73}\)The morphophonemic processes involved include nasal harmony, nasal preplosion, metathesis, and vowel deletion. The vowel deletion rule which deletes a vowel before an identical long vowel is required to derive \( [ki'amad] 'have\text{-GOAL}.' \) The derivation is: underlying form - \#\text{ki'ara} + an#; stress rule - \#\text{ki'a'roan#}; nasal preplosion - \#\text{ki'a'raadn#}; metathesis - \#\text{ki'a'ardn#}; vowel deletion - \[ki'aardn].
existential clauses is identical to that found in achievement possessive clauses. Sentences (85) and (86) illustrate achievement existential clauses (cf. (64), (65)).

(85) **Ki-a-ardn (ki-ara-an) na lama dii bali nu.**

POS-exist-ACH PFT person at house 2sGEN
'There is SOMEBODY at your house.'

(86) **Sia nd-a-ardn (ki-ara-an) na kati'.**

3sNOM NEG-exist-ACH PFT here
'HE is not here.'

A fifth type of achievement has an underlying locative predicate in its LS. As pointed out in §2.1.2, locative predicates are either verbal or nonverbal, depending on what functions as the predicate. In both instances, the LS contains the two-place abstract predicate, **be-at'** (x,y). The addition of the logical operator **BECOME** to a locative predicate indicates a change in location. For example, (87) and (88) illustrate two locative states, the former nonverbal and the latter verbal.

The corresponding achievement states are illustrated by (89) and (90) respectively. In (87) (cf. (19)), the spatial deictic **dii** 'there' (cf. Table 2.3) functions as the predicate of the nonverbal state. In (88) (cf. (15)), the predicate is derived from the locative adjective root **ingad** 'near'.

(87) **Sia dii.**

3sNOM there
'SHE is there.'

(88) **Sia m-ingad.**

3sNOM ST-near
'SHE is near.'

(89) **Sia kin-dii (km-dii).**

3sNOM ACH-there
'SHE is going there.'

(90) **Sia kim-ingad (km-ingad).**

3sNOM ACH-near
'SHE is getting near.'

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74 The semantic contrast between the achievement existential clauses in (85) and (86), and the stative existential clauses in (64) and (65) is interesting, and not reflected in the English free translations. The achievement existential clauses are used to convey contra-expectation.

75 Cf. Table 2.7; cf. also Jolly (1993:277).
The LSs and verbal cross-referencing for (87), (88), (89), and (90) are provided in (91a), (91b), (91c), and (91d) respectively. In each case, the first argument (the locative) is unspecified. The second argument (the theme) is both the undergoer and the syntactic pivot. There is no change between locative states and achievements with underlying locative states in terms of the assignment of thematic relations, macroroles, syntactic functions, or case (cf. (18)). The difference lies in the addition of the operator BECOME to the LS of the achievement clauses and a concomitant change in verbal cross-referencing.76

(91) a. LS for (87): 
   \textit{dii} 'there' (Ø, sia 'she')  
   Cross-referencing:

b. LS for (88): 
   \textit{ingad} 'near' (Ø, sia 'she')  
   Cross-referencing: \textit{m-}

c. LS for (89): 
   BECOME \textit{dii} 'there' (Ø, sia 'she')  
   Cross-referencing: \textit{km-}

d. LS for (90): 
   BECOME \textit{ingad} 'near' (Ø, sia 'she')  
   Cross-referencing: \textit{km-}

Like their locative stative counterparts, achievements with underlying locative predicates can occur with a specified locative argument as in (92) (cf. (89)) and (93) (cf. (90), (15)). A summary analysis of (93) is provided in (94) (cf. (18)).

(92) 
\textit{Sia} \textit{kin-dii (km-dii)} \textit{bali} \textit{nya}.  
3sNOM ACH-at house 3sGEN  
'HE is going to his house.'

(93) 
\textit{Sia} \textit{kim-ingad (km-ingad)} \textit{diaadn}.  
3sNOM ACH-near 1sACC  
'SHE is coming close to me.'

\textsuperscript{76}The cross-referencing of achievements by \textit{km-} is realized in different ways depending on both the lexical category and the phonological shape of the root. \textit{km-} is realized the same for both achievement verbs derived from locative adjectives (e.g. \textit{kim-ingad} 'ACH-near' in (90)) and achievement verbs derived from other adjectives (e.g. \textit{km-aal} 'ACH-expensive in (76)). The phonological processes involved are described in footnote 68 and exemplified in (76). For many adjective roots, \textit{km-} is realized as an infix /-m-/ (e.g. \textit{d-em-alabm} 'ACH-deep' in (76)) (cf. other examples in (76)). However, \textit{km-} is always realized as a prefix, never as an infix, for achievement verbs derived from spatial deictics (e.g. \textit{km-dii} 'ACH-there' in (89)). In this case, an epenthetic vowel /v/ is inserted to avoid impermissible syllable structures (cf. footnote 68), and the nasal portion of the prefix \textit{km-} assimilates to the same point of articulation as the initial consonant of the root (this follows the rule of nasal assimilation in footnote 31). Furthermore, /k/ is not simply inserted just to provide the right phonological environment for infixation; it indicates direction toward a location (goal) with these achievement verbs.
(94) a. General LS for locative state: \textbf{be-at'} (x,y) \quad x=\text{locative}, y=\text{theme}
b. General LS for achievements with underlying locative state: \textbf{BECOME be-at'} (x,y) \quad x=\text{locative}, y=\text{theme}
c. Clause-specific LS for (93): \textbf{BECOME ingad 'near'} (diaadn 'me', sia 'she')
d. Assign thematic relations: \textit{diaadn 'me'} \leftarrow \text{locative}
\textit{sia 'she'} \leftarrow \text{theme}
e. Assign semantic macroroles: undergoer \leftarrow \text{theme} \quad 1 \text{ Macrorole}
f. Assign syntactic functions: pivot \leftarrow \text{undergoer-sia 'she'}
direct core syntactic argument \leftarrow \text{locative-diaadn 'me'}
g. Assign case and prepositions: pivot-sia 'she' \leftarrow \text{nominative case}
core argument-diaadn 'me' \leftarrow \text{accusative case}
h. Cross-reference verb: \textit{ingad 'near'} \leftarrow \text{km-'ACH}

It is instructive to compare the analysis of the achievement verb in (94) with the analysis of the locative stative verb in (18). Both verbs have two arguments in their LS. In the stative situation, (18a), both the theme (Figure) and the locative (Ground) are stationary, whereas in the achievement situation, (94c), the theme (Figure) is moving with respect to the locative (Ground).

By (54c), locative statives and achievements with an underlying locative predicate only have one macrorole, since only the theme can be the clause pivot, never the locative. By (54b.2), the single macrorole is an undergoer (cf. (52d)). Thus, in both situations, following the Actor-Undergoer Hierarchy in (4), the theme is linked to undergoer and the locative is not linked to a macrorole (cf. (18d), (94e)).\footnote{According to the Actor-Undergoer Hierarchy in (4), the theme is the unmarked choice for undergoer since it is the rightmost argument. Furthermore, just because a verb has two arguments in its LS, it is not required to have two macroroles (VV 1993:46-47).} In both situations the pivot is an undergoer, and the locative is a direct core syntactic argument (cf. (18c), (94f)).\footnote{In (94g) accusative case is overtly marked since pronouns are distinguished according to case, but in (18f) accusative case is not overtly marked since common nouns are not case marked (cf. Table 1.3). Thus, case is lexically dependent here.} In the stative situation the verb is cross-referenced by \textit{m-} (cf. (18g)), whereas in the achievement situation it is cross-referenced by \textit{km-}.

Bonggi achievement verbs with underlying locative predicates have a directional meaning.

For instance, the achievement verb in (92) indicates direction toward a location; that is, it is goal-oriented. However, other achievement verbs indicate direction from a location; that is, they are source-oriented. Two types of spatial deictics were described in §2.1.2: specific, illustrated by \textit{dii}
'there' in (87) (cf. Table 2.3), and nonspecific, illustrated by kuii' 'somewhere yonder' in (95) (cf. Table 2.4). Given the nonverbal locative statives in (87) and (95), (96) and (97) are source-oriented achievements derived these locative states. A summary analysis of (97) is provided in (98).

(95) Sia kuii'.
3sNOM somewhere.yonder
'SHE is somewhere yonder.'

(96) Sia ti-dii (tm-dii).79
3sNOM FROM-there
'SHE is from there.'

(97) Sia tung-kuii' (tm-kuii').
3sNOM FROM.ACH-somewhere.yonder
'SHE is from somewhere yonder.'

(98) a. General LS for locative predicate: be-at' (x,y) x=locative, y=theme
b. General LS for source-oriented achievements with underlying locative state: BECOME NOT be-at' (x,y) x=locative, y=theme
c. Clause-specific LS for (97): BECOME NOT kuii' 'somewhere yonder' (O, sia 'she')
d. Assign thematic relations: sia 'she' ← theme
e. Assign semantic macroroles: undergoer ← theme 1 Macrorole
f. Assign syntactic functions: pivot ← undergoer-sia 'she'
g. Assign case and prepositions: pivot-sia 'she' ← nominative case
h. Cross-reference verb: kuii' 'somewhere yonder' ← tm- 'ACH'

The addition of the operator BECOME NOT to a locative predicate results in a source-oriented achievement verb (cf. (98b)). Thus, by (98c), (97) is a source-oriented achievement verb. By (54c), there is only one macrorole, since only the theme can be the clause pivot, never the locative. By (54b.2), the single macrorole is an undergoer. By (4), the theme is linked to undergoer (cf. (98e)). By (7), the undergoer is the pivot (cf. (98f)). The verb is cross-referenced by tm- (cf. (98h)).

Differences between goal-oriented and source-oriented directional verbs include: (i) the absence of NOT in the LS of goal-oriented directionals (e.g. (94b), (94c)), but the presence of NOT

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79The vowel associated with the prefix tm- is epenthetic. It is inserted to avoid impermissible syllable structures (cf. footnotes 31 and 68). The nasal portion /m/ does not occur with source-oriented specific spatial deictics such as ti-dii 'FROM-there' in (96).
in the LS of source-oriented directionals (e.g. (98b) (98c)); and (ii) goal-oriented directional verbs are cross-referenced by \textit{km-} (e.g. (94h)), whereas source-oriented directional verbs are cross-referenced by \textit{tm-} (e.g. (98h)).

Perhaps, instead of these two prefixes, there are three: \textit{k-}, \textit{t-}, and \textit{m-} with \textit{k-} indicating goal-orientation; \textit{t-} indicating source-orientation; and \textit{-m-'ACH'} deriving a directional verb from a spatial deictic. Note, however, that \textit{l/m} does not occur with source-oriented specific spatial deictics such as \textit{ti-dii 'FROM-there'} in (96). This is due to the fact that \textit{ti-dii 'FROM-there'} and other source-oriented specific spatial deictics can occur as locative adverbs as in (99) or locative prepositions as in (100).

(99) \textit{Sia mubah ti-dii (tm-dii).} \\
3sNOM leaves FROM-there \\
'SHE leaves from there.'

(100) \textit{Sia mubah ti-dii (tm-dii) bali nya.} \\
3sNOM leave FROM-at house 3sGEN \\
'SHE leaves from her house.'

In both (99) and (100) the source interpretation associated with \textit{tm-} is derivative from the spatial[locative meaning of \textit{dii 'there'} which is primary.\textsuperscript{80} Source-oriented spatial deictics which are derived from the specific spatial deictics in Table 2.3 are shown in Table 2.8.\textsuperscript{81} The derived spatial deictics are used to indicate a location away from the deictic center which is established by the base form.

\textsuperscript{80}Cf. Lichtenberk (1991:485) for a similar conclusion regarding To'aba'ita, an Austronesian language in the Oceanic subgroup.

\textsuperscript{81}Although source-oriented \textit{directional verbs} (e.g. \textit{rung-kuiti 'FROM.ACH-somewhere yonder'} in (97)) can be derived from the nonspecific spatial deictics in Table 2.4, source-oriented \textit{spatial deictics} cannot be derived from the nonspecific spatial deictics in Table 2.4.
Table 2.8: Derived specific spatial deictics

<table>
<thead>
<tr>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ti-diti</td>
<td>'from-here' (near speaker)</td>
</tr>
<tr>
<td>ti-dia</td>
<td>'from-there' (near addressee)</td>
</tr>
<tr>
<td>ti-dioo</td>
<td>'from-there' (not near speaker or addressee, but usually visible)</td>
</tr>
<tr>
<td>ti-dii</td>
<td>'from-yonder' (not visible)</td>
</tr>
</tbody>
</table>

The source marking function of $t$- motivates the use of *tidii* as the source in the standard of comparison as in (101). The primary function of *tidii* is spatial, but its meaning is extended to include the standard in comparison.\(^{82}\)

\(^{(101)}\) Sia lobi pandi tidii diadn.  
3sNOM more know than 1sACC  
'SHE knows more than me.'

Another distinction between the specific spatial deictics in Table 2.3 and the nonspecific spatial deictics in Table 2.4 is that the former can occur with imperatives as in (102), but the latter cannot.

\(^{(102)}\) Ipaa' diti!  
put.it here  
'Put it here!'  

Ipaa' dioo!  
put.it there  
'Put it there!'

Ipaa' dii!  
put.it yonder  
'Put it way over yonder!'

Two types of locative states were described in §2.1.2, nonverbal and verbal. Nonverbal, locative stative clauses are defined as clauses whose predicate is either a deictic adverb (e.g. (14), (19), (87), (95)) or a locative preposition (e.g. (8), (11), (12), (16)). Verbal, locative stative clauses are defined as clauses whose predicate is a stative verb (e.g. (15), (88)). The stative verbs in (15) and (88) are derived from adjective roots which have a locative meaning. This section has shown that achievement verbs with an underlying locative in their LS can be derived from deictic

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\(^{82}\) Cf. Lichtenberk (1991:487) for a similar situation in Fijian.
adverbs (e.g. (89), (97)), locative prepositions (e.g. (92)), or locative adjectives (e.g. (90), (93)). Although achievements are normally verbal, achievements such as (96) can be considered nonverbal with a deictic adverb (e.g. ti-dii 'FROM-there' in (96)) functioning as the clause predicate. This accounts for the absence of /m/ in such forms.

There are achievement verbs which are lexicalized in Bonggi and have an underlying locative in their LS, as in (103). A summary analysis of (103) is provided in (104).

(103) Adak nya me-dabu' (mV-dabu').
almost 3sGEN ACH-fall.down
'IT almost fell down.'

(104) a. General LS for locative predicate: be-at' (x,y) x=locative, y=theme
b. General LS for achievements with underlying locative: BECOME be-at' (x,y) x=locative, y=theme
c. Clause-specific LS for (103): BECOME dabu' 'fall down' (O, nya 'it')
d. Assign thematic relations: nya 'it' ← theme
   undergoer ← theme 1 Macrorole
e. Assign semantic macroroles: pivot ← undergoer-nya 'it'
f. Assign syntactic functions: pivot-nya 'it' ← genitive case
g. Assign case and prepositions: dabu' 'arrive' ← mV- 'ACH'
   h. Cross-reference verb: dabu' 'arrive'

By (54c), there is only one macrorole. By (54b.2), the single macrorole is an undergoer. By (4), the theme is linked to undergoer (cf. (104e)). Achievement verbs which are derived from this group of verb roots are cross-referenced by mV- (cf. (104h)).

The LS for locative achievement verbs can be analyzed in terms of an interval analysis since these verbs involve a change of location (cf. FVV 1984:38; Jolly 1993:294). In an interval analysis, the LS for medabu' 'fall down' is either: (i) be-at' (x,y) & BECOME NOT be-at' (x,y), or (ii) NOT be-at' (x,y) & BECOME be-at' (x,y) (cf. (104b)). As mentioned above, source-oriented

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83 The use of genitive case nya 'it' in (103) results from the occurrence of the pivot within the verb phrase. Adak 'almost' is a modal operator which is discussed in Chapter 3. If the pivot occurs in clause-initial position, it receives nominative case as in: Sia adak medabu' 'IT almost fell down.'

84 /V/ is a vowel which is subject to vowel harmony and vowel weakening. This vowel is part of the prefix and is not simply inserted to avoid impermissible syllable structures (cf. footnote 31). The nature of the vowel is phonologically predictable.

mV- only occurs in the nonpast tense. Past tense forms are avoided here to reduce the complexity.
achievement verbs include the operator BECOME NOT in their LS, whereas goal-oriented achievement verbs only include the operator BECOME in their LS. In fact, both (i) and (ii) are permissible with verb *medabu* 'fall down', and the choice predicts the nature of the locative argument; that is, given the LS in (i), the locative argument is source-oriented, and given the LS in (ii), the locative argument is goal-oriented. For example, in (103) the locative argument is unspecified; this is captured by '∅' in the clause-specific LS in (104c). In (105) the locative argument is a source; this is captured by BECOME NOT in the LS in (107a). In (106) the locative argument is a goal; this is captured by BECOME in the LS in (107b). Thus, preposition assignment here is predicted from the LSs, not arbitrarily assigned to verbs in the lexicon.

(105) *Adak nya me-dabu' (mV-dabu') ti-dii mija'.*  
almost 3sGEN ACH-fall.down from-at table  
'IT almost fell down from the table.'

(106) *Adak nya me-dabu' (mV-dabu') dii tana'.*  
almost 3sGEN ACH-fall.down at ground  
'IT almost fell down on the ground.'

(107)a. LS for (105): **be-at' (mija' 'table', nya 'it') & BECOME NOT dabu' 'fall down' (mija' 'table', nya 'it')**  
b. LS for (106): **NOT be-at' (tana' 'ground', nya 'it') & BECOME dabu' 'fall down' (tana' 'ground', nya 'it')**

On the one hand, locative achievement verbs which are derived from spatial deictics are cross-referenced by *km-* if they are goal-oriented (e.g. (89), (92)), and *tm-* if they are source-oriented (e.g. (96), (97)). On the other hand, locative achievement verbs which have been lexicalized are cross-referenced by *mV-* (e.g. (103), (105), (106)) and goal/source is reflected in the assignment of prepositions. Some locative achievement verbs are source-oriented, e.g. *me-rari* 'ACH-flee', whereas others are goal-oriented, e.g. *me-tabukng* 'ACH-sink'. That is, the LS for *me-rari* 'ACH-flee' is **be-at' (x,y) & BECOME NOT be-at' (x,y)**, but the LS for *me-tabukng* 'ACH-sink' is **NOT be-at' (x,y) & BECOME dabu' 'fall down' (x,y)**.

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85 Whereas English *flee* and *run away* suggest a volitional agent, this is not the case with Bonggi *merari*, which I gloss as 'flee'. In Bonggi, people who *me-rari* 'ACH-flee' are like people who 'get lost' (*me-teirdn* 'ACH-lost'); in both situations, the participants are undergoers and what happens to them is beyond their control.
at' (x,y) & BECOME be-at' (x,y). Since the LS for me-rari 'ACH-flee' contains BECOME NOT be-at', whenever the locative argument occurs it is marked by the preposition tidii 'from'. In contrast, since the LS for me-tabuku 'ACH-sink' contains BECOME be-at', whenever the locative argument occurs it is marked by the preposition dii 'into'. Other locative achievement verbs, such as me-dabu 'fall', can be either source or goal-oriented, depending on the perspective of the speaker.

To summarize, all locative predicates have the two-place abstract predicate, be-at' (x,y) in their LS, where the first argument is a locative and the second a theme. The LS for locative statives is be-at' (x,y). Locative statives are either verbal or nonverbal, depending upon the class of the word which functions as the predicate. Nonverbal locative statives have either spatial deictic predicates (cf. Table 2.3 and Table 2.4) or locative prepositional predicates (cf. Table 2.5). Verbal locative statives have predicates which are derived from adjective roots with a locative meaning (e.g. (15)). Some achievements contain an underlying locative predicate in their LS, and are referred to as locative achievements. Furthermore, locative achievements whose predicate is derived from a spatial deictic are sometimes referred to as directional verbs because their meaning involves movement in some direction with respect to the locative base. This movement is either toward the base (i.e. goal-oriented) or away from the base (i.e. source-oriented). Bonggi lexicalizes other locative achievements in which case the goal/source found in the LS is reflected in preposition assignment. The relationship between locative states and derived achievements is summarized in Table 2.9 with representative members.86

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86 In terms of distribution, the data in Table 2.9 are inconclusive with respect to 'source' being marked as opposed to 'goal'. For a general discussion of 'source' as the marked relationship as opposed to 'goal', see Ikegami (1987).
### Table 2.9: Relationship between locative states and achievements

<table>
<thead>
<tr>
<th>Locative State</th>
<th>Specific Spatial Deictic</th>
<th>Nonspecific Spatial Deictic</th>
<th>Locative Adjective</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static</td>
<td>be-at' (x,y)</td>
<td>dii 'there' (e.g. (87))</td>
<td>m-ingad 'ST-near' (e.g. (88))</td>
<td>me-rari 'ACH-flee'</td>
</tr>
<tr>
<td>Goal-oriented</td>
<td>BECOME be-at' (x,y)</td>
<td>kin-dii 'TO-there' (e.g. (89))</td>
<td>kim-ingad 'ACH-near' (e.g. (90))</td>
<td>me-tabukng 'ACH-sink'</td>
</tr>
<tr>
<td>Source-oriented</td>
<td>BECOME NOT be-at' (x,y)</td>
<td>ti-dii 'FROM-there' (e.g. (96))</td>
<td>tung-kuii' 'FROM-yonder' (e.g. (97))</td>
<td></td>
</tr>
</tbody>
</table>

The condition states introduced in §2.1.3 are derived from adjective roots. There are a few achievement verbs which appear to have condition statives in their LS and which are derived from nouns. The noun roots can occur unaffixed in nominal syntactic positions, but they are not prototypical nouns, as can easily be seen in (108).

(108) **ROOT** | **GLOSS** | **ACHIEVEMENT** | **GLOSS**
---|---|---|---
inak | fat | kin-inak | become-fatty
lusak | mud | l-um-usak | become-muddy
obu | odor | kem-obu | become-smelly
ropukng | mold | r-em-opukng | become-moldy
todob | fever | t-em-odob | become-feverish
togor | rust | t-em-ogor | become-rusty

Achievement verbs which are derived from noun roots are illustrated in (109) and (110). A summary analysis of (110) is provided in (111) (cf. (78)). These achievement verbs are cross-referenced like those which have condition statives in their LS and are derived from adjective roots (cf. (74) and (76)).

(109) *Anak* ku *nda*' kim-inak (km-inak).
child lsGEN not ACH-fat
'MY CHILD is not getting fat.'

(110) *Dindikng* ku *k-um-uluaq* (km-kuluak) ga' dolok.
wall lsGEN @-ACH-bark from rain
'MY WALL is peeling off from the rain.'
(111) a. General LS for achievements with underlying locative: \[ \text{BECOME NOT be-at'} (x,y) \quad x=\text{locative}, \quad y=\text{theme} \]

b. Clause-specific LS for (110): \[ \text{[from'} (x, \text{[BECOME NOT be-at'} (y,z)])\]

\[ x=\text{antecedent cause}, \quad \text{be-at'} (y,z)=\text{resulting state}, \]

\[ \text{[ga' from'} (\text{dolok 'rain'}, \text{[BECOME NOT be-at'}} (y,z)\text{'kuluak 'bark']))\]

c. Assign thematic relations: \[ \text{dindikng 'wall' } \leftarrow \text{ locative} \]

\[ \text{kuluak 'bark' } \leftarrow \text{ theme} \]

dolok 'rain' \leftarrow \text{ effector (antecedent cause)}

d. Assign semantic macroroles: undergoer \leftarrow \text{ locative} \quad \text{1 Macrorole}

\[ \text{pivot } \leftarrow \text{ undergoer-dindikng 'wall'} \]

\[ \text{oblique adjunct } \leftarrow \text{ effector (antecedent cause)}- \]

dolok 'rain'

e. Assign syntactic functions: \[ \text{pivot-dindikng 'wall' } \leftarrow \text{ nominative case (0)} \]

\[ \text{effector-dolok 'rain' } \leftarrow \text{ oblique ga' from'} \]

f. Assign case and prepositions: \[ \text{pivot-dindikng 'wall' } \leftarrow \text{ nominative case (0)} \]

\[ \text{effector-dolok 'rain' } \leftarrow \text{ oblique ga' from'} \]

g. Cross-reference verb: \[ \text{kuluak 'bark' } \leftarrow \text{ km- 'ACH'} \]

Example (110) has an effector (antecedent cause) which is marked as an oblique adjunct (cf. (77)). The analysis presented in (111) is similar to that found in (78). In (110) the predicate is derived from the noun root kuluak 'bark', in (77) it is derived from the adjective root korikng 'dry'.

The LS in (111b) contains a locative predicate be-at' (y,z), the LS in (78b) a condition state.

Because the theme argument in the LS functions as the predicate in (110), it is cannot be linked to a macrorole; instead, the locative argument is linked to undergoer (cf. (111d)). This follows from the general principle that when arguments in the LS function as the predicate in syntax, they usually do not function as an argument in the same clause.

Besides achievements which have condition states in their LS and are derived from adjective roots (cf. §2.1.3) and noun roots (cf. above), there are also achievements which have condition states in their LS and are derived from verb roots as in (112), where the embedded clause contains the achievement. A summary analysis of (112) is provided in (113).

(112) M-olok ou tilug na m-pesa' (km-pesa').

ST-scared lsNOM egg DEF ACH-crack
'I am scared THE EGG might crack.'

(113) a. General LS for achievements with underlying condition static: \[ \text{BECOME predicate'} (x) \quad x=\text{patient} \]

b. Clause-specific LS for (112): \[ \text{BECOME pesa'} 'crack' (tilug 'egg') \]

c. Assign thematic relations: \[ \text{tilug 'egg' } \leftarrow \text{ patient} \]

d. Assign semantic macroroles: \[ \text{undergoer } \leftarrow \text{ patient} \quad \text{1 Macrorole} \]

e. Assign syntactic functions: \[ \text{pivot } \leftarrow \text{ undergoer-tilug 'egg'} \]

\[ \text{pivot-tilug 'egg' } \leftarrow \text{ nominative case (0)} \]

f. Assign case and prepositions: \[ \text{pesa'} 'crack' } \leftarrow \text{ mV- 'ACH'} \]
Achievements which are derived from adjective roots (e.g. (76)) and noun roots (e.g. (108)) are cross-referenced by km-. Those that are lexicalized as verbs (e.g. (103) and (112)) are cross-referenced by mV-. Some achievements which are derived from verb roots are shown in (114).⑧

<table>
<thead>
<tr>
<th>(114)</th>
<th>m-</th>
<th>mV-</th>
</tr>
</thead>
<tbody>
<tr>
<td>m-abis</td>
<td>ACH-finish</td>
<td>me-dabu'</td>
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<tr>
<td>m-ahit</td>
<td>ACH-infect</td>
<td>me-dadi</td>
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<td>m-ala</td>
<td>ACH-lose</td>
<td>me-dak</td>
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<td>m-ansur</td>
<td>ACH-dissolve</td>
<td>me-dasadn</td>
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<td>m-eilu</td>
<td>ACH-drunk</td>
<td>mu-guab</td>
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<td></td>
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<td>me-kahas</td>
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<tr>
<td>m-bela'</td>
<td>ACH-shatter</td>
<td>mi-kisad</td>
</tr>
<tr>
<td>m-bereit</td>
<td>ACH-tear</td>
<td>me-kotop</td>
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<tr>
<td>m-binasa</td>
<td>ACH-break</td>
<td>mu-kusut</td>
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<tr>
<td>m-bubus</td>
<td>ACH-spill</td>
<td>me-lagadn</td>
</tr>
<tr>
<td>m-buha'</td>
<td>ACH-open</td>
<td>me-lamos</td>
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<tr>
<td>m-palis</td>
<td>ACH-blown.away</td>
<td>me-loput</td>
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<tr>
<td>m-pali'</td>
<td>ACH-burn</td>
<td>me-reba'</td>
</tr>
<tr>
<td>m-pesa'</td>
<td>ACH-break</td>
<td>mu-rumbak</td>
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<tr>
<td>m-puda'</td>
<td>ACH-extinguish</td>
<td>mu-rupus</td>
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<tr>
<td>m-pupu'</td>
<td>ACH-fall.off.branch</td>
<td>mi-sipit</td>
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<td>mu-suat</td>
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</tbody>
</table>

The five types of achievements described thus far have statives in their LSs as follows: (i) the achievements in (74), (76), (77), (108), (109), (110), and (112) have condition statives in their LS; (ii) the achievement in (79) has a cognition stative in its LS; (iii) the achievements in (81), (82), and (84) have possession statives in their LS; (iv) the achievements in (85) and (86) have

⑧The prefix vowel is deleted before vowel-initial roots and roots whose initial consonant is a bilabial (cf. footnote 68). Kroeger (1990) refers to roots such as those in (114) as unaccusative roots.
existential statives in their LS; and (v) the achievements in (89), (90), (92), (93), (96), (97), (103), (105) and (106) have locative statives in their LS.

Table 2.7 provided an overview of six types of states and (63) summarized the different subclasses of states in Bonggi. As pointed out earlier,88 the LS for all states can be generalized as either predicate' (x) or predicate' (x,y) (VV 1993:36). Variations among stative subclasses result from variations within these two LSs. The most important semantic distinction among the subclasses of stative verbs is that between locational states (which includes both locative and existential states) and nonlocational states (all other stative verbs).89 This semantic distinction is reflected in the linking between LS arguments and macroroles. Nonlocative states select the first argument in the LS to be both the undergoer and syntactic pivot. Thus, for two-place nonlocative statives, the first argument 'x' in the LS configuration predicate' (x,y) is the undergoer and the syntactic pivot, whereas for one-place nonlocative statives, the first and only argument 'x' in the LS configuration predicate' (x) is the undergoer and the syntactic pivot. In contrast to this, locational statives (including both locative and existential statives) are always two-place statives and always select the second argument 'y' in the LS configuration predicate' (x,y) to be the undergoer and the syntactic pivot.

Two types of states described in §2.1, but not discussed thus far in this section, are experiencer states and emotional states (cf. Table 2.7; cf. also (63)). Since both of these are two-place nonlocational states, they should be, and, in fact, are treated the same according to the claim made above.

Bonggi lexicalizes perception verbs as achievements. For example, (115) illustrates the achievement verb ki-liid 'ACH-see'. A summary analysis of (115) is provided in (116).

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88 See the discussion following (63).

89 Equational states are not included because they are nonverbal. Note that achievement verbs cannot be derived from equational states because they are nonverbal.
(115) *Ki-liid ou nya.*
ACH-see IsNOM 2sACC
'I see him.'

(116) a. LS for perception achievements: \( \text{BECOME predicate'}(x,y) \) \( x=\text{experiencer}, y=\text{theme} \)
b. Clause-specific LS for (115): \( \text{BECOME liid 'see'}(\text{ou }'t', \text{nya }'\text{him}') \)
c. Assign thematic relations: \( \text{ou }'t' \leftarrow \text{experiencer} \) \( \text{nya }'\text{him}' \leftarrow \text{theme} \)
d. Assign semantic macroroles: undergoer \( \leftarrow \text{experiencer} \) 1 Macrorole
f. Assign syntactic functions: pivot \( \leftarrow \text{undergoer-ou }'t' \) core argument-nya 'him' \( \leftarrow \) accusative case

As seen in (116d), the first argument in the LS configuration \( \text{predicate'}(x,y) \) (i.e., \( x=\text{experiencer} \)) is linked to undergoer. Achievement perception verbs are cross-referenced by \( k- \) (116g). In fact, with the exception of possessive achievements (e.g. (81), (82), (84)), all two-place nonlocational achievements are cross-referenced by \( k- \). Although the achievement verb *kem-pandi* 'ACH-know' in (79) appears to be an exception, it is not. Other two-place nonlocational achievements are shown in (117).

(117) k- kV-
k-adak ACH-smell ke-door ACH-hear
k-aap ACH-able ki-lipat ACH-forget
k-intabm ACH-remember ki-pisiaa ACH-believe
k-ubu ACH-laugh ke-rati ACH-understand
ke-rasa ACH-taste ke-tondu' ACH-recognize

As with stative verbs, all achievements are intransitive in RRG terms; i.e. they have only one macrorole which is an undergoer. Furthermore, for each subclass of achievement verb there is only one possible syntactic pivot — the undergoer.

2.3. Activities

Activities are situations which have arbitrary endpoints; i.e., they are unbounded (cf. Smith 1983:481). On the other hand, achievements (cf. §2.2) and accomplishments (cf. §2.4) have natural endpoints; i.e., they are bounded. "Activity verbs are not derived from stative predicates but are represented as primitive predicates in their own right" (Van Valin 1990:224). The general LS for activity verbs is shown in (118a). (118b) illustrates a simple English activity clause and its LS.
(118) a. LS for one-place activity verbs:  
   \[ \text{do'} (x, [\text{predicate'} (x)]) \]
   \[ \text{do'} (\text{he}, [\text{swim'} (\text{he})]) \]

   In (118) \text{do'} refers to a generalized unspecified activity predicate. \text{do'} has two argument positions. The first argument position in (118a) is occupied by 'x', the second by another LS, i.e. \[ [\text{predicate'} (x)] \]. Most activity verbs have a single argument which is an effector. An effector is defined as the first argument of \text{do'}. This definition is in accord with the RRG position that \( \theta \)-roles are defined in terms of argument positions (cf. (5)). The variable 'x' is used in (118a) to refer to both the first argument of \text{do'} and the only argument of \text{predicate'}. Because the same variable 'x' is used in both places, these arguments are coreferential. Coreferential arguments are counted as a single argument in LSs. Therefore, the LSs in (118a) and (118b) apply to single argument activity predicates which are sometimes referred to as one-place activity predicates.\(^{90}\)

   By (54a.2), one-place activity verbs take one macrorole. By (54b.1) the macrorole must be an actor because the LS contains the activity predicate \text{do'}. Thus, by either (4) or (5) \text{he} in (118b) is an actor. According to (4), effector is linked to actor; according to (5), the first argument of \text{do'} is linked to actor.

   There are two basic types of activity verbs: motion activity verbs and nonmotion activity verbs. The former are described in \( \S \)2.3.1, the latter in \( \S \)2.3.2.

2.3.1. Motion Activity Verbs

   The activity verb \text{swim} in (118b) is an example of a motion activity verb. The Bonggi clause which corresponds to (118b) is shown in (119), with a summary analysis in (120).

   \begin{align*}
   (119) & \quad \text{Sia} \quad l-em-ongi (-m-longi). \\
   & \quad 3sNOM \quad @\text{-ACY-swim} \\
   & \quad '\text{HE swims.'} \\
   \end{align*}

\(^{90}\)In the RRG literature, the two parts of activity verb LSs are sometimes conflated in which case the LS for \text{swim} is \text{swim'} (\text{he}).
Activity verbs are primitives and are not derived from states (cf. achievements §2.2). The general LS for all one-place motion activity verbs is shown in (120a). As stated above, the single argument 'x' of one-place activity predicates is an effector. However, with motion activity verbs, 'x' is both an effector and a theme (cf. (120a)). In (120a), the first 'x' refers to an effector, and the second 'x' to a theme. Since the two Xs are coreferential, they are referred to collectively as an effector-theme.

By (54a.2), one-place motion activity verbs have a single macrorole since they have one argument in their LS. By (54b.1), the single macrorole must be an actor because the LS contains the activity predicate do' (cf. (120d)). The single argument 'x' is linked to actor by either (4) since x=effector-theme, or (5) since x=first argument of do'. By (7), the actor is the syntactic pivot (cf. (120e)). Nominative case is assigned to the pivot (cf. (120f)), and motion activity verbs are cross-referenced by -m- (cf. (120g)).

Although the prototypical actor is an agent (which is captured by the Actor-Undergoer Hierarchy in (4)), effectors are more basic than agents (cf. Wilkins & Van Valin 1993:20). The relative status of effectors and agents is seen in both (118a) where all activity predicates have an effector argument, and (120a) where motion activity predicates have an effector-theme argument.

Because agents are volitional, animate participants who instigate an event, the single argument in (119) is an agent. Foley and Van Valin (1984:38) suggested using the logical operator DO to

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91 An effector is a participant that brings about the event. A theme is a participant that changes location.

92 The number of 'arguments' refers to arguments of the predicate which are not coreferential.
represent agenthood in the LS. The addition of the operator DO to the LSs in (120a) and (120b) yields the LSs found in (121a) and (121b) respectively. In this view, agents are defined as the first argument of the logical operator DO. Or stated another way, the presence of the logical operator DO in (121a) and (121b) indicates that a volitional agent is involved.

(121) a. LS for volitional motion activity: \( \text{DO} (x, [\text{do}' (x, [\text{predicate}' (x)])]) \) \( x=\text{agent-effector} \) (& theme)

b. Clause-specific LS for (119): \( \text{DO} (\text{sia}' \text{he}', [\text{do}' (\text{sia}' \text{he}', [\text{longi}' \text{swim}' (\text{sia}' \text{he}')])]) \)

More recently, Wilkins and Van Valin (1993) and Van Valin (1991) have suggested, following Holisky (1987), that DO only appears in a LS if the verb must be interpreted as agentive; otherwise agency is treated as an implicature involving animate arguments of activity verbs (cf. Van Valin 1991:160; Wilkins & Van Valin 1993:15). Wilkins and Van Valin (1993:14) point out that agents are always composite thematic roles, and secondary in that all agents are also effectors. Furthermore, agency is not entirely a property of verbs, so it cannot be represented in the LS of the verb.

There is a fundamental distinction among activity verbs between those which take a volitional argument and those that do not. This distinction applies to both motion and nonmotion activity verbs. For example, l-em-ongi 'swim' (e.g. (119)) is a motion activity verb which involves a volitional agent-effector-theme argument, whereas d-em-abu' 'fall' is a motion activity verb which involves a nonvolitional effector-theme argument as shown in (122).

(122) Dolok kaa' na d-em-abu' (-m-dabu').
rain near PFT @-ACY-fall
'The RAIN is about to fall.'

On the one hand, the motion activity verb in (119) involves an animate effector which is construed as an agent. On the other hand, the motion activity verb in (122) involves an inanimate

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93-\( m \)- is realized as a prefix before vowel-initial roots and roots whose initial consonant is a bilabial obstruent; otherwise, it is infixed after the initial consonant of the stem (cf. (131), (132), and (138) for examples).
effector which cannot be construed as an agent. The ability of effectors to be construed as agents has implications for imperative mood. Only effectors which can be construed as agents can occur in the imperative. Motion activity verbs which take a volitional argument, such as l-em-ongi 'swim' in (119), form their imperatives with the bare root, e.g. Dei longi! 'Don't swim!' Motion activity verbs which do not take a volitional argument, such as d-em-abu' 'fall' in (122), do not have an imperative form, e.g. *Dei dabu! 'Don't fall!'94

Motion activity verbs can occur in clauses with either one or two core syntactic arguments. (123) illustrates a motion activity verb in a clause with one syntactic argument. A summary analysis of the complement clause in (123) is provided in (124). The general LS for motion activity verbs is shown in (124a), the clause-specific LS for (123) in (124b).

(123) Nd-ara lama m-apit (-m-apit).
NEG-exist person ACY-stop.by
'NOBODY stops by.'

(124) a. General LS for motion activities: do' (x, [predicate' (x)]) x=effector-theme
b. Clause-specific LS for (123): do' (lama 'person', [apit 'stop by' (lama 'person')])
c. Assign thematic relations: lama 'person' ← effector-theme
d. Assign semantic macroroles: actor ← effector-theme 1 Macrorole
e. Assign syntactic functions: pivot ← actor-lama 'person'
f. Assign case and prepositions: pivot-lama 'person' ← nominative case (θ)
g. Cross-reference verb: apit 'stop by' ← -m- 'ACY'

According to Van Valin (1993:48), activity verbs can have only actor macroroles, never undergoers. However, optional arguments can occur in syntax which are not part of the LS of these verbs, but are included in their clause-specific LS. This parallels the situation among one-place condition stative verbs and achievement verbs which have only undergoer macroroles, never actors; however, optional adjuncts can occur in syntax which are included in their clause-specific LS. For example, the general LS for condition stative verbs does not include an effector (cf. (27a)); however, when condition stative clauses include an optional adjunct which is an effector as

94 Of course there is a way to say 'Don't fall!' in Bonggi; i.e. Dei kedabu'! However, this is a motion accomplishment verb and not an activity verb. The LS for kedabu' is do'(x) CAUSE [BECOME be-at'(y,x)], where x=effector-theme and y=locative-goal. Accomplishment verbs are described in §2.4.
in (26), this is indicated in the clause-specific LS (cf. (27b)). Similarly, the general LS for achievements with underlying condition stative verbs does not include an effector (cf. (78a)); however, when such clauses include an optional adjunct which is an effector as in (77), this is indicated in the clause-specific LS (cf. (78b)).

The distinction I have drawn between general LS and clause-specific LS is very important, yet it can be very elusive. In order to understand the relationship between these two levels of LS, we need some understanding of lexical categories and their relationship to LSs. Recall in §1.3.3, I provided a brief justification for three major word classes: nouns, verbs, and adjectives. Then, in this chapter, I introduced spatial deictics, and showed how, for example, adjective roots such as korikng 'dry', can be plugged into the predicate position of the LS, predicate\( (x) \), resulting in condition stative verbs such as ngkorikng 'be dry' (cf. (21), (22), (23)). The condition stative verbs described in §2.1.3 are derived from adjective roots, regardless of whether or not they have an effector (cf. (21) with (26)). Furthermore, although the clause-specific LS in (27b) is different from the general LSs in (27a) and (23a), neither the argument structure nor the LS of the verb changes with the addition of an effector (cf. (27b) with (27a)).

In contrast to the circumstances described above for statives and achievements, the addition of a locative argument to motion activity verbs (e.g. apit 'to stop' in (123)) results in a motion accomplishment clause (e.g. (125)) with its corresponding LS.\(^{95}\) The general LS for accomplishment verbs is \( \phi \text{CAUSE } \psi \), where \( \phi \) is an activity predicate, \( \psi \) is an achievement predicate, and the logical operator \( \text{CAUSE} \) indicates an accomplishment. Since \( \psi \) refers to an achievement predicate, it contains the logical operator \( \text{BECOME} \) and some stative predicate (cf. §2.2). In the case of motion accomplishment verbs, \( \psi \) contains both the logical operator \( \text{BECOME} \) and an underlying locative predicate. Or stated in another way, the achievement portion of motion

\(^{95}\)Although accomplishment verbs are primarily described in §2.4, motion accomplishment verbs are introduced here due to the relationship between motion activities and motion accomplishments.
accomplishment verbs is a locative achievement. For example, (125) is a motion accomplishment verb whose achievement portion includes a locative predicate be-at' (x,y).

The addition of a locative argument to motion activity verbs differs from the addition of an optional effector in stative and achievement clauses in two ways. Firstly, it requires subcategorization of lexical categories. Specifically, some verb roots are subcategorized as motion activities.\footnote{Up to this point we have discussed classifying verbs according to their LS. Subcategorization of verb roots provides a basis for plugging different types of roots into different types of LSs. At this point, we need only say that there is a set of activity verb roots in Bonggi.} Secondly, although the verb forms in (123) and (125) are the same (i.e. mapit 'to stop by'), the former is an activity clause and the latter a motion accomplishment clause. Lexically, apit 'to stop by' is a motion activity verb root; however, syntactically, it can occur in activity clauses (e.g. (123)) and motion accomplishment clauses (e.g. (125)). Like condition stative verbs, motion activity verbs have a single argument in their general LS (cf. (124a) and (126a)). However, motion activities can become motion accomplishments if a definite goal is added; for example, English walk (activity) versus walk to the store (accomplishment) (FWV 1984:39; Jolly 1993:285). Whereas motion activity verbs have one core semantic argument in their LS (e.g. (124b)), motion accomplishments have two core semantic arguments in their LS (e.g. (126d)).

\begin{center}
\textbf{(125) Nd-ara lama m-apit (-m-apit) dii bali n Dupuk.}
not-have person ACY-stop.by at house NPIV Dupuk
'NOBODY stops by at Dupuk's house.'
\end{center}

A summary analysis of the complement clause in (125) is provided in (126).
(126) a. LS for motion activities: \( \text{do}'(\mathbf{x}, [\text{predicate}'(\mathbf{x})]) \quad \mathbf{x} = \text{effector-theme} \)
   b. LS for accomplishments: \( \phi \text{CAUSE } \psi \)
   c. LS for goal-oriented motion accomplishments: \( [\text{do}'(\mathbf{x})] \text{CAUSE } [\text{BECOME be-at}'(\mathbf{y},\mathbf{x})] \quad \mathbf{x} = \text{effector-theme}, \mathbf{y} = \text{locative-goal} \)
   d. Clause-specific LS for (125): \([\text{apit 'stop by' (lama 'person')}] \text{CAUSE } [\text{BECOME dii 'at'}(\text{bali n Dupuk 'Dupuk's house'}, \text{lama 'person'})] \)
   e. Assign thematic relations: lama 'person' \( \leftarrow \) effector-theme
   f. Assign semantic macroroles: actor \( \leftarrow \) effector-theme
   g. Assign syntactic functions: pivot \( \leftarrow \) effector-theme
   h. Assign case and prepositions: lama 'person' \( \leftarrow \) nominative case (\( \Theta \))
   i. Cross-reference verb: \( \text{apit 'stop by' } \leftarrow -m-'\text{ACY}' \)

The general LS for accomplishments is shown in (126b). The first portion (\( \phi \)) is an activity verb whose general LS is shown in (126a). The logical operator \( \text{CAUSE} \) indicates an accomplishment situation. The final portion (\( \psi \)) of (126b) is a goal-oriented achievement which is indicated in (126c) by \( \text{BECOME be-at}'(\mathbf{y},\mathbf{x}) \). Goal-oriented motion accomplishment verbs have two core semantic arguments as shown in (126c); the first is an effector-theme and the second a locative-goal. Sometimes the locative-goal occurs syntactically as a direct core argument (e.g. (127)) and other times it occurs as an oblique core argument as in (125). \( \text{Dii 'to'} \) marks locative-goals with motion accomplishment verbs when the locative-goal is not a direct core argument (cf. Jolly 1993:277). That is, \( \text{dii 'to'} \) occurs with arguments which would be expected to occur as undergoers in terms of the hierarchy in (4), but do not (cf. Jolly 1993:280).\(^98\) Because activity verbs never have an undergoer, motion accomplishment clauses also never have an undergoer (cf. VV 1993:48).\(^99\)

\(^97\)Note that the two parts of activity verb LSs are conflated as \([\text{do}'(\mathbf{x})]\) in accomplishments (cf. footnote 90).

\(^98\)According to Van Valin (1993:156; footnote 45), undergoers are always direct core arguments.
Sentence (127) illustrates a motion accomplishment clause with two direct core syntactic arguments.\(^{100}\) A summary analysis is provided in (128) (cf. (126)).

(127) Nd-ara lama m-apit (-m-apit) diaadn.
not-have person ACY-stop.by IsACC 'NOBODY stops by to see me.'

(128) a. LS for motion activities: \(\text{do}'(x, [\text{predicate}'(x)])\) \(x=\text{effector-theme}\)
    b. LS for accomplishments: \(\phi \text{ CAUSE } \psi\)
    c. LS for goal-oriented motion accomplishments: \([\text{do}'(x)] \text{ CAUSE } [\text{BECOME be-at'}(y,x)]\)
        \(x=\text{effector-theme}, y=\text{locative-goal}\)
    d. Clause-specific LS for (127): \([\text{apit} \ 'stop by' (lama 'person')] \text{ CAUSE } [\text{BECOME be-at'}(\text{diaadn}'me', lama 'person')]\)
    e. Assign thematic relations: \(\text{lama 'person'} \leftarrow \text{effector-theme}\)
    f. Assign semantic macroroles: \(\text{actor} \leftarrow \text{effector-theme}\)
    g. Assign syntactic functions: \(\text{pivot} \leftarrow \text{actor-lama 'person'}\)
        \(\text{direct core argument} \leftarrow \text{locative-goal-diaadn 'me'}\)
    h. Assign case and prepositions: \(\text{pivot-lama 'person'} \leftarrow \text{nominative case (O)}\)
        \(\text{direct core argument-diaadn 'me'} \leftarrow \text{accusative case}\)
    i. Cross-reference verb: \(\text{apit} \ 'stop by' \leftarrow -m-'ACY'\)

Both (125) and (127) are motion accomplishment clauses with two core semantic arguments.

The difference between them lies in their syntactic treatment of the locative-goal. In (127), the locative-goal is assigned the syntactic status of direct core argument (cf. (128g)), whereas in (125) the locative-goal is assigned the syntactic status of oblique core argument (cf. (126g)). In both cases, there is a single macrorole which is an actor (cf. (126f), (128f); cf. also VV 1993:47). The question is, why does the default macrorole assignment principle in (54a.2) appear to be violated? This principle states that if a verb has one argument in its LS, it will take one macrorole.

Although motion accomplishment clauses contain two arguments in their LS (e.g. (126c), (128c)), motion activity verbs contain only one argument in their LS (e.g. (126a), (128a)). The LS for \(m\)-apit 'ACY-stop.by' is \(\text{do}'(x, [\text{apit}'\ 'stop by' (x)])\) regardless of whether it occurs in an activity

\(^{99}\)Cf. Van Valin (1990:228), "Two-argument activity verbs have two direct core arguments, but only one macrorole (actor)."

\(^{100}\)Givón (1984:98) refers to these as verbs with a locative direct object.
clause or an accomplishment clause. Activity verbs have only one macrorole, an actor, never an undergoer.

When the locative-goal argument is an oblique core argument, the most frequent preposition to serve as an oblique case-marker is *dii 'at', as in (125). Recall from §2.1.2, however, that the presence of *be-at' in the LS does not mean that surface syntax must contain a locative phrase introduced by *dii 'at' as in (125). Instead, any member of either the set of specific spatial deictics in Table 2.3 or the set of nonspecific spatial deictics in Table 2.4 can occur. For example, in (129) the deictic locative adverb *diti 'here' has the same function as the locative prepositional phrase *dii bali *n Dupuk 'at Dupuk's house' in (125).  

(129) Nd-ara lama m-apit (-m-apit) diti.

not-have person ACY-stop.by here 'NOBODY stops by here.'

It has been shown that motion activity verbs can occur in either motion activity clauses (e.g. (122), (123)) or motion accomplishment clauses (e.g. (125), (127), (129)). It has also been argued that motion accomplishment clauses have only one macrorole. Further evidence for a single macrorole is that the locative-goal can never function as the syntactic pivot in these clauses. This follows from principle (54c). If the locative-goal could be linked to an undergoer, it could also function as the syntactic pivot, which it never does.

Although all (or most) motion accomplishment verbs can occur with or without a direct core syntactic argument, different verbs have different tendencies favoring one over the other. For example, *apit 'to stop by' most frequently occurs with the locative-goal being an oblique core argument as in (125) and (129), whereas *lobot 'to go across' most frequently occurs with the locative-goal being a direct core argument as in (130).

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101Cf. the locative nominal *diaadn 'me' in (127). Locative nominals can be nouns or pronouns with a nominal function in syntax and a locative meaning.
I have also made a distinction between motion activity verbs that take a volitional argument (e.g. (119), (123), (130)) and those that do not (e.g. (122)). Although these two types of motion activity verbs are treated identically in terms of the morphology in simple declarative clauses, they differ in terms of affix potential. Motion activity verbs which take a volitional argument and are derived from verb roots are shown in (131). Motion activities which do not take a volitional argument are shown in (132).

(131) L-ema-lobot (-m-lobot) ihi Sungi Mudik.\(^{102}\)

\[ @-ACY-go\] across IpexcNOM River Mudik

'WE cross the Mudik River.'

\(^{102}\)When the verb is infixed, an epenthetic vowel /\(V\)/ is inserted between the initial consonant of the root and the infix in order to avoid impermissible syllable structures (cf. footnote 31).

\(^{103}\)All the clauses presented in this section are simple declarative clauses. Compare the discussion of operators in Chapter 3.

\(^{104}\)I have not found any roots that belong to the motion activity subclass, whose initial consonant is a velar obstruent.

\(^{105}\)Lempad, lumpat, and tumpa are irregular. Their roots are lempad, lumpat, and tupa respectively. There is an apparent phonological constraint against infixing -m- into roots before /\(Vm/\). The occurrence of the bilabial nasal /m/ in the roots blocks infixation.
The motion activity verbs in (131), (132), and those described earlier in this section involve motion along a single trajectory. These verbs have one argument in their LS, but can occur in accomplishment clauses with two core syntactic arguments.

Motion activity verbs that take a volitional argument occur as unaffixed roots in imperative mood, whether the imperative is an activity clause as in (133) or a motion accomplishment clause as in (134). Activities and accomplishments (cf. §2.4) can occur in imperative mood, but statives and achievements cannot.

(133) Dei apit!
    do.not stop.by
    'Don't stop by!'

(134) Dei apit di bali i Menoon!
      do.not stop.by at house NPIV Menoon
      'Don't stop by Menoon's house!'

The actor is always the pivot in motion activity clauses and motion accomplishment clauses, whether or not the clause is imperative. In imperative clauses, the pivot is the addressee which is usually not realized in the surface syntax, e.g. (133), (134). The locative-goal in motion

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106 Cf. (123), (125), (127), and (129).

107 As mentioned in §1.3.1, one of the ways in which Bonggi distinguishes pivots from nonpivots is by the grammatical markers which precede personal names. In (134) /i/ 'NPIV' is a phonologically conditioned variant of the grammatical marker ni which precedes nonpivot personal names and other terms of reference which are treated as personal names (cf. §1.3.1, footnote 27). The grammatical marker ni 'NPIV' is realized as /n/ before terms of reference which begin with an alveolar consonant (e.g. §1.2, /n Daya/ in (10), §2.1.3, /n Tagi/ in (26), §2.3.1, /n Dupuk/ in (125)); as /n/ 'ny' before terms of reference which begin with a vowel (e.g. §1.3.1, /n indu?/ 'mother' in footnote 27); and as /i/ elsewhere (e.g. (134)).
accomplishment clauses cannot be the pivot. For example, although the locative-goal (i.e. \( \text{BECOME be-at' (y,x)} \)) is part of the clause-specific LS in (128d), it is not part of the LS of the lexical verb *apit 'to stop by' (e.g. (128a)). The syntactic consequence of core arguments in syntax not being part of the LS of lexical verbs is that they cannot occur as pivot (cf. Van Valin 1993:48; 154, footnote 28).

This section has shown how motion activity verbs can occur in both motion activity clauses and motion accomplishment clauses. All the motion accomplishment clauses which are discussed above contain locative-goals; that is, they are goal-oriented and their LS includes \( \text{BECOME be-at' (y,x)} \) (e.g. (125), (127), (129), (130), and (134)). There are other motion activity verbs which occur in motion accomplishment clauses with locative-sources; that is, they are source-oriented and their LS includes \( \text{BECOME not be-at' (y,x)} \). For example, the roots *uhad 'to leave' and *tulak 'to depart' (cf. (131)) occur in motion accomplishment clauses with locative-sources. *Tidii 'from' marks locative-sources with motion accomplishment verbs when the locative-source is not a direct core argument (e.g. (99) and (100)). A summary analysis of (100) is provided in (135).

(135) a. LS for motion activities: \( \text{do'} (x, [\text{predicate'} (x)]) \quad x=\text{effector-theme} \)

b. LS for accomplishments: \( \phi \text{CAUSE } y \)

c. LS for source-oriented motion accomplishments: \( [\text{do'}(x)] \text{CAUSE [BECOME not be-at' (y,x)]} \quad x=\text{effector-theme}, y=\text{locative-source} \)

d. Clause-specific LS for (100): \( [\text{uhad 'move' (sia 'she')}] \text{CAUSE [BECOME not be-at' (bali nya 'her house', sia 'she')]} \)

e. Assign thematic relations: \( \text{sia 'she' } \leftarrow \text{effector-theme} \quad \text{bali nya 'her house' } \leftarrow \text{locative-source} \)

f. Assign semantic macroroles: \( \text{actor } \leftarrow \text{effector-theme} \quad 1 \text{ Macrorole} \quad \text{pivot } \leftarrow \text{actor-sia 'she'} \quad \text{oblique core argument } \leftarrow \text{locative-source-bali nya 'her house'} \)

g. Assign syntactic functions: \( \text{pivot-sia 'she' } \leftarrow \text{nominative case} \quad \text{locative-source-bali nya 'her house' } \leftarrow \text{oblique case} \quad \text{tidii 'from'} \)

h. Assign case and prepositions: \( \text{uhad 'move' } \leftarrow \text{-m-'ACY'} \)

We have seen in this section that the \( y \) portion of the LS for motion accomplishment verbs consists of an achievement with an underlying locative predicate. All of the motion
accomplishment verbs which have been discussed thus far are derived from verb roots.\textsuperscript{108} §2.2 described a set of achievements whose underlying locative predicate is a spatial deictic (e.g. (89), (92)). These achievements can also form the $\psi$ portion of motion accomplishment verbs. For example, given the specific spatial deictic dii 'there' (cf. Table 2.3 in §2.1.2), both an achievement verb kin-dii 'ACH-there' (e.g. (89)) and a motion accomplishment verb mi-n-dii 'ACY-DIR-there' (e.g. (136)) can be derived from it. (136) is an example of a motion accomplishment (cf. (16) for the corresponding stative, and (92) for the corresponding achievement).

(136) \textit{Sia } mi-n-dii (-m—m-dii) bali nya.  
3sNOM ACY-DIR-there house 3sGEN  
'SHE is going to her house.'

The motion accomplishment verb in (136) is goal-oriented. Goal-oriented motion accomplishments can be derived from both specific (cf. Table 2.3) and nonspecific (cf. Table 2.3) spatial deictics. For example, given the nonspecific deictic \textit{kuii}'somewhere yonder', (137) illustrates a motion accomplishment (cf. (95)). A summary analysis of (136) is provided in (138).

(137) \textit{Sia } mu-ng-kuii'(-m—m-kuii').  
3sNOM ACY-DIR-there  
'SHE is going somewhere there.'

(138) a. LS for locative stative: \textit{be-at' (x,y)} x=locative, y=theme  
b. LS for motion activities: \textit{do' (x, [predicate' (x)])} x=effector-theme  
c. LS for accomplishments: $\phi$ CAUSE $\psi$  
d. LS for goal-oriented motion accomplishments: \textit{[do'(x)] CAUSE [BECOME be-at' (y,x)]} x=effector-theme, y=locative-goal  
e. Clause-specific LS for (136): \textit{[do'(sia 'she')] CAUSE [BECOME dii 'at' (bali nya 'her house', sia 'she')]}  
f. Assign thematic relations: sia 'she' $\leftarrow$ effector-theme \textit{bali nya 'her house' $\leftarrow$ locative-goal}  
g. Assign semantic macroroles: actor $\leftarrow$ effector-theme 1 Macrorole  
h. Assign syntactic function: pivot $\leftarrow$ actor-sia 'she'  
i. Assign case and prepositions: pivot-sia 'she' $\leftarrow$ nominative case \textit{direct core argument-}bali nya 'her house' $\leftarrow$ accusative case (O)  
j. Cross-reference verb: dii 'there' $\leftarrow$ -m—'ACY' -m—'DIR'

\textsuperscript{108}See, for example, \textit{apit} 'stop by' in (125), (127), (129); \textit{lobot} 'go across' in (130); and the roots listed in (131) and (132) which can all be used to form motion accomplishment verbs.
The presence of the logical operator BECOME, along with the locative predicate be-at' \((y,x)\) in (138d) indicates that this motion accomplishment is goal-oriented. The verb \(mi-n-di\)'ACY-DIR-there' in (136) is volitional. As pointed out earlier, volitionality is not captured in the LS, but is determined by examining the nature of the effector. The modal operators account for other properties such as ability which are associated with participants (cf. §4.2). Whereas goal-oriented directional achievements are cross-referenced by \(k\)'ACH' and \(-m\)'DIR' (cf. (92), (94h)), goal-oriented directional accomplishments are cross-referenced by \(-m\)'ACY' and \(-m\)'DIR' (cf. (136), (138j)).

There is a small set of motion verbs which are derived from place nouns and refer to motions associated with the place, e.g. (139). The morphology of the verbs in (139) is different than that described for other motion verbs. Perhaps there are two prefixes with the second nasal having a directional meaning similar to that described above for motion accomplishments derived from spatial deictics.

<table>
<thead>
<tr>
<th>(139)</th>
<th>ROOT</th>
<th>GLOSS</th>
<th>ACTIVITY</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>buig</td>
<td>hill</td>
<td>ngim-buig</td>
<td>climb a hill</td>
<td></td>
</tr>
<tr>
<td>dain</td>
<td>trail</td>
<td>ngin-dain</td>
<td>follow a trail</td>
<td></td>
</tr>
<tr>
<td>diaa</td>
<td>inland</td>
<td>ngin-diaa</td>
<td>go inland</td>
<td></td>
</tr>
<tr>
<td>sua'</td>
<td>mouth of river</td>
<td>ngin-sua'</td>
<td>go out to mouth of river</td>
<td></td>
</tr>
<tr>
<td>tana'</td>
<td>land</td>
<td>ngin-tana'</td>
<td>walk</td>
<td></td>
</tr>
</tbody>
</table>

2.3.2. Nonmotion Activity Verbs

Besides the motion activities described in §2.3.2, the other major type of activity verb is nonmotion activities, e.g. \(temeis\) 'cry' in (140). A summary analysis of (140) is provided in (141).

(140) \(Sia \ t-em-eis (-m-teis)\).¹⁰⁹

³sNOM @-ACY-cry
'SHE is crying.'

¹⁰⁹ Other verb forms suggest the root is \(tangis\) which may be borrowed from Malay \(tangis\) 'weep'. \(T-em-eis\) is irregular in that there is no form \(*teis\) which can be used in the imperative. The imperative form is \(tangis\) (cf. footnote 105).
The general LS for all one-place nonmotion activity verbs is shown in (141a). The single argument 'x' of these activity predicates is an effector. By (54a.2), there is a single macrorole since there is one argument in their LS. By (54b.1), the single macrorole must be an actor because the LS contains the activity predicate do' (cf. (141d)). The single argument 'x' is linked to actor by either (4) since x=effector, or (5) since x=first argument of do'. By (7), the actor is the syntactic pivot (cf. (141e)). Nominative case is assigned to the pivot (cf. (141f)), and nonmotion activity verbs are cross-referenced by -m- (cf. (141g)). Other nonmotion activity verbs which are derived from verb roots are shown in (142).

A few nonmotion activity verbs are derived from noun roots that refer to body parts or products which are associated with bodily functions; i.e. *sidu* 'urine', *suha* 'vomit', *toi* 'feces', *tilug* 'egg', and *dudu* 'breast' (e.g. (143)).

Activity verbs which are derived from body parts can occur in imperative mood, in which case they are unaffixed, e.g. (144) (cf. (133), (134)).
(144) Dei sidu dioo!
do not urine over there
'Don't urinate over there!'  

Two activity verbs are derived from the meterological noun roots dudug 'thunder' and dolok 'rain'. Verbs which are derived from meterological roots (e.g. d-em-olok 'rain' in (145)) have no arguments. Furthermore, verbs with no arguments have no macroroles (Van Valin 1990:227).

(145) D-em-olok (-m-dolok) nehaa' na.
@-ACY-rain now -
'It is raining now.'

Some nonmotion activity verbs can occur in clauses with either one or two syntactic arguments, e.g. the verb ohodn 'to eat'. In (146) the verb m-ohodn 'ACY-eat' has a single syntactic argument sia 'he' (an effector) (cf. (140), (141a)).

In (147) the verb m-ohodn 'ACY-eat' has two syntactic arguments: sia 'he' (an effector) and egas 'rice' (a theme). In (148) the verb in-ohodn 'PST.UPL-eat' has the same two arguments only the theme is the clause pivot. Semantically, (146) is an activity with a single macrorole (actor), whereas (147) and (148) are accomplishments with two macroroles (actor and undergoer). Morphologically, (146) and (147) are activities, whereas (148) is an accomplishment. Actor pivot accomplishment verbs are marked by ng- (cf. §2.4), instead of -m- which occurs with actor pivot activity verbs.

(146) Sia m-ohodn (-m-ohon) tina.
3sNOM ACY-eat later
'HE will eat later.'

(147) Sia m-ohodn (-m-ohon) egas.
3sNOM ACY-eat rice
'HE eats rice.'

(148) Egas in-ohodn (-in-ohon) nya.
rice PST.UPL-eat 3sGEN
'He ate RICE.'

Since (147) contains two direct core syntactic arguments, it is syntactically similar to the motion accomplishment clauses with two direct core syntactic arguments described in §2.3.1, e.g. (127), (130). In §2.3.1, I pointed out that the addition of a locative-goal or locative-source to

110Tina 'earlier' is a temporal adjunct in (146), and not an argument.
motion activity verbs results in a motion accomplishment clause. However, I also pointed out that the locative-goal or locative-source in such clauses can never function as the syntactic pivot. Therefore, in accordance with principle (54c), such clauses have one macrorole, an actor. By (54c), locative-goal and locative-source cannot be linked to a macrorole, because they cannot occur as clause pivot in these motion accomplishment clauses.

The circumstances surrounding two-argument nonmotion verbs such as m-ohodn 'ACY-eat' in (147)) is different than those described above for motion accomplishment clauses. Either of the two LS arguments 'x' and 'y' can occur as the syntactic pivot. For example, given (147), egas 'rice' can occur as clause pivot in an accomplishment clause, e.g. (148). A summary analysis of (148) is provided in (149). The LS for (146) is found in (149a), whereas the LS for both (147) and (148) is found in (149b).

(149) a. LS for nonmotion activities: do' (x, [predicate' (x)]) x=effector
    b. LS for consumption accomplishments: do' (x, [predicate' (x)]) \[CAUSE \{BECOME NOT exist'(y)\}] x=effector, y=theme
    c. Clause-specific LS for (148): do' (nya 'he', [ohodn 'eat'(nya 'he')]) CAUSE \{BECOME NOT exist'(egas 'rice')\}
    d. Assign thematic relations: nga 'he' \<- effector
      egas 'rice' \<- theme
    e. Assign semantic macroroles: actor \<- effector 2 Macroroles
      undergoer \<- theme
    f. Assign syntactic functions: pivot \<- undergoer-egas 'rice'
      direct core argument \<- actor-nya 'he'
    g. Assign case and prepositions: pivot-egas 'rice' \<- nominative case (Ø)
      direct core argument-nya 'he' \<- genitive case
      ohodn 'eat' \<- in- 'PST.UPL'

In (146) the pivot is an actor (effector) and the situation type is an activity; in (147) the pivot is an actor (effector) and the situation type is an accomplishment; and in (148) the pivot is an undergoer (theme) and the situation type is an accomplishment. All verbs which can occur with actor and undergoer pivot are accomplishments (Van Valin 1990:248).

Activity verbs such as m-ohodn 'ACY-eat' are unique in that the situation type is not immediately transparent from the morphology. Such actor-pivot verbs occur in both activity and accomplishment clauses with the same morphology. As activity verbs, they never have an
undergoer macrorole. As accomplishment verbs, they have both an actor and an undergoer, either of which can occur as syntactic pivot.

Another actor-pivot verb which can occur in both activity and accomplishment clauses is *d-um-udu* 'nurse/suckle'. It is illustrated in an accomplishment clause in (150). Other verbs in this class are shown in (151) with the activities in the nonpast tense and the accomplishments in the past tense.

(150) *Sia kahal d-um-udu' (-m-dudu') diaa dn.
3sNOM still @-ACY-breast 1sACC
'HE still nurses from me.'

<table>
<thead>
<tr>
<th>Root</th>
<th>Effector-pivot activity</th>
<th>Theme-pivot accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>doos</em> 'spend night at girlfriend's house'</td>
<td><em>d-em-oos</em></td>
<td><em>d-in-oos</em></td>
</tr>
<tr>
<td><em>inggat</em> 'chew betel nut'</td>
<td><em>m-inggat</em></td>
<td><em>in-inggat</em></td>
</tr>
<tr>
<td><em>lidik</em> 'slash brush'</td>
<td><em>l-im-idik</em></td>
<td><em>l-in-idik</em></td>
</tr>
<tr>
<td><em>ogot</em> 'hold'</td>
<td><em>m-ogot</em></td>
<td><em>in-ogot</em></td>
</tr>
<tr>
<td><em>suha</em> 'vomit'</td>
<td><em>s-um-uha</em></td>
<td><em>s-i-uha</em></td>
</tr>
<tr>
<td><em>sulakng</em> 'take over discarded item'</td>
<td><em>s-um-ulakng</em></td>
<td><em>s-i-ulakng</em></td>
</tr>
<tr>
<td><em>tata</em> 'lap up liquid'</td>
<td>*t-em-at'</td>
<td>*t-i-at'</td>
</tr>
</tbody>
</table>

By way of summary of what has been said regarding activity verbs, consider the clauses in (152). Two of the clauses ((152a) and (152c)) have one core syntactic structure, and two ((152b) and (152d)) have two core syntactic arguments. The former two are activity clauses, whereas the latter two are accomplishment clauses. The verb morphology is the same in each clause. In simple declarative clauses, the verb is cross-referenced by -m-; in imperative clauses, the verb is not cross-referenced. Furthermore, in each clause the pivot is the actor.
By way of contrast, in (152a) the verb *mapit* 'stop by' is a motion activity verb in an activity clause (cf. (123)). The addition of a locative to a clause containing a motion activity verb results in a motion accomplishment clause which has the LS shown in (152b). The locative argument in these motion accomplishment clauses can never function as clause pivot, but occurs in syntax as either a core syntactic argument (e.g. (127), (130), (152b)) or an oblique argument (e.g. (125), (134)). Since the locative can occur as an oblique argument, we expect the clause in (152b) to sometimes occur with an oblique marker, and it does (i.e. *Sia m-apit diaadn. 'HE stops by to see me.'*). Motion activity verbs always have only one macrorole (an actor) whether they occur in activity or accomplishment clauses.

In (152c) the verb *mohodn* 'eat' is a nonmotion activity verb in an activity clause. Activity clauses have only one macrorole (an actor). The addition of a theme to a clause containing a nonmotion activity verb results in an accomplishment clause, e.g. (152d). The theme argument in these accomplishment clauses can function as clause pivot, and cannot occur in syntax as an oblique argument. Accomplishment clauses have two macroroles (actor and undergoer), either of

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111 The locative can also be a source. The LS in (152b) is for locative-goals (cf. (135)).
which can be the clause pivot. For example, the pivot is an actor in (152d) and an undergoer in (148).112

In (150) the verb dumudu' 'suckle' is a nonmotion activity verb in an accomplishment clause. This verb has two core syntactic arguments, two arguments in its LS (an effector and an experiencer/location), and consequently, two macroroles (actor and undergoer). If the actor is pivot, the undergoer can occur in syntax as either a core argument (e.g. (150)) or an oblique argument. Thus, we expect the clause in (150) to sometimes occur with an oblique marker, and it does (i.e. Sia d-um-udu' dii diaadn. 'HE nurses from me.'). If the undergoer is pivot, the verb is suffixed with -an, e.g. (153).113 A summary analysis of (153) is provided in (154).

(153) Si Munsang dudu-adn (dudu'-an) ny eili'.
Piv Munsang breast-EXP N piv little.boy
'MUNSANG is nursing her little boy.'

(154) a. LS for one-place, nonmotion activities:
   do'(x, [predicate'(x)])) \ x=effector
   \ CAUSE \ y
b. LS for accomplishments:
   [do'(x)] CAUSE [BECOME be'(y, [predicate'])]
   \ x=effector, y=experiencer, predicate'=theme
c. LS for accomplishments whose \ contains an experiencer:
   [do'(eili' 'little boy'))] CAUSE
   [BECOME be'(Munsang, [dudu' 'breast'])]
   eili' 'little boy' \ effector
   Munsang \ experiencer
d. Clause-specific LS for (153):
   be' + [dudu' 'breast'] \ predicate
   actor \ effector
   2 Macroroles
   undergoer \ experiencer
h. Assign syntactic functions:
   pivot \ undergoer-Munsang
   direct core argument \ actor-eili' 'little boy'
i. Assign case and prepositions:
   pivot-Munsang \ nominative case si 'Piv'
   direct core argument \ accusative case

\ j. Cross-reference verb:
   dudu' 'breast' \ -an 'EXP'

112 Van Valin (1994) describes verbs such as eat as multiple argument activity verbs. He points out that second argument in multiple argument activity verbs has unique properties and suggests calling it an inherent argument. The activity eating implies something is consumed even when the theme is not overtly specified.

113 In §2.4 a distinction is made between functionally unmarked undergoer-pivot accomplishments, and functionally marked undergoer-pivot accomplishments. When the undergoer is functionally marked, -an occurs as in (153).
The general LS for one-place, nonmotion activities is shown in (154a), and the general LS for accomplishments in (154b). One type of achievement that was not discussed in §2.2 is achievements that have experiencer statives in their LS.\(^{114}\) (153) is an example of an accomplishment verb whose \(\psi\) portion contains an experiencer stative. The LS for such accomplishment verbs is shown in (154c).

§2.1.3 showed that the LS for experiencer statives is be' \((x, \text{[predicate']}\))\(^{114}\), where \(x=\text{experiencer}\) and \(\text{predicate'}=\text{theme}\) (cf. (29)). §2.1.3 also explained how the theme is incorporated into the predicate by rule (30) so that the theme is not available to function as undergoer. Instead, the experiencer is linked to undergoer resulting in both a marked undergoer and a corresponding markedness in terms of verb morphology. This same rule (30) also applies in (153) resulting in incorporation of the theme into the predicate (cf. (154f)). This results in the experiencer being assigned to undergoer (cf. (154g)) and the verb being cross-referenced by \(-an\) (cf. (154j)).

The example in (153) illustrates what has been called the 'adversative passive' (Wierzbicka 1988:257) or 'dative of misfortune' (Wierzbicka 1988:278). Traditionally it is argued that the adversative passive usually occurs with intransitive verbs. Adversative passives are said to be morphologically passive with the subject of the sentence being adversely affected by the action, or event, denoted by the verb.\(^{115}\)

Two different types of activity verbs with their corresponding LSs have been described:

(i) motion activities \(\text{do}'(x, \text{[predicate']}(x))\) \(x=\text{effector-theme}\) (cf. §2.3.1)
(ii) nonmotion activities \(\text{do}'(x, \text{[predicate']}(x))\) \(x=\text{effector}\) (cf. §2.3.2).

\(^{114}\)Achievements with experiencer statives in their LS were not discussed in §2.2 because of a lack of supporting data. This absence of data may be due to either a gap in my data or possibly such achievements do not exist.

\(^{115}\)The example in (153) is not an isolated example. I have collected at least twenty similar examples.
From the perspective of situation aspect, the two types of activities share the Aktionsart features [+dynamic] and [-telic] which are predictable from the LSs. One distinction among activity verbs that is not predictable from the LSs is that between volitional or controllable activities and nonvolitional or noncontrollable activities. Volition is determined from pragmatic implicatures by examining the nature of the effector; for example, only animate effectors can be construed as volitional agents. Other features, including the assignment of modality and viewpoint aspect, belong to the operator projection described in Chapter 3. The LSs described in this chapter constitute the constituent projection and account for argument structures (cf. VV 1993:11). LSs are important for predicting certain syntactic phenomena, but they do not account for differences such as those between declarative and imperative clauses. This difference in modality is captured by modal operators. Similarly, certain aspectual features are not accounted for by LSs. These "other" aspectual features are accounted for by the aspectual operators described in Chapter 3. One important aspectual distinction in Bonggi which is not accounted for by LSs has to do with the internal structure of a situation.

The two subclasses of activities described above were established on semantic grounds. Furthermore, these semantic distinctions were shown to be important to syntax. Note, however, that in terms of verb morphology, there is no distinction between the two subclasses. Yet, an examination of other activity verbs which have not been discussed shows that in terms of verb morphology, Bonggi divides activity verbs into two groups. These groups can be referred to according to their formal marking: the -m- group which has been described above, and the peg-group which has not been discussed. Like the -m- group, the peg- group can be subdivided into two subclasses: motion activities and nonmotion activities. The overriding principle which separates the -m- group from the peg- group has to do with the internal structure of events.

It has long been recognized in studies of aspect that some events are punctual (e.g. kick) and others are nonpunctual (e.g. make). The difference between verbs such as kick and make is often said to be a matter of lexical or inherent aspect which cannot be handled by either a constituent projection (cf. §2) or an operator projection (cf. §3). Punctuality is not the only possible feature
related to the internal structure of events. The two groups of activity verbs in Bonggi are divided in terms of whether an event is viewed as a single event or a series of events. The -\textit{m}- group views the internal structure of an event as a single event, whereas the \textit{peg}- group views the internal structure of an event as a series of events.

Perhaps the easiest way to understand this distinction in Bonggi is to compare two prototypical motion verbs from each class. The verb \textit{apit} 'to stop by' belongs to the -\textit{m}- group (e.g. (123), (125), (127), (129), (133), (134)). This verb refers to a circumstance whereby a person X on a single journey between two points (C and D) stops by to visit someone Y, normally at Y's house, after which X continues his journey. On the other hand, the verb \textit{ahut} 'to shuttle' belongs to the \textit{peg}- group. This verb refers to a circumstance whereby a person X makes multiple trips between two points (C and D) in order to transport goods from point C to point D. In simple, nonpast, declarative clauses, the verb \textit{apit} occurs as \textit{m-apit}, the verb \textit{ahut} occurs as \textit{ngg-ahut}. In imperative clauses, the verb \textit{apit} occurs as \textit{apit}, the verb \textit{ahut} occurs as \textit{peg-ahut}. Verbs in the -\textit{m}- group take the bare root in imperative clauses, whereas those in the \textit{peg}- group take the prefix \textit{peg}- from which the class gets its name. The \textit{peg}- group is described in detail in §3.1, where I also show how -\textit{m}- group verbs (e.g. \textit{apit}) can be reduplicated (e.g. \textit{ngg-apit-apii}), giving them an iterative meaning.

2.4. Accomplishments

Accomplishment verbs express a single change of state which is brought about by an agent-effector (cf. Givón 1984:97). They include prototypical transitive events which involve both a controlling agent and an affected patient (cf. Givón 1984:20). From the perspective of transitivity in RRG, accomplishments are always transitive. They have two macroroles, actor and undergoer, either of which can occur as the syntactic pivot.\footnote{The motion accomplishment verbs described in §2.3.1 are an exception in that the undergoer cannot occur as syntactic pivot.}
The logical structure for accomplishments is $\phi$ CAUSE $\psi$, where $\phi$ is normally an activity verb and $\psi$ an achievement verb (FVV 1984:39; Van Valin 1990:224; VV 1993:36). The logical operator CAUSE indicates an accomplishment situation and distinguishes accomplishments from states, achievements, and activities. There is a derivational relationship between states, achievements, and accomplishments. Achievements are derived from states; accomplishments are derived from achievements in combination with an activity (cf. VV 1993:37).

§2.3 described two subclasses of activity verbs, whereas §2.2 described several different achievements depending on the type of stative from which they derived. Therefore, the question arises as to what types of activities and achievements combine together as $\phi$ and $\psi$ to form accomplishments. The answer to this question is the basis for the exposition that follows.

I begin with accomplishments whose $\psi$ portion is an achievement with an underlying condition stative (cf. (156b)). This is illustrated in (155) by the actor-pivot accomplishment verb ng-orikng 'APL-dry'. A summary analysis of (155) is provided in (156).

(155) Ng-orikng (ng-koring) ou piasu.
     APL-dry 1sNOM coconut
     'I dry coconut.' (Implied: Dry them by a fire.)

(156) a. LS for accomplishments: $\phi$ CAUSE $\psi$
    b. LS when $\psi = \text{achievement}$
       derived from condition stative: $[\text{do}'(x)]$ CAUSE $[\text{BECOME \text{predicate}'(y)]$
                                      x=effector, y=patient
    c. Clause-specific LS for (155): $[\text{do}'(ou '\text{I}')]$ CAUSE
                                         $[\text{BECOME korikng 'dry' (piasu 'coconut')}]$
    d. Assign thematic relations: ou $'\text{I}' \leftarrow$ effector
                                         piasu 'coconut' $\leftarrow$ patient
                                         actor $\leftarrow$ effector
                                         undergoer $\leftarrow$ patient
                                         2 Macroroles
    e. Assign semantic macroroles: pivot $\leftarrow$ actor-ou $'\text{I}'$
                                         director core argument $\leftarrow$ undergoer-piasu 'coconut'
                                         pivot-ou $'\text{I}' \leftarrow$ nominative case
    f. Assign syntactic functions: piasu 'coconut' $\leftarrow$ accusative case ($\emptyset$)
    g. Assign case and prepositions: korikng 'dry' $\leftarrow$ ng-'APL'

117One source of income for the Bonggi is coconut meat (copra). Coconuts are split open and then dried. After drying, the copra is removed from the shells and placed in gunnysacks which are then transported to the mainland and sold.
The general LS for accomplishments is shown in (156a). The $\phi$ portion of the LS in (156b) is a one-place activity predicate. A comparison of the $\phi$ portion of (156b) with the LS in (118a) shows that the two parts of the activity LS in (118a) are conflated in (156b).\footnote{See footnote 90.} $do'$ refers to a generalized unspecified activity predicate performed by the effector ($ou \ 'l'$) which brings about the resulting change of state ($\psi$). By definition, the first argument of $do'$ is an effector, and the single argument of a one-place stative verb is a patient. Therefore, in (156b) 'x' is an effector and 'y' a patient (cf. (156d)).

The clause-specific LS for (155) is provided in (156c). Since the effector is an animate human, it is construed to be an agent by pragmatic implicature. By (54a.1), there are two macroroles since there are two arguments in the LS (cf. (156e)). According to the Actor-Undergoer Hierarchy in (4), agent is the functionally unmarked choice for actor and patient is the functionally unmarked choice for undergoer. Thus, by (4), the agent-effector is linked to actor and the patient is linked to undergoer (cf. (156e)). (156f) indicates the actor is assigned to pivot. This follows the Pivot Choice Hierarchy in (7) whereby actor is the functionally unmarked choice for pivot. As usual, the pivot is assigned nominative case and the nonpivot undergoer accusative case (cf. (156g)).

Actor-pivot accomplishment verbs are cross-referenced with $ng$- (cf. (156h)). The prefix $ng$- indicates both that verb is an accomplishment and the actor (agent-effector) is pivot. This prefix is realized in different ways, as seen by the arrangement of roots in (157).\footnote{The relevant phonological processes are: vowel epenthesis, vowel harmony, vowel weakening, and consonant coalescence. The consonant coalescence rule replaces /$\eta$-/ and root-initial voiceless consonants with a nasal homorganic to the root-initial consonant; see, for example (155). Root-initial voiced bilabials also coalesce with /$\eta$-/., with the exception of a few borrowed words.}

The majority of condition statives described in §2.1.3 are derived from adjective roots. Since the accomplishments described here contain a condition stative in their LS, they too can be derived from adjective roots. For example, in (155), the verb $ngorikng$ 'to dry' is derived from the root
koring 'dry'. Other accomplishment verbs which are derived from adjective roots are shown (157) (cf. (76)).

<table>
<thead>
<tr>
<th>ROOT</th>
<th>GLOSS</th>
<th>ACCOMPLISHMENT</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>aal</td>
<td>expensive</td>
<td>ng-aal</td>
<td>make expensive</td>
</tr>
<tr>
<td>enta'</td>
<td>unripe</td>
<td>ng-enta'</td>
<td>half cook</td>
</tr>
<tr>
<td>ingad</td>
<td>near</td>
<td>ng-ingad</td>
<td>make near</td>
</tr>
<tr>
<td>ingi</td>
<td>crazy</td>
<td>ng-ingi</td>
<td>make crazy</td>
</tr>
<tr>
<td>iskidn</td>
<td>poor</td>
<td>ng-iskidn</td>
<td>make poor</td>
</tr>
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<td>odobm</td>
<td>black</td>
<td>ng-odobm</td>
<td>blacken</td>
</tr>
<tr>
<td>odu'</td>
<td>far</td>
<td>ng-odu'</td>
<td>make far</td>
</tr>
<tr>
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<td>sweeten</td>
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<td>hungry</td>
<td>ng-udap</td>
<td>make hungry</td>
</tr>
<tr>
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<td>spoiled</td>
<td>ng-utakng</td>
<td>spoil</td>
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<td>ng-apal</td>
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<td>round</td>
<td>m-ilug</td>
<td>make round</td>
</tr>
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<td>buha'</td>
<td>open</td>
<td>m-uha'</td>
<td>open something</td>
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<td>biru</td>
<td>blue</td>
<td>ngi-biru</td>
<td>make blue</td>
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<td>ngi-bisa</td>
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<td>ngi-gia</td>
<td>make big</td>
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<td>nge-lompukng</td>
<td>fatten</td>
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<td>ngi-liug</td>
<td>make tall</td>
</tr>
<tr>
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<td>baggy</td>
<td>ngu-luag</td>
<td>make baggy</td>
</tr>
<tr>
<td>romuk</td>
<td>rotten</td>
<td>nge-romuk</td>
<td>make rotten</td>
</tr>
</tbody>
</table>

120 Only actor-pivot forms are given here. There are corresponding patient-pivot forms.

121 The roots biru 'blue' and bisa 'strong' are borrowed from Malay. ng- is realized as /ŋV/ with these two bilabial-initial roots (cf. footnote 119).
The last portion of the LS of these accomplishment verbs contains an achievement that is derived from a one-place condition stative, i.e. BECOME predicate' (y).

A comparison of (157) with (76) shows that some of the adjective roots which are used to form achievement verbs can also be used to form actor-pivot accomplishment verbs marked by ng-, while others cannot. The connection between achievement verbs and accomplishment verbs is as follows: if an adjective root can be used to form an achievement verb, that same root can also be used to form an accomplishment verb. However, there are two types of accomplishment verbs: regular accomplishment verbs which are marked by ng- when the actor is pivot; and causative accomplishment verbs which are marked by the morphological causative prefix p-. 122

Thus, if an adjective root can be used to form an achievement verb (i.e. those in (76)), but it cannot be used to form an accomplishment verb marked by ng-, then it still can be used to form a causative accomplishment verb marked by p-. 123 On the other hand, adjective roots which cannot be used to form achievement verbs also cannot be used to form accomplishment verbs.

Any adjective root in (76) which cannot be used to form an accomplishment verb marked by ng- can still be used to form a causative accomplishment verb. The adjectives in (76) which cannot be used to derive accomplishment verbs marked by ng- are shown in (158) with their causative forms.

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122 All true morphological causative constructions are accomplishment verbs.

123 An epenthetic vowel /V/ is inserted between the prefix p- and consonant-initial roots to avoid impermissable syllable structures.
Furthermore, some adjectives can be used to form both regular accomplishment verbs and causative accomplishment verbs. For example, the adjective root *koring* 'dry' can be used to form a regular accomplishment verb as in (155) and a causative accomplishment verb as in (159). A summary analysis of (159) is provided in (160).

(159) **Pe-korikng** (p-*koring*) **ou** piasu,
CAU-dry IsNOM coconut
'I dry coconut.' (Implied: Dry them in the sun.)

(160) a. LS for accomplishments: \(\phi\) CAUSE \(\psi\)
b. LS when \(\psi\) = achievement derived from condition stative: [do' (x)] CAUSE [BECOME predicate' (y)]
   \(x=\text{effector}, y=\text{patient}\)
c. LS for causative when \(\psi\) = achievement derived from condition stative: [do' (x)] CAUSE [[do' (y)] CAUSE
   [BECOME predicate' (z)]
   \(x=\text{causer-effector}, y=\text{causee-effector}, z=\text{patient}\)
d. Clause-specific LS for (159): [do' (ou 'I')] CAUSE [[do' (Ø)] CAUSE
   [BECOME *koring* 'dry' (piasu 'coconut')]]
e. Assign thematic relations: ou 'I' \(\leftarrow\) causer-effector
   piasu 'coconut' \(\leftarrow\) patient
f. Assign semantic macroroles: actor \(\leftarrow\) causer-effector 2 Macroroles
   undergoer \(\leftarrow\) patient
g. Assign syntactic functions: pivot \(\leftarrow\) actor-ou 'I'
   director core argument \(\leftarrow\) undergoer-piasu 'coconut'
   pivot-ou 'I' \(\leftarrow\) nominative case
   piasu 'coconut' \(\leftarrow\) accusative case (Ø)
   *koring* 'dry' \(\leftarrow\) p- 'CAU'
h. Cross-reference verb: The general LS for all accomplishments is shown in (160a). (160b) is the LS for accomplishments whose \(\psi\) portion contains a condition stative. (160c) is the LS for morphologically derived accomplishments whose \(\psi\) portion contains a condition stative.

Morphologically derived accomplishments have two predicates, the causative predicate and the caused predicate. Each of the two predicates in (160c) has an effector, 'x' for the causative and 'y' for the caused. Thus, there are two potential actors, the causer-effector 'x' and the causee-effector
'y'; however, the actor is always the causer-effector (cf. (160f)). As stated earlier, accomplishment verbs have two macroroles. The causee-effector is unspecified in (159), as shown by the clause-specific LS in (160d) where 'y' is filled by 'Ø'. This is in accord with an RRG constraint which requires all of the arguments specified in the LS of a verb to be realized syntactically. When arguments are not realized in syntax, the argument positions in the LS are filled by 'Ø', i.e. unspecified (cf. VV 1993:74).

Other assignments are the same as in (156) with the exception of verbal cross-referencing. Regular accomplishment verbs are prefixed by ng- when the actor is pivot (e.g. (155), (157)), and causative accomplishment verbs are prefixed by p- when the actor is pivot (e.g. (158), (159)).

The semantic difference between (155) and (159) has to do with the degree of control the actor exercises during the drying process. Agent-effectors have more direct control over the process than causer-effectors. When an agent (actor) makes a fire to dry out coconuts, he has greater control and the verb ngorikng is used, e.g. (155). However, when a causer (actor) lays coconuts out to dry in the sun, he has less control since the sun is actually doing the drying; thus, the verb pekorikng is used, e.g. (159). This difference in degree of control is captured by the LSs in (156b) and (160c). In (160c), the causer-effector 'x' belongs to the superordinate CAUSE and is separated from the resultant state by an intermediate predicate and CAUSE. In (156b), the agent-effector immediately dominates the resultant state.

Another example can be seen with took 'ripe' in (158). A person cannot directly control ripeness, thus the absence of ng- with the adjective root took 'ripe'. However, a person can do something to an entity so that it becomes ripe, thus the presence of p- with took 'ripe' in (158). A similar explanation can be given for the distinction between the other forms in (157) and (158).

Thus far, the accomplishment verbs which have been described are derived from adjective roots which are also used to form achievement verbs (cf. §2.2). Since the logical structure of accomplishment verbs normally includes an achievement verb, we need to examine other achievement verbs to determine their relationship to accomplishment verbs. Some achievement
verbs are derived from noun roots, e.g. (108). All of the noun roots in (108) can be used to form either regular accomplishment verbs, e.g. (161) or causative accomplishment verbs, e.g. (162).

(161) Sia ng-uluak (ng-kuluak) kiou na.
    3sNOM APL-bark wood DEF
    'HE removes the bark from the wood.'

(162) Sia pe-togor (p-togor) badi' ku.
    3sNOM CAU-rust machete 3sGEN
    'HE makes my machete rusty.'

The LSs for (161) and (162) are shown in (163).

A person can directly affect the bark on wood, but a person cannot directly make an object rusty. Thus, the regular accomplishment ng- in (161), but the absence of ng- in (162). However, a person can do something to an object so that it will eventually become rusty; thus, the causative accomplishment p- in (162).

(163) a. LS for (161): [do' (sia 'he')] CAUSE
    [BECOME NOT be-at' (kiou na 'the wood', kuluak 'bark')]

d. LS for (162): [do' (sia 'he')] CAUSE [[do' (Ø)] CAUSE
    [BECOME togor 'rust' (badi' 'machete)]]

The LS in (163a) contains an abstract locative predicate, be-at' (x,y). §2.2 showed how the logical operators BECOME and BECOME NOT interact with be-at' (x,y), resulting in achievements with locative-goal and locative-source arguments (e.g. (94), (98)). It was then shown in §2.3.1 that these achievements serve as the ψ portion of motion accomplishments verbs (e.g. (126), (135)). Recall that the LS for accomplishments is φ CAUSE ψ, where φ is normally an activity verb and ψ an achievement verb. Motion accomplishments are a subtype of accomplishment which contain the abstract locative predicate be-at' (x,y) in the ψ portion of their LS (e.g. (126c), (128c), (135c), (138d)). However, just because an accomplishment verb contains a locative predicate in its LS does not mean it is a motion accomplishment verb. In fact, there are regular accomplishment verbs (e.g. (161), (165)) and causative accomplishment verbs (e.g. (166)) which contain a locative predicate in their LS.

The distinction between motion accomplishments, regular accomplishments, and causative accomplishments is nicely illustrated by the verb root uhad 'to leave'. (100), repeated here as
(164), illustrates a motion accomplishment verb, (165) a regular accomplishment verb, and (166) a causative accomplishment verb.

(164) Sia m-uhad (-m-uhad) ti-di bali nya.

3sNOM ACY-leave from-at house 3sGEN
'SHE leaves from her house.'

(165) Sia ng-uhad (ng-uhad) dahi sindoidn nya.

3sNOM APL-leave dirt fingernail 3sGEN
'SHE removes the dirt from underneath her fingernails.'

(166) Sia p-uhad (p-uhad) kuakng na.

3sNOM CAU-leave demon DEF
'SHE casts out the demon.'

The differences between motion, regular, and causative accomplishment verbs can be seen by contrasting the LSs in (167). All three LSs contain a locative predicate in the achievement portion of their LS. In motion accomplishments (167b), 'x' is both the effector and the theme; whereas in regular accomplishments (167c), these two thematic roles are split between two arguments 'x' and 'z'. Causative accomplishments (167d) result in an additional argument, the causer, and a superordinate cause (cf. VV 1993:85).

(167) a. LS for accomplishments: \( \Phi \) CAUSE \( \psi \)

b. LS for motion accomplishments: \([\text{do'(x)}] \) CAUSE [BECOME NOT be-at' (y,x)]

x=effector-theme, y=locative-source

c. LS for regular accomplishments: \([\text{do'(x)}] \) CAUSE [BECOME NOT be-at' (y,z)]

x=effector, y=locative-source, z=theme

d. LS for causative accomplishments: \([\text{do'(w)}] \) CAUSE [[\text{do'(x)}] CAUSE [BECOME NOT be-at' (y,z)]]

w=causer-effector, x=causee-effector, y=locative-source, z=theme

In each of the three examples above, i.e. (164), (165), and (166), the pivot is the actor. The actor is an effector-theme with motion accomplishments, an effector with regular accomplishments,
and a causer-effector with causative accomplishments. Verbal cross-referencing encodes voice distinctions (situation type) and either the macrorole or the thematic role of the pivot.\textsuperscript{125}

All three types of accomplishment verb are morphologically derived; \textit{m}- for motion accomplishments, \textit{ng}- for regular accomplishments, and \textit{p}- for causative accomplishments. Differences in morphology and corresponding accomplishment type have to do with the degree of control which the actor exercises. When the effector has direct control over the entity being moved, \textit{ng}- is used indicating a regular accomplishment as in (165). When the causer has indirect control over the entity being moved, \textit{p}- is used indicating a causative accomplishment as in (166). When the effector and the entity being moved are coreferential, \textit{m}- is used indicating a motion accomplishment as in (164). Briefly, agent-effectors have more direct control than causer-effectors.

The notion of control also explains why some of the verb roots listed in (142) cannot be used to form regular \textit{ng}- accomplishment verbs. For example, the root \textit{longi} 'swim' cannot be used to form a regular \textit{ng}- accomplishment verb since the effector does not control another entity while swimming. However, a causative accomplishment verb can be derived from the root \textit{longi} 'swim' since a causer can make someone else swim, although he cannot directly control their swimming, e.g. (168).

\begin{verbatim}
(168) Sia pe-longi (p-longi) anak nya.
     3sNOM CAU-swim      child 3sGEN
'SHE makes her child swim.'
\end{verbatim}

At the end of §2.3.2 a distinction was made between two groups of activity verbs, the \textit{m}-group which was described in §2.3 and the \textit{peg}- group which is described in §3.1. §2.3.2 showed how some activity verbs in the \textit{m}- group are derived from noun roots (e.g. (143), (144), (150)). Likewise, there are activity verbs in the \textit{peg}- group which are derived from noun roots. If a verb or noun root can be used to form an activity verb in either group, it can also be used to form either a

\textsuperscript{125}A summary analysis of (100)/(164) was provided in (135). Summary analyses for (165) and (166) are not given since the differences are contrasted here.
regular ng- accomplishment verb, a causative accomplishment verb, or both.\textsuperscript{126} (169) illustrates a causative accomplishment that is derived from the noun root *dudu* 'breast' from which activity verbs in the -m- group can be formed (e.g. *Dei dudu* 'di indu' *nu*! 'Don't nurse from your mother!'; cf. (143), (150)). (170) illustrates a causative accomplishment verb that is derived from the noun root *baju* 'shirt' from which activity verbs in the peg- group can be formed (e.g. *Dei peg-baju*! 'Don't put on a shirt!'). (171) illustrates a regular ng- accomplishment verb that is derived from the noun root *tondukng* 'head covering' from which activity verbs in the peg- group can be formed (e.g. *Dei peg-tondukng*! 'Don't cover your head!')..

\begin{aligned}
(169) & \text{Sia pu-du'} (p-dudu') anak nya. \\
& 3s\text{NOM} \text{CAU-breast} \text{child} 3s\text{GEN} \\
& 'SHE makes her child nurse.' \\
\end{aligned}

\begin{aligned}
(170) & \text{Sia pe-baju'} (p-baju') anak nya. \\
& 3s\text{NOM} \text{CAU-shirt} \text{child} 3s\text{GEN} \\
& 'SHE puts a shirt on her child.' \\
\end{aligned}

\begin{aligned}
(171) & \text{Sia n-ondukng (ng-tondukng)} anak nya. \\
& 3s\text{NOM} \text{APL-head.covering} \text{child} 3s\text{GEN} \\
& 'SHE covers her child's head.' \\
\end{aligned}

As seen above, activities in the peg- group can be derived from the two nouns, *baju* 'shirt' and *tondukng* 'head covering'. The most common item used by the Bonggi as a *tondukng* 'head covering' is a piece of cloth. Why should two nouns that belong to the same semantic domain and function identically in terms of activity verb formation act differently with respect to accomplishment verb formation? Once again, the explanation is semantic. In the causative situation in (170), the child is the participant in contact with the shirt once it is on, so the child has a measure of control as to whether or not the shirt stays on or not. Furthermore, the child had to move in order to have on the shirt. In the noncausative situation in (171), the child may not be in contact at all with the covering, it is the mother who has control over whether or not the covering

\textsuperscript{126}Causative accomplishment verbs are more likely to occur than regular ng- accomplishment verbs.
stays on. This is because she is hold the covering over the child's head. The picture here is comparable to two people walking together under an umbrella. Certainly the one holding the umbrella has greater control over who gets wet. In fact, it is common to see Bonggi parents carrying small children and covering their head (nondukng) using an umbrella or banana leaf instead of a piece of cloth.

The accomplishment verbs which have been described thus far in this section are derived from adjective roots (e.g. (155), (157), (158), (159)), noun roots (e.g. (161), (162), (169), (170), (171)), and motion activity verb roots (e.g. (165), (166), (168)). There are also ACCOMPLISHMENT verb roots which can only be used to form accomplishment verbs as in (172) and (173). The LSs for (172) and (173) are provided in (174).

(172) Sia ng-IPA' (ng-IPA') badi' nya dii tana'.
   3sNOM APL-cut.weeds machete 3sGEN on ground
   'HE puts his machete on the ground.'

(173) Sia nge-loos (ng-loos) bali nya.
   3sNOM APL-cut.weeds house 3sGEN
   'SHE cuts the weeds around her house.'

(174) a. LS for (172): [do' (sia 'he')] CAUSE [BECOME be-at' (tana' ground', badi' 'machete')]
   b. LS for (173): [do' (sia 'he')] CAUSE [BECOME NOT be-at' (bali nya 'his house', weeds)]

Other accomplishment verbs which are derived from accomplishment verb roots are shown in

(175) | ROOT   | ACCOMPLISHMENT | GLOSS           |
     |        |                |                 |
     | tibas  | n-ibas         | strike with machete |
     | timbak | n-imbak        | shoot            |
     | tobokng| n-obokng       | cut down trees    |

127 The stem pudu' 'cause to breast feed' has undergone haplology.
128 Once again only actor-pivot forms are given here, but there are corresponding undergoer-pivot forms.
Note that these roots are accomplishment verb ROOTS, and there are no adjectives, achievement verbs, or activity verbs that can be related to the verb roots of (175) by any surface derivational process.

Accomplishment verbs can occur in clauses with zero, one, two, or three core syntactic arguments. In (176b) the verb *nobokng* 'cut down trees' is derived from an accomplishment verb root *tobong* (cf. (175)). (176b) has no core syntactic argument, but the verb is marked with *ng-* indicating that the syntactic pivot is an actor. In (177) the verb *ngidindikng* 'to make a wall' is derived from the noun root *dinding* 'wall'. (177) has one core syntactic argument, and the verb is marked with *ng-* indicating that the pivot (*ou T*) is an actor. (178) is the same as (177) except for the addition of a second argument. (179) has three core syntactic arguments, and again the verb is marked with *ng-* indicating that the pivot (*Tagi*) is an actor.

(176) a. Nggien i Mual?
   where NPIV Mual
   'Where is Mual?'

   b. N-obokng (ng-tobong) na.
      APL-cut.down.trees now
      'HE is cutting down trees.'

(177) Ngi-dindikng (ng-dinding) ou.
      APL-wall 1sNOM
      'I put up walls.'

(178) Ngi-dindikng (ng-dinding) ou bali nya.
      APL-wall 1sNOM house 3sGEN
      'I put up walls on his house.'

(179) Si Tagi m-ori (ng-bori) n Tereib siidn.
      PIV Tagi APL-give NPIV Tereib money
      'TAGI gives Tereib money.'

Although clauses (176b), (177), (178), and (179) each have a different number of core syntactic arguments, they are all accomplishment clauses with accomplishment verbs. In §1.2, I pointed out how Dowty (1979) and Cooper (1985) claim that it is sentences as a whole which belong to the various situation classes and the classes are not determined simply by the verb that the sentences contain. The claim that situation type is not determined by the verb holds for English

129A literal English translation of (177) is 'I wall'. English does not verbalize 'wall' as it verbalizes 'brush', (cf. (182)).
(cf. §1.2, examples (11) and (12)). This claim also holds to a certain extent for Bonggi motion activity verbs. As shown in §2.3.1, given a motion activity verb such as m-apit 'ACY-stop.by', it can occur in either a motion activity clause (e.g. (123)) or a motion accomplishment clause (e.g. (125)). Since the difference between these two types of motion clauses depends on the presence or absence of a locative argument, one could argue that it is the clause as a whole which determines the situation class. Like the English examples in (11) and (12) of §1.2, the verb morphology of m-apit 'ACY-stop.by' does not change whether m-apit occurs in a motion activity or a motion accomplishment situation. However, the argument that verb morphology does not change only holds when distinguishing motion activities from motion accomplishments. It does not hold in the general case, where activities are distinguished from accomplishments by their verbal affixation. For example, the verb root dabu 'fall' occurs as d-em-abu' in an activity situation (e.g. (122)) and as nge-dabu' in an accomplishment situation. It is the verb, specifically the verb morphology, which determines the situation type; the determining factor is not the number of arguments present in the clause. Compare again (176b), (177), (178), and (179); they each have a different number of arguments in the clause, but they are all accomplishments. In summary, in simple declarative verbs when the pivot is the actor, activity verbs take -m- (cf. §2.3) and accomplishment verbs take ng- (cf. §2.4).130 In this analysis, m-apit 'to stop by' is an activity regardless of the presence or absence of a locative argument. This analysis is supported by the fact that m-apit 'to stop by' and other motion activity verbs never have an undergoer (cf. §2.3.1). Verb morphology not only distinguishes activities from accomplishments, but it also distinguishes other situation types.

Thus far, I have described three types of accomplishments which have a locative predicate (i.e. be-at' (x,y)) in their LS: motion accomplishments (e.g. (164)), regular accomplishments (e.g. (165)), and causative accomplishments (e.g. (166)). Accomplishments with a locative predicate

130 This excludes the peg- group of verbs which are discussed in §3.1. However, they, too, are uniquely marked. In simple declarative clauses they take ngg-, e.g. ngg-ahut 'to shuttle'.
can also have arguments which have traditionally been called "instruments" as in (180). The
general and clause-specific LSs for (180) are seen in (181).

(180) Sia nge-labad diaadn ma' kiou.
     3sNOM APL-hit 3sACC with wood
     'HE hits me with a stick.'

(181) a. LS for accomplishments
     with an "instrument":
     [[[do' (x)] CAUSE [do' (y)] CAUSE [BECOME be-at' (z, y)]
     \[x=effector, y=effector-theme, z=locative-goal\]
     b. LS for (180):
     [[[do' (sia 'he')] CAUSE [do' (kiou 'wood')] CAUSE
     \[BECOME be-at' (diaadn 'me', kiou 'wood')]]

By definition, the first argument of do' is an effector, the first argument of be-at' is a locative,
and the second argument of be-at' is a theme. In (181a), 'y' is both an effector and a theme. This
effector-theme is equivalent to what is traditionally called "instrument" (cf. (Jolly 1993:308)).
131 Like the causative accomplishments described earlier (e.g. (160)), accomplishment clauses with an
"instrument" argument have two predicates. Each of the two predicates in (181a) has an effector,
so there are two potential actors. However, the actor is always the first effector 'x'. In (181b) the
effector 'x' is construed as an agent by pragmatic implicature. Animate agents have control over
inanimate instruments and have higher actor potential (cf. the Actor-Undergoer Hierarchy in (4)).
Since agents are leftmost on the cline in (4), they are linked to actor. This leaves the effector-
theme 'y' and the locative-goal 'z' to contend for undergoerhood. The locative-goal 'z' is the
undergoer by either (4) or (5); by (4), locative is undergoer because it is to the right of effector on
the cline;132 by (5) 'z' is the undergoer because it is the second argument of predicate' (y, z) which
is to the right of the first argument on the cline.

131 Here, effector-theme is equivalent to "instrument." In §2.3.1, I used effector-theme to describe
the single argument of a motion activity verb, since the participant brings about the event and
changes location. This points out a problem with using these labels as opposed to argument
positions in LSs. The LS of the "effector-theme" relation described in §2.3.1 is not the same as
that described here for instruments.
132 The mnemonic labels for coreferential arguments, e.g. y=effector-theme, are constructed in the
order in which they occur in the LS. That is, y=effector occurs in the LS before y=theme. As
coreferential arguments, they are combined and labelled effector-theme. The first portion of the
label (e.g. effector) is always used for determining the position on the thematic relation cline in (4).
In §2.3.1, I showed how the abstract locative predicate \textit{be-at'} (x,y) combines with the logical operators \textit{BECOME} and \textit{BECOME NOT} to account for the locative prepositions \textit{dii 'to} and \textit{tidii 'from}'.

Thus, \textit{to} = \textit{BECOME be-at'} (x,y), and \textit{from} = \textit{BECOME NOT be-at'} (x,y), where \textit{to} marks locative-goal arguments of stative predicates embedded under \textit{BECOME} in LS and \textit{from} marks locative-source arguments of statives embedded under \textit{BECOME NOT}. (Jolly 1993:277)

In RRG, LSs account for both verbal structures and prepositional functions which makes preposition assignment nonarbitrary (cf. Jolly 1993). LSs not only account for the locative prepositions discussed in §2.3.1, but other prepositions such as the one used to indicate "instrument" arguments. In Bonggi, \textit{ma'} 'with' marks effector-themes under the following circumstances: (i) the effector and theme are coreferential; (ii) the effector is not an actor; and (iii) the theme is not an undergoer. For example, \textit{kiou} 'wood' is marked by \textit{ma'} 'with' in (180) because as seen in (181b): (i) \textit{kiou} 'wood' is both effector and theme; (ii) \textit{kiou} 'wood' is not an actor by (4) or (5); and (iii) \textit{kiou} 'wood' is not a undergoer by (4) or (5).

There are a number of noun roots from which we can derive accomplishment verbs describing an accomplishment that uses the noun as an instrument, e.g. (182). The general and clause-specific LSs for (182) are seen in (183).

(182) \textit{M-urus (ng-burus) ou kuhut ku.}
\textit{APL-brush IsNOM teeth IsGEN}
'I brush my teeth.'

(183) a. LS for accomplishments with an "instrument": \[
[[\textit{do'} (x)] \text{CAUSE} [\textit{do'} (y)]] \text{CAUSE} \textit{BECOME be-at'} (z, y)]
x=effector, y=effector-theme, z=locative-goal
\]
b. LS for (182): \[
[[\textit{do'} (ou 'l')] \text{CAUSE} [\textit{do'} (burus 'brush')]] \text{CAUSE}  
\textit{BECOME be-at'} (kuhut ku 'my teeth', burus 'brush')]
\]

The general LS in (183a) is identical to the general LS in (181a). The difference between (182) and (180) is that the effector-theme in the LS of (183a) is realized as a verb in (182) but as a noun in (180). Other instrument noun roots which are used to form accomplishment verbs are shown in (184).
(184) **ROOT** | **GLOSS** | **ACCOMPLISHMENT** | **GLOSS**
--- | --- | --- | ---
asu | dog | ng-asu | hunt with a dog
orob | spear trap | ng-orob | use a spear trap
pam | pump | nge-pam | to fish with hook
posi | fishhook | mi-osi | to fish
put | tin can | ngu-put | measure with tin can
rasudn | poison | nge-rasudn | to poison
sanggul | hoe | n-anggul | to hoe
sapu | broom | n-apu | sweep
sinsu | chain saw | n-insu | cut with chain saw
sudu' | spoon | n-udu' | scoop
tondukng | head cover | n-ondukng | cover head
toes | snare | n-oos | to snare
tuba | type of root | n-uba | poison fish with root
tuhal | hammer | n-uhal | to hammer

ng- is one of the most common derivational morphemes. It is a transitivizing morpheme used to derive prototypical transitive verbs from noun roots as seen in (184) (cf. Givón 1984:234).

The accomplishment verbs which are derived from noun roots in (161), (177), (178), (182), and (184) all involve control on the part of the actor, and some change in state or location on part of the undergoer. For example, *ngepam* 'spray' is only used to describe spraying weeds with weedkiller or spraying a house with DDT; in either case, there is a radical change in the state of the undergoer. *Nondukng* 'cover head' is used when an actor covers someone other than herself in order to protect them from the sun or rain; for example, when a mother covers her small baby (cf. (171)). On the other hand, the activity verb *ntondukng* is used when an actor covers her own head.134

The ψ portion of some accomplishment verbs contains an underlying possession state. The verb *bori* 'give' is representative of this group of accomplishment verbs, e.g. (185) (cf. (179)). The general and clause-specific LSs for both (185) and (179) are shown in (186).

(185) Si Tagi m-ori (ng-bori) siidn dii n Tereib.
P IV Tagi APL-give money to NPIV Tereib
'TAGI gives money to Tereib.'

---

133The roots *pam* 'pump' and *put* 'tin can' are borrowed. There are very few monosyllabic nominal roots in Bonggi. Consonant coalescence occurs with disyllabic roots, but not borrowed monosyllabic roots. I.e. *ng-* is realized as /ŋV/ with monosyllabic roots (cf. footnote (121)).

134*Ntondukng* 'cover head' belongs to the *peg-* group of activity verbs (§3.1).
(186) a. LS for accomplishments
   with underlying possessive:  [do' (x)] CAUSE [BECOME have' (y,z)]
   x=effector, y=locative-recipient, z=theme
b. LS for (185) & (179):  [do' (Tagi)] CAUSE
   [BECOME have' (Tereib, siidn 'money')]

The verbs associated with the LS in (186a) are transfer verbs which involve an effector 'x'
conveying a theme 'z' toward a locative-recipient 'y'.\footnote{135} §2.1.4 defined the LS of possessive states
as have' (x,y). In §2.1.4, I referred to the first argument 'x' as a possessor and the second
argument 'y' as the possessed item, but pointed out that in RRG 'x' is sometimes referred to as a
locative and 'y' a theme.\footnote{136} Recipient can be defined as either: (i) the locative argument 'y' in the
configuration ...[BECOME have' (y,z)] (Van Valin 1993:154, footnote 23); (ii) the possessive
argument 'y' in the configuration ...[BECOME have' (y,z)]; or (iii) the first argument in the
configuration ...[BECOME have' (y,z)].

With respect to macrorole assignment, the effector 'x' is the actor according to either (4) or
(5). This leaves two potential undergoers: the locative-recipient 'y' or the theme 'z'. In fact, both
are possible undergoers. By either (4) or (5), the theme 'z' is the unmarked choice for undergoer,
and the locative-recipient 'y' the marked choice.\footnote{137} At least two factors influence undergoer
choice: (i) the locative-recipient argument is normally animate or human with these verbs and the
theme inanimate; and (ii) information flow, whereby topical NPs occur before nontopical NPs (VV
1993:77).

With respect to the assignment of syntactic functions, transfer verbs have four possibilities as
seen in Table 2.10. This table is read as follows: i) IF the pivot is an actor AND the undergoer is a

\footnote{135}{The verb give is discussed in many places including: Longacre 1976:33; FVV 1984:87, 201;
VV 1993:44, 48; Jolly 1993:292.}

\footnote{136}{See also the discussion of the differences between existential and possessive statives following
(64) and (65).}

\footnote{137}{Cf. Van Valin (1993:45) for dative-shift constructions in English. For a different view see
Dryer's (1986) antidative analysis.}
theme, THEN the undergoer-theme is realized as a direct core syntactic argument AND the recipient is realized as an oblique core argument as in EXAMPLE (185).\textsuperscript{138}

Table 2.10: Syntactic function possibilities for transfer verbs

<table>
<thead>
<tr>
<th>IF</th>
<th>AND</th>
<th>THEN</th>
<th>AND</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>pivot=ACT</td>
<td>UND=theme</td>
<td>UND-theme→ direct core</td>
<td>recipient→ oblique</td>
</tr>
<tr>
<td>ii)</td>
<td>pivot=ACT</td>
<td>UND=recipient</td>
<td>UND-recipient→ direct core</td>
<td>theme→ direct core</td>
</tr>
<tr>
<td>iii)</td>
<td>pivot=UND-theme</td>
<td>ACT→ direct core</td>
<td>recipient→ oblique</td>
<td>(187)</td>
</tr>
<tr>
<td>iv)</td>
<td>pivot=UND-recipient</td>
<td>ACT→ direct core</td>
<td>theme→ direct core</td>
<td>(188)</td>
</tr>
</tbody>
</table>

(187) \textit{Siidn} biri-\textit{idn (bori-Vn)} n Tagi dii n Tereib.\textsuperscript{139} money give-[-mk]UPL NPIV Tagi to NPIV Tereib 'MONEY is given by Tagi to Tereib.'

(188) \textit{Si} Tereib biri-\textit{adn (bori-an)} n Tagi siidn. NOM Tereib give-[+mk]UPL NPIV Tagi money 'TEREIB is given money by Tagi.'

With respect to the assignment of case and prepositions, the pivot is always assigned nominative case. If the actor is not the pivot, it is assigned genitive case (e.g. (187); cf. (21) in §1.3.1). If the theme is not the pivot, it is assigned accusative case (e.g. (185)). If the recipient is not the pivot, it is assigned accusative case (e.g. (179)). If the recipient is neither the pivot nor the undergoer, it is marked as an oblique core argument by the preposition \textit{dii} 'to' (e.g. (185)).

\textsuperscript{138} This assumes the arguments in the LS are realized in syntax and not elided.

\textsuperscript{139} The suffix vowel 'V' is subject to rules of vowel harmony. It harmonizes with the preceeding vowel in the stem (cf. Kroeger 1992b).
With respect to cross-referencing the verb, verbs with actor pivots are marked by ng-, verbs with unmarked undergoer pivots (in this case a theme) are marked by -Vn, and those with marked undergoer pivots (in this case a recipient) are marked by -an.

Some transfer verbs involve transfer from a source instead of transfer toward a goal. The verb tahu 'steal' is representative of this group of verbs, e.g. (189). The LS for (189) is shown in (190).

(189) Sia n-ahu (ng-tahu) siidn tidii n Tereib.
3sNOM APL-steal money from NPIV Tereib
'HE stole money from Tereib.'

(190) a. General LS for (189): [do' (x)] CAUSE [BECOME NOT have' (y,z)]
x=effector, y=locative-source, z=theme
b. Specific LS for (189): [do' (sia 'he')] CAUSE
[BECOME NOT have' (Tereib, siidn 'money')]

The verbs associated with the LS in (190a) involve an effector 'x' conveying a theme 'z' from a locative-source 'y' (cf. VV 1993:48). Source can be defined as either: (i) the locative argument 'y' in the configuration ...[BECOME NOT have' (y,z)] (Van Valin 1993:154, footnote 23); (ii) the possessive argument 'y' in the configuration ...[BECOME NOT have' (y,z)]; or (iii) the first argument in the configuration ...[BECOME NOT have' (y,z)]. The locative-source argument can be animate or inanimate.

With respect to macrorole assignment, the effector 'x' is always the actor and the theme 'z' is always the undergoer. The locative-source argument cannot be the undergoer. This is different from locative-recepients which can be undergoers (e.g. (179)).

With respect to the assignment of syntactic functions, this subset of transfer verbs is similar to the goal-oriented transfer verbs described in Table 2.10. The difference is that source cannot be undergoer (cf. (ii) in Table 2.10). All three arguments can be the pivot: the actor-effector 'x' (e.g. (189)), the undergoer-theme 'z' (e.g. (191)), and the locative-source (e.g. (192)). In previous

140 Other verbs in this class include ng-abis 'APL-finish' and ng-ai 'APL-take' (cf. VV 1993:78).
examples the pivot has also been a macrorole; however, macrorole status is not a requirement for assignment to syntactic pivot (cf. the Pivot Choice Hierarchy in (7)).

(191) Sîtdn tuhu-udn (tahu-Vn) nya tidii n Tereib.

money steal-UPL  3sGEN from NPIV Tereib
'MONEY is stolen by him from Tereib.'

(192) Sî Tereib teho-odn (tahu-an) lama.

PIV Tereib steal-LOC  person
'Someone stole from TEREIB.'

Case and preposition assignment is the same as that for goal-oriented transfer verbs with the exception being that if the source is not the pivot, it is marked as an oblique core argument by the preposition tidii 'from' (e.g. (189), (191)).

Verbal cross-referencing for all regular accomplishment verbs in simple, nonpast tense can be summarized as follows: verbs with actor pivots are prefixed with ng- (e.g. (155), (157), (161), (165), (171), etc.); verbs with unmarked undergoer pivots are suffixed with -Vn (e.g. (187), (191)); verbs with marked undergoer pivots are suffixed with -an (e.g. (188)); verbs whose pivot would be expected to occur as undergoer in terms of the hierarchy in (4), but do not, are also suffixed with -an (e.g. (192)); and verbs whose pivot is an effector-theme (instrument) which would be expected to occur as actor in terms of the hierarchy in (4), but does not, are prefixed with pVng- (e.g. (193)).

(193) Kiou penge-labad (pVng-labad) nya diaadn.

wood INSTPL-hit  3sGEN 1sACC
'A STICK is what he hits me with.'

---

141 Cf. the use of tidii 'from' for marking source-oriented motion accomplishments as described in (135).

142 As we have already seen, actor-pivot accomplishments are marked by -m-, ng-, or p- depending on the type of accomplishment. -m- for motion accomplishments whose actor is an effector-theme; ng- for regular accomplishments whose actor is an effector; and p- for causative accomplishments whose actor is a causer-effector (cf. (167)).

143 For accomplishment verbs which allow only one argument to be the undergoer, that argument is the unmarked undergoer.

144 Cf. the corresponding actor-pivot clause in (180).
In §2.1.3, I pointed out that antecedent cause, which occurs in stative and achievement clauses, would be expected to occur as actor in terms of the hierarchy in (4), but does not. I also stated that antecedent cause cannot function as an actor because it is an adjunct, not an argument of the verb. Similar reasoning can be given for both instrument and locative-source. These arguments can occur as syntactic pivot although they lack macrorole status.

This section began by pointing out that the LS for accomplishments is $\phi$ CAUSE $\psi$, where $\phi$ is normally an activity verb and $\psi$ an achievement verb. All of the accomplishment verbs described thus far conform to this norm. Furthermore, they all involve volitional actors. The actor-effector in accomplishment clauses must be animate, e.g. (155), (172), and (173). It cannot be inanimate, e.g. (194) and (195). That is, the inanimate nouns dodos 'wind' and api 'fire' cannot occur as effectors in accomplishment clauses.145

\[(194) *Dodos\text{ }m-uh\text{'}a\text{'}(ng-buha')\text{ pintu'.} \]
\[\text{wind APL-open door 'THE WIND opens the door.'}\]

\[(195) *Api\text{ }m-ali'(ng-pali')\text{ diaadn.} \]
\[\text{fire APL-burn 1sACC 'THE FIRE burns me.'}\]

I have provided a survey of some of the variation that exists in the $\phi$ and $\psi$ portions of the LS of accomplishment verbs and how this accounts for differences in meaning; for example, the differences between motion, regular, and causative accomplishment verbs (cf. (167)). Although this survey has not been exhaustive, it has provided an overview of the most frequent types of accomplishment verbs and how they are derived. Other accomplishment verbs which could be examined include: (i) verbs of consumption such as inum 'drink', whose LS contains two arguments in the $\phi$ portion, $[\text{inum 'drink'} \text{ (x,y)}] \text{ CAUSE } [\text{BECOME NOT exist' (y)}]$; and (ii) verbs which either

---

145 Note that the restriction of the effector to animate nouns does not exist with activity verbs. Thus, animacy correlates with high transitivity, or accomplishment verbs. This correlation is predicted by Hopper and Thompson's transitivity hypothesis (1980:254f.).
have the undergoer built into their lexical meaning or are derived from noun roots which refer to
the result of the action, i.e. what the action produces, e.g. (196) and (197).

(196)  
\[ \text{Sta (ng-suart) suart.} \]
\[ 3sNOM APL-letter letter \]
'HE writes a letter.'

(197)  
<table>
<thead>
<tr>
<th>GLOSS</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>gogu'</td>
<td>hole</td>
</tr>
<tr>
<td>padi</td>
<td>rice field</td>
</tr>
<tr>
<td>sindoidn</td>
<td>fingernail</td>
</tr>
<tr>
<td>ponsu'</td>
<td>bathe</td>
</tr>
</tbody>
</table>

We now pass on to consider undergoer-pivot accomplishment verbs. When the undergoer is
FUNCTIONALLY UNMARKED, \(-Vn\) occurs. However, when the undergoer is functionally marked, \(-an\) occurs. The functionally unmarked undergoer in a clause is the thematic role which is nearest
the undergoer end of the Actor-Undergoer Hierarchy in (4) (cf. Foley & Van Valin 1984:59; Van

There is an iconic relationship between actor and prefix, as opposed to undergoer and suffix.
Prototypically, the actor instigates the action and the undergoer is the endpoint of the action. This
suggests an earlier word-order of SVO with S being associated primarily with actor in two
argument clauses (cf. Bybee 1985:6f.).

The suffix \(-Vn\) occurs with functionally unmarked undergoer-pivot accomplishment verbs. \(-Vn\) indicates both accomplishment verb and unmarked undergoer pivot.\(^{146}\)

The thematic role of the undergoer is prototypically a patient, e.g. (198) (cf. (155)). The LS
for (198) is the same as that provided for (155) in (156c). The main difference between (198) and
(155) is in the assignment of syntactic functions. In (198) the undergoer is assigned to pivot and
and the actor is a nonpivot director core argument. This difference in pivot assignment results in
differences in case assignment and verbal cross-referencing. In (198) the undergoer (piasu

\[^{146}\text{The morphophonemic alternations associated with }-Vn\text{ are very complex. See (200) for examples. The relevant phonological processes are: vowel shortening, }/l/\text{ deletion, glottal deletion, suffix vowel harmony, root vowel harmony, vowel weakening, nasal prestopping, and metathesis.} \]
'coconut') occurs in the pivot position, before the verb, whereas the actor receives genitive case since it is nonpivot, and it immediately follows the verb which is cross-referenced by -Vn.

(198) Piasu kiring-in (koring-Vn) ku.\textsuperscript{147} coconut dry-UPL IsGEN 'COCONUT is dried by me.'\textsuperscript{148} (Implied: They are dried by fire.)

In other instances, the unmarked undergoer is a theme, e.g. (199). Accomplishment verbs whose unmarked undergoer is a theme are not formally distinguished from accomplishment verbs whose unmarked undergoer is a patient.\textsuperscript{149} Theme is the entity which is moved in a transfer verb. For example, the undergoer siidn 'money' in (199) is a theme; nevertheless, the verbal affixation is the same as in (198).

(199) Siidn biri-idn (bori-Vn) ama' n Janit dii anak nya. money give-UPL father NPIV Janit to child his 'MONEY is given by the father of Janit to his child.'

Other accomplishment verbs with unmarked undergoers are shown in (200).\textsuperscript{150}

<table>
<thead>
<tr>
<th>(200)</th>
<th>ROOT</th>
<th>GLOSS</th>
<th>ACCOMPLISHMENT</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>atad</td>
<td>send</td>
<td>etad-adn</td>
<td>take a picture</td>
<td></td>
</tr>
<tr>
<td>gambar</td>
<td>picture</td>
<td>gemba-ardn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>api</td>
<td>fire</td>
<td>ipi-idn</td>
<td>cook</td>
<td></td>
</tr>
<tr>
<td>bagi</td>
<td>divide</td>
<td>bigi-idn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bahus</td>
<td>overpower</td>
<td>buhus-udn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ansur</td>
<td>dissolve</td>
<td>unsu-urdn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>balas</td>
<td>reciprocate</td>
<td>belas-adn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reda'</td>
<td>step on</td>
<td>reda-adn</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{147}As mentioned in §1.3.1, one of the ways which Bonggi distinguishes pivots from nonpivots is word-order. With the exception of first and second person pronouns, the normal constituent order is SVO, where S is pivot and O is nonpivot.

\textsuperscript{148}Sometimes undergoer-pivot clauses are translated as passive voice in English. The reader should keep in mind that undergoer pivot is not equivalent to English passive.

\textsuperscript{149}In Kimaragang and Tombonuwo, theme and locative are distinct from patient in terms of verbal affixation (Kroeger 1988a:231f.; personal communication, Julie King).

\textsuperscript{150}The roots in (200) are organized to highlight vowel harmony and /l/ deletion, not lexical categories or thematic roles.
iap  count  iap-adn
  tibas  strike with machete  tibas-adn

biid  turn over  bid-idn
  biin  message  bin-in

giuk  worm  giuh-udn

boli  buy  bili-idn
  poting  tie  piting-in

konop  increase  kenop-odn
  sohom  soak  sehom-on

ponsu'  bathe  punsu-udn
  loput  snap  luput-udn

guab  split  guab-adn
  buat  make  buat-adn

tuug  dry  tug-udn
  buurt  cut hair  burt-udn

tombol  patch  tembo-idn
  kohol  bite  keho-idn

Other pivot possibilities mentioned in this section and to which I return in §4 include:

instrument (e.g. (193)), locative-goal (e.g. (188)), and locative-source (e.g. (192)).

This chapter has provided an overview of the four basic verb classes which occur in all languages: states, achievements, activities, and accomplishments. These four classes have been described here in terms of logical structures (LSs). LSs are a means of lexical decomposition used to account for verbal semantics. I showed how states and activities are basic, and achievements and accomplishments are derivative. I also pointed out that one of the functions of verb morphology in Bonggi is to indicate situation type. Furthermore, I provided a set of rules and principles for linking the LSs to the verb morphology.

Associated with each of the four basic verb classes are a set of aspectual properties (Aktionsart) which are language independent. States are [-dynamic], whereas achievements, activities, and accomplishments are [+dynamic]. Activities are [-telic], whereas achievements and accomplishments are [+telic]. Accomplishments are [+causative], whereas achievements and activities are [-causative].
The *Aktionsart* properties are reflected in the LSs which have been described. Any LS that does not contain either BECOME or do' is [-dynamic] and refers to a state. Any LS that contains BECOME is [+telic] and refers to either an achievement or an accomplishment. Any LS that contains CAUSE is [+causative] and refers to an accomplishment.

In the following chapter, I show how each of the situation types described here constrain viewpoint aspect.
CHAPTER 3
VIEWPOINT ASPECT IN BONGGI

Table 1.1 in §1.2 characterized the salient aspectual features/properties which distinguish the four basic situation types: states, achievements, activities, and accomplishments. These properties are collectively referred to as Aktionsart properties which are inherent in the four situation types. For example, achievements are: [+dynamic], [+telic], and [-causative] (cf. Table 1.1). Because Aktionsart properties are inherent in situations, they are also called situation aspect. Chapter 2 described how Bonggi verb morphology indicates situation type. Given any situation type, the situation aspect (i.e. Aktionsart) is predictable from the type. For example, given that the prefix ng- indicates that the situation is an accomplishment,\(^1\) the inherent situation aspect is: [+dynamic], [+telic], and [+causative].

Whereas Chapter 2 dealt with situations and situation aspect, this chapter deals with viewpoint aspect, which is often overtly marked in morphosyntax. As a grammatical category, viewpoint aspect is frequently marked in both verb morphology and syntax. The grammatical categories aspect, modality, and tense are treated as operators in RRG. However, each of these operators modifies a different layer of the clause (cf. VV 1993:7). Aspect modifies the nucleus, modality the core, and tense the clause.

Clause structure is layered or hierarchically structured. The primary constituents of a clause are the nucleus, which contains the predicate, the core, which contains the nucleus and the arguments of the predicate, and the periphery, which is an adjunct to the core and includes

\(^1\)The prefix ng- actually indicates that the situation is an accomplishment and that the pivot is an actor (cf. §2.4).
nonarguments of the predicate (cf. introduction to §2). Operators are not part of the nucleus, core, or periphery, but are modifiers of these units (cf. VV 1993:10).

Viewpoint aspect is treated as an operator modifying the clause nucleus. As a nuclear operator, it modifies the action, event, or state without reference to the participants (VV 1993:9). The assignment of viewpoint aspect belongs to the operator projection. The operator projection contrasts with the constituent projection which accounts for argument structures (cf. §2). The relationship between viewpoint aspect in the operator projection and the constituent projection is shown in Figure 3.1.

Although different situation types have different constituent projections, the same situation can be presented from different viewpoints. These different viewpoints are accounted for via viewpoint aspect (cf. Smith 1983:479). The Aktionsart properties which are inherent in the situation do not change with a change in viewpoint aspect. For example, an accomplishment normally involves a single change of state, e.g. (1), but speakers can choose to present accomplishments as multiple changes of state. For instance, Bonggi uses an iterative marker (g-) to indicate iterative accomplishment verbs involving multiple changes of state, e.g. (2). The situation in both (1) and (2) is an accomplishment, only the viewpoint is different with (1) referring to a single change of state and (2) referring to multiple changes of state.

(1) Sia n-imbak (ng-imbak) babi.
3sNOM APL-shoot pig
'HE shoots pig.'

(2) Sia ng-g-ahut (ng-g-ahut) babi.
3sNOM NPST-IT-shuttle pig
'HE is shuttling the pig back and forth.'
The approach to aspect which is described here is comparable to the Case Grammar model of Fillmore (1968). Fillmore's grammar contained the rule: $S \rightarrow$ Modality + Proposition. The proposition portion of Fillmore's rule is reflected in the RRG treatment of predicates, arguments, and adjuncts in the constituent projection. The modality portion of Fillmore's rule is reflected in the RRG treatment of operators including aspect, modality, and tense (cf. Wilkins & Van Valin 1993:12).

The view that aspect is an operator on the predicate can also be found in generative semantics models of the 1970s. For example, Gregerson (1979) treats both aspect and modality as predicate operators. "Aspectual elements are essentially one-termed predicates which take a proposition as their argument" (Gregerson 1979:50).

There are several approaches that one can take with respect to viewpoint aspect. One approach is to present viewpoint aspect in terms of grammatical levels. In this approach,
viewpoint aspect is primarily discussed in terms of verb morphology and auxiliary verbs. That is, one begins with the grammatical forms (morphology and free morphemes), and shows which semantic functions are realized by these forms. A second approach is to begin with semantic functions, then show how these functions are realized in morphosyntax. A third approach is to present viewpoint aspect in terms of what others have said about aspect in related languages. One problem with all three of these approaches is the absence of a clear connection between them and the framework for situation aspect presented in Chapter 2. My approach is to relate viewpoint aspect to the situation types described in the previous chapter, while at the same time not neglect the relationship between form and function.

As seen in Figure 3.1, operators can have scope over the nucleus, the core, or the clause. Viewpoint aspect is an operator which has scope over the nucleus. As a nuclear operator, it modifies the state or event without reference to the participants. Viewpoint aspect is formally expressed in both the verb morphology (§3.1) and the syntax (cf. Comrie 1976:87). Within the domain of syntax, viewpoint aspect is expressed both inside the verb phrase (§3.2) and outside the verb phrase (§3.3).

### 3.1. Viewpoint Aspect in Verb Morphology

Chapter 2 showed how situations are defined in terms of logical structures and how situation aspect is determined from the LSs and not the verb per se. LSs are designed to capture relationships between predicates and their arguments, but not the internal structure of events. That is, there are certain aspectual features which deal with the internal structure of situations that cannot be accounted for by LSs. For example, all languages have some verbs which are inherently punctual (e.g. to crack) and others which are inherently nonpunctual (e.g. to heat). In some cases, verbs have two forms, one punctual (e.g. 'take a look at') and one nonpunctual (e.g. 'look at'). LSs do not capture the distinction between punctual and nonpunctual situations. For example, in Bonggi the verbs *m-esa* (ng-pesa) 'APL-crack' and *m-anas* (ng-panas) 'APL-heat' are both
accomplishments; however, there is nothing in the LS\texttt{[do' (x)] CAUSE [BECOME predicate' (y)]}\footnote{For the time being, I gloss the imperative form \textit{peg-} as 'IMP' and nonimperative forms as 'VA' since I claim later that the nonimperative forms indicate viewpoint aspect. In the next section, I provide a semantic basis for subdividing these forms.} (where \(x=\)effector and \(y=\)patient) to capture the difference in punctuality.

This section examines the internal structure of events, specifically, the temporal nature of events. I begin in §3.1.1 by examining the \textit{peg-} group of verbs mentioned in §2.3.2.

3.1.1. Morphophonemic Contrasts within the \textit{Peg-} Group

Two groups of verbs were mentioned in §2.3 where they were referred to as the \(-m\)-group and the \textit{peg-} group. In a word, the \textit{peg-} group is complex from the perspective of either phonology, morphology, or semantics. Before discussing semantic variation within this class (cf. §3.1.2), I account for the phonological variation, as well as certain aspects of morphological variation. The analysis of Bonggi verbal morphology is complicated by numerous changes which I do not formalize here.

The \textit{peg-} group derives its name from the imperative form. Verbs in the \textit{peg-} group form imperatives by prefixing \textit{peg-} to the root, whether the root is a verb as in (3) (where \textit{peg-} is prefixed to \textit{limut} 'to slander') or a noun as in (4) (where \textit{peg-} is prefixed to \textit{uru} 'medicine'). On the other hand, verbs in the \(-m\)-group (activities) form their imperative by simply using the stripped down root (e.g. (5); cf. §2.3), and regular accomplishments form their imperative with the normal \textit{ng-} affixed form when the pivot is the actor (e.g. (6)). The form of the imperative enables us to determine to which group a particular verb belongs.

(3) \textit{Dei peg-limut diaadn}!\footnote{} do.not IMP-slander 1sACC 'Don't slander me!'

(4) \textit{Dei peg-uru nya}! do.not IMP-medicine 3sACC 'Don't medicate him!'
There are two tenses in Bonggi, past and nonpast. In indicative mood, the *peg-* group has one
past tense form and two nonpast tense forms which are referred to here as full and reduced forms.

Full forms occur more frequently than reduced forms. There is a good (but not perfect) correlation
between full forms and main independent clauses and between reduced forms and dependent
clauses. Full forms are obtained by prefixing the stem-forming prefix *g-* to the root, then inflecting
the stem with the prefix *ng-* 'NPST', e.g. (7). Various morphophonemic changes conform the
final surface forms to the phonological patterns of the language. Specifically, the full form is */ŋ-/
+ */ŋ-/* Root, then:

(i) if the root begins with a vowel, no further processes occur, e.g. (8);

(ii) if the root begins with a liquid */l/ or */ɾ/, there is well-motivated vowel epenthesis between the
stem-forming prefix */ŋ-/* and the root, e.g. (7) where the epenthetic vowel */i/* is a copy of the initial
vowel in the root;

(iii) if the root begins with an obstruent (stop or fricative), delete the */ŋ-/* and assimilate the nasal
*/ŋ-/ to the point of articulation of the initial obstruent of the root, e.g. (9) and (10).

(7) Sia ng-gi-limut (ng-g-limut) diaadn.
3sNOM NPST-VA-slander 1sACC
'SHE slanders me.'

(8) Sia ng-g-imbakng (ng-g-imbakng) anak na.
3sNOM NPST-VA-forbid child DEF
'SHE is forbidding her child.'

---

3Here *ng-* refers to a nonpast tense marker. It is a different morpheme than *ng-* 'APL' (cf. §2.4).
*ng-* 'NPST' is inflectional, whereas *ng-* 'APL' is derivational. I have chosen *ng-* as the
representative or underlying form for 'NPST' as */ŋ/* occurs more frequently than the other
allomorphs */n/* or */m/* (cf. (18)). However, in §3.1.3 I show how *meg-* can be analyzed as two
morphemes *m-* and *g-* and I draw parallels between *m-* + *g-* and *ng-* + *g-*. This suggest the
underlying form for 'NPST' is */m/*.
Reduced forms of the peg-group are obtained by simply prefixing /g/- to the root with much the same morphophonemic changes as before. Specifically, they are:

(i) if the root begins with a vowel, no further processes occur, e.g. (11) (cf. (8));
(ii) if the root begins with a liquid /l/ or /r/, there is again well-motivated vowel epenthesis as before, e.g. (12) (cf. (7));
(iii) if the root begins with /g/, there is no reduced form;
(iv) if the root begins with an obstruent, you add an initial /i/ because the word initial cluster #/g/ + obstruent is a deviant sequence in Bonggi, e.g. (13) (cf. (9)).

To arrive at the past tense forms of verbs in the peg-group:

prefix /i/- to the stem if it begins with /g/, e.g. (14) and (15) (cf. (10), (7), and (12));

prefix /n/- to the stem if it does not begin with /g/, e.g. (16) (cf. (9) and (13)).

---

4 The underlying form for past tense is in-. 
To arrive at the imperative forms of verbs in the *peg-* group:

- prefix /pa-/ to the root if the root begins with /g/, e.g. (17) (cf. (10) and (14));
- prefix /pag-/ to the root if the root does not begin with /g/, e.g. (3) (cf. (7) and (12)).

Further evidence of these morphophonemic changes is provided in (18), where I have included full-forms, reduced-forms, past tense forms, and imperative forms. All of the verbs in (18) are derived from verb roots.

<table>
<thead>
<tr>
<th>(18) ROOT</th>
<th>GLOSS</th>
<th>FULL FORM</th>
<th>REDUCED FORM</th>
<th>PAST TENSE</th>
<th>IMPERATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>adak</td>
<td>smell</td>
<td>ng-g-adak</td>
<td>g-adak</td>
<td>i-g-adak</td>
<td>peg-adak</td>
</tr>
<tr>
<td>ahal</td>
<td>trick/cheat</td>
<td>ng-g-ahal</td>
<td>g-ahal</td>
<td>i-g-ahal</td>
<td>peg-ahal</td>
</tr>
<tr>
<td>ahut</td>
<td>shuttle</td>
<td>ng-g-ahut</td>
<td>g-ahut</td>
<td>i-g-ahut</td>
<td>peg-ahut</td>
</tr>
<tr>
<td>ait</td>
<td>wait</td>
<td>ng-g-ait</td>
<td>g-ait</td>
<td>i-g-ait</td>
<td>peg-ait</td>
</tr>
<tr>
<td>isik</td>
<td>shake</td>
<td>ng-g-isik</td>
<td>g-isik</td>
<td>i-g-isik</td>
<td>peg-isik</td>
</tr>
<tr>
<td>it</td>
<td>bring</td>
<td>ng-g-it</td>
<td>g-it</td>
<td>i-g-it</td>
<td>peg-it</td>
</tr>
<tr>
<td>imbakng</td>
<td>deny permission</td>
<td>ng-g-imbakng</td>
<td>g-imbakng</td>
<td>i-g-imbakng</td>
<td>peg-imbakng</td>
</tr>
<tr>
<td>ubu</td>
<td>laugh</td>
<td>ng-g-ubu</td>
<td>g-ubu</td>
<td>i-g-ubu</td>
<td>peg-ubu</td>
</tr>
<tr>
<td>lebas</td>
<td>strip</td>
<td>ng-g-lebas</td>
<td>g-lebas</td>
<td>i-g-lebas</td>
<td>peg-lebas</td>
</tr>
<tr>
<td>libag</td>
<td>make fun of</td>
<td>ng-gi-libag</td>
<td>gi-libag</td>
<td>i-gi-libag</td>
<td>peg-libag</td>
</tr>
<tr>
<td>lingas</td>
<td>play around</td>
<td>ng-gi-lingas</td>
<td>gi-lingas</td>
<td>i-gi-lingas</td>
<td>peg-lingas</td>
</tr>
<tr>
<td>linit</td>
<td>circle</td>
<td>ng-gi-lit</td>
<td>gi-liput</td>
<td>i-gi-liput</td>
<td>peg-liput</td>
</tr>
<tr>
<td>rampus</td>
<td>angry</td>
<td>ng-gi-rampus</td>
<td>ge-rampus</td>
<td>i-gi-rampus</td>
<td>peg-rampus</td>
</tr>
<tr>
<td>ramu</td>
<td>have intercourse</td>
<td>ng-gi-ramu</td>
<td>ge-ramu</td>
<td>i-gi-ramu</td>
<td>peg-ramu</td>
</tr>
<tr>
<td>seidn</td>
<td>change clothes</td>
<td>n-seidn</td>
<td>ig-seidn</td>
<td>n-gi-seidn</td>
<td>peg-seidn</td>
</tr>
<tr>
<td>siliu</td>
<td>exchange things</td>
<td>n-siliu</td>
<td>ig-siliu</td>
<td>n-gi-siliu</td>
<td>peg-siliu</td>
</tr>
<tr>
<td>suruadn</td>
<td>arrange marriage</td>
<td>n-suruadn</td>
<td>ig-suruadn</td>
<td>n-gi-suruadn</td>
<td>peg-suruadn</td>
</tr>
<tr>
<td>tatang</td>
<td>look after</td>
<td>n-tatang</td>
<td>ig-tatang</td>
<td>n-gi-tatang</td>
<td>peg-tatang</td>
</tr>
<tr>
<td>timung</td>
<td>gather together</td>
<td>n-timung</td>
<td>ig-timung</td>
<td>n-gi-timung</td>
<td>peg-timung</td>
</tr>
<tr>
<td>bagi</td>
<td>divide</td>
<td>m-bagi</td>
<td>ig-bagi</td>
<td>n-gi-bagi</td>
<td>peg-bagi</td>
</tr>
<tr>
<td>bali</td>
<td>play</td>
<td>m-bali</td>
<td>ig-bali</td>
<td>n-gi-bali</td>
<td>peg-bali</td>
</tr>
<tr>
<td>buat</td>
<td>make</td>
<td>m-buat</td>
<td>ig-buat</td>
<td>n-gi-buat</td>
<td>peg-buat</td>
</tr>
<tr>
<td>buunu'</td>
<td>fight</td>
<td>m-bunu'</td>
<td>ig-bunu'</td>
<td>n-gi-bunu'</td>
<td>peg-bunu'</td>
</tr>
<tr>
<td>pihir</td>
<td>think</td>
<td>m-pihir</td>
<td>ig-pihir</td>
<td>n-gi-pihir</td>
<td>peg-pihir</td>
</tr>
<tr>
<td>kogis</td>
<td>scrape teeth</td>
<td>ng-kogis</td>
<td>ig-kogis</td>
<td>n-gi-kogis</td>
<td>peg-kogis</td>
</tr>
<tr>
<td>ganad</td>
<td>study</td>
<td>ng-ganad</td>
<td>i-ganad</td>
<td>pe-ganad</td>
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</tr>
<tr>
<td>giras</td>
<td>wail</td>
<td>ng-giras</td>
<td>i-giras</td>
<td>pe-giras</td>
<td></td>
</tr>
<tr>
<td>gokuk</td>
<td>pester</td>
<td>ng-gokuk</td>
<td>i-gokuk</td>
<td>pe-gokuk</td>
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</tr>
</tbody>
</table>
Verbs in the *peg-* group can also be derived from noun roots. These include: 1) things that people wear like *baju* 'shirt', e.g. (19); 2) interpersonal relationships like *pangan* 'friend', e.g. (20); and other nouns, e.g. *api* 'fire' as in (21).

(19) *Sia m-baju*'(ng-g-baju').
3sNOM NPST.VA-shirt
'HE is putting on a shirt.'

(20) *Sia m-pangan (ng-g-pangan) diaadn.*
3sNOM NPST.VA-friend IsACC
'SHE befriends me.'

(21) *Sia pandi ng-g-api (ng-g-api).*
3sNOM know NPST-VA-fire
'SHE knows how to cook.'

All verbs in the *peg-* group are prefixed with *peg-* in imperative mood, including those derived from noun roots, e.g. (4) and (22) (cf. (19)).

(22) *Dei peg-baju'*
do.not IMP-shirt
'Don't put on a shirt!

Other verbs in the *peg-* group that are derived from noun roots are shown in (23), where I have included full-forms, reduced-forms, past tense, imperatives, and glosses for both the roots and derived verbs (cf. (18)).

<table>
<thead>
<tr>
<th>ROOT</th>
<th>GLOSS</th>
<th>FULL FORM</th>
<th>GLOSS</th>
<th>REDUCED FORM</th>
<th>PAST TENSE</th>
<th>IMPERATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>anak</td>
<td>child</td>
<td>ng-g-anak</td>
<td>give birth</td>
<td>g-anak</td>
<td>i-g-anak</td>
<td>peg-anak</td>
</tr>
<tr>
<td>ama'</td>
<td>father</td>
<td>ng-g-ama'</td>
<td>call father</td>
<td>g-ama'</td>
<td>i-g-ama'</td>
<td>peg-ama'</td>
</tr>
<tr>
<td>api</td>
<td>fire</td>
<td>ng-g-api</td>
<td>cook</td>
<td>g-api</td>
<td>i-g-api</td>
<td>peg-api</td>
</tr>
<tr>
<td>apu'</td>
<td>grandfather</td>
<td>ng-g-apu'</td>
<td>call</td>
<td>g-apu'</td>
<td>i-g-apu'</td>
<td>peg-apu'</td>
</tr>
<tr>
<td>indu'</td>
<td>mother</td>
<td>ng-g-indu'</td>
<td>call</td>
<td>g-indu'</td>
<td>i-g-indu'</td>
<td>peg-indu'</td>
</tr>
<tr>
<td>odu'</td>
<td>grandmother</td>
<td>ng-g-odu'</td>
<td>call</td>
<td>g-odu'</td>
<td>i-g-odu'</td>
<td>peg-odu'</td>
</tr>
<tr>
<td>langu'</td>
<td>sibling-in-law</td>
<td>ng-ge-langu'</td>
<td>call</td>
<td>ge-langu'</td>
<td>i-ge-langu'</td>
<td>peg-langu'</td>
</tr>
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<td>grave</td>
<td>ng-ge-lobokng</td>
<td>bury</td>
<td>ge-lobokng</td>
<td>i-ge-lobokng</td>
<td>peg-lobokng</td>
</tr>
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<td>tobacco</td>
<td>n-sigup</td>
<td>smoke</td>
<td>ig-sigup</td>
<td>n-ig-sigup</td>
<td>peg-sigup</td>
</tr>
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<td>slippers</td>
<td>n-silipar</td>
<td>put on</td>
<td>ig-silipar</td>
<td>n-ig-silipar</td>
<td>peg-silipar</td>
</tr>
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<td>pants</td>
<td>n-suruar</td>
<td>put on</td>
<td>ig-suruar</td>
<td>n-ig-suruar</td>
<td>peg-suruar</td>
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<td>tondukng</td>
<td>head covering</td>
<td>n-tondukng</td>
<td>put on head covering</td>
<td>ig-tondukng</td>
<td>n-ig-tondukng</td>
<td>peg-tondukng</td>
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<tr>
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<td>watch</td>
<td>n-jaabm</td>
<td>spend time with</td>
<td>ig-jaabm</td>
<td>n-ig-jaabm</td>
<td>peg-jaabm</td>
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<td>shirt</td>
<td>m-baju'</td>
<td>put on shirt</td>
<td>ig-baju'</td>
<td>n-ig-baju'</td>
<td>peg-baju'</td>
</tr>
<tr>
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<td>co-sibling-in-law</td>
<td>m-biras</td>
<td>call co-sibling-in-law</td>
<td>ig-biras</td>
<td>n-ig-biras</td>
<td>peg-biras</td>
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<tr>
<td>boros</td>
<td>noise</td>
<td>m-boros</td>
<td>make noise</td>
<td>ig-boros</td>
<td>n-ig-boros</td>
<td>peg-boros</td>
</tr>
<tr>
<td>bua'</td>
<td>fruit</td>
<td>m-bua'</td>
<td>bear fruit</td>
<td>ig-bua'</td>
<td>n-ig-bua'</td>
<td>peg-bua'</td>
</tr>
<tr>
<td>pangan</td>
<td>friend</td>
<td>m-pangan</td>
<td>befriend</td>
<td>ig-pangan</td>
<td>n-ig-pangan</td>
<td>peg-pangan</td>
</tr>
<tr>
<td>pusud</td>
<td>sibling</td>
<td>m-pusud</td>
<td>call sibling</td>
<td>ig-pusud</td>
<td>n-ig-pusud</td>
<td>peg-pusud</td>
</tr>
<tr>
<td>kapak</td>
<td>song</td>
<td>ng-kapak</td>
<td>sing</td>
<td>ig-kapak</td>
<td>n-ig-kapak</td>
<td>peg-kapak</td>
</tr>
<tr>
<td>kasut</td>
<td>shoes</td>
<td>ng-kasut</td>
<td>put on shoes</td>
<td>ig-kasut</td>
<td>n-ig-kasut</td>
<td>peg-kasut</td>
</tr>
<tr>
<td>kerai</td>
<td>work</td>
<td>ng-kerai</td>
<td>to work</td>
<td>ig-kerai</td>
<td>n-ig-kerai</td>
<td>peg-kerai</td>
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<td>uncle</td>
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<td>call uncle</td>
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<td>peg-kuman</td>
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<tr>
<td>ganggu'</td>
<td>jew's harp</td>
<td>ng-ganggu'</td>
<td>play jew's harp</td>
<td>i-ganggu'</td>
<td>pe-ganggu'</td>
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<td>replacement</td>
<td>ng-ganti</td>
<td>replace</td>
<td>i-ganti</td>
<td>pe-ganti</td>
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<tr>
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<td>sarung</td>
<td>ng-geisikng</td>
<td>put on sarung</td>
<td>i-geisikng</td>
<td>pe-geisikng</td>
<td></td>
</tr>
<tr>
<td>guai</td>
<td>lover</td>
<td>ng-guai</td>
<td>call lover</td>
<td>i-guai</td>
<td>pe-guai</td>
<td></td>
</tr>
</tbody>
</table>

Before addressing the semantic structure of the peg-group, I return briefly to the the difference between full and reduced forms. Although there are only two tense distinctions (nonpast and past), there is a three-way surface contrast in indicative mood. For example, the root limut 'slander' has three forms: ng-gi-limut as in (7), gi-limut as in (12), and i-gi-limut as in (15). A similar three-way contrast exists with causative p- and modal k-. For example, the root loub 'face down' can occur with both of these affixes, in which case there is a three-way contrast in indicative mood between actor-pivot forms: m-pe-loub 'cause to be face down', pe-loub, and i-pe-loub; and ng-ke-loub 'fall face down', ke-loub, and i-ke-loub.

In each of these three cases, past tense is marked as i-: i-gi-limut, i-pe-loub, and i-ke-loub. Full forms are marked by a homorganic nasal preceding the stem forming morpheme (g-, p-, or k-): ng-gi-limut, m-pe-loub, and ng-ke-loub. Reduced forms have neither a preceding nasal, nor a preceding past-tense marker: gi-limut, pe-loub, and ke-loub. Although this suggests that the homorganic nasal in the full forms is a present tense marker, such an analysis is a gross oversimplification of a complex problem. Even though full forms occur much more frequently
than reduced forms, knowing when to use one versus the other remains somewhat of a mystery to me.

3.1.2. Semantic Structure of the Peg- Group

One feature shared by all verbs in the g-/peg- group is that the clause pivot is always the actor. This means that verbs in this group must be either activities or accomplishments since states and achievements do not have actor pivots. As I show below, some verbs in the g-/peg- group are activities and others are accomplishments.

The verbs in the g-/peg- group have different meanings which show a family resemblance to each other. This section examines the different types of meanings associated with verbs from the g-/peg- group.

§2.3.1 showed how motion activity verbs occur in two types of clauses: motion activity clauses and motion accomplishment clauses. The only difference between these two types of clauses has to do with the presence or absence of a locative argument. Motion accomplishment clauses have a locative argument, but motion activity clauses do not. Therefore, motion activity clauses are simpler in terms of their LS and, in some instances, the number of core syntactic arguments. Motion activity clauses have one argument in their LS and one core syntactic argument. The motion activity verb m-apit 'ACY-stop.by' is representative of motion verbs in the -m- group. It is illustrated in (24), with a summary analysis provided in (25).

(24) Sia nda' m-apit (-m-apit).
    3sNOM not ACY-stop.by
    'HE does not stop by.'

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6In some instances, the locative argument in accomplishment clauses occurs as a noncore oblique argument.
(25) a. LS for motion activities: do' (x, [predicate' (x)])
   x=effector-theme
b. Clause-specific LS for (24): do' (sia 'he', [apit 'stop by' (sia 'he')])
c. Assign thematic relations: sia 'he' ← effector-theme
d. Assign semantic macroroles: actor ← effector-theme 1 Macrorole
e. Assign syntactic functions: pivot ← actor-sia 'he'
f. Assign case and prepositions: pivot-sia 'he' ← nominative case
g. Cross-reference verb: apit 'stop by' ← -m- 'ACY'

The general LS for one-place motion activity verbs is shown in (25a). The single argument 'x' of one-place motion activity predicates is an effector-theme which is both the actor and syntactic pivot.\(^7\) Motion verbs in the -m- group are cross-referenced by -m-, and involve one-way motion along a single trajectory, e.g. m-apit 'ACY-stop by' in (24).

The verb ng-g-isik 'NPST-IT-shake' (e.g. (26)) is representative of one-place motion activity verbs from the g-/peg- group. These verbs have the same LS as that shown in (25a). The difference between (24) and (26) is that (26) has an iterative aspectual operator with a concomitant contrast in verbal cross-referencing (i.e. g- instead of -m-).\(^8\)

(26) Sia nda' ng-g-isik (ng-g-isik).  
3sNOM not NPST-IT-shake  
'HE is not shaking.'

Motion activity verbs which are marked by g- (or peg-) have an iterative meaning. The verb nggisik means 'to shake' or 'to tremble' and refers to back-and-forth motion.\(^9\) Whereas verbs in the

---

\(^7\) Cf. §2.3.1 for further details.

\(^8\) As stated at the beginning of this chapter, aspectual operators have scope over the nucleus which contains the predicate. The presence of the negator nda' 'not' (e.g. (24) and (26)) does not effect the marking of aspect.

\(^9\) Although ng-g-isik 'NPST-IT-shake' is a one-place motion activity verb, it can occur in clauses with two core syntactic arguments as in (i), where the second argument is a locative adjunct. (i) involves possessor ascension. The corresponding clause without possessor ascension is shown in (ii). The interesting point here is that possessor ascension has been reported to be possible only if the possessed argument is an undergoer; in this case, it is an actor (cf. Van Valin 1990:251; cf. also §2.1.3).

(i) Sia ng-g-isik (ng-g-isik) onsi.  
3sNOM NPST-IT-shake flesh  
'HE is shivering.'

(ii) Ng-g-isik (ng-g-isik) onsi nya.  
NPST-IT-shake flesh 3sGEN  
'HE is shivering.'
-m- group refer to a single situation, many verbs in the g-/peg- group refer to successive occurrences of a given situation. In the case of motion verbs, this translates into either successive motion back-and-forth along a single trajectory or, in some cases, possibly successive stages along a trajectory (cf. (34)). The exact interpretation is contingent upon the semantics of the root.

As stated above and described in §2.3.1, motion verbs from the -m- group can occur in motion accomplishment clauses. Thus, if we take the verb m-apit 'ACY-stop by' in (24) and add a locative argument, the result is a motion accomplishment clause (e.g. (27)) with its accompanying LS (i.e. (29a)). Similarly, some verbs in the g-/peg- group can occur with a locative argument resulting in motion accomplishment clauses. For example, the verb ng-ge-lobokng 'NPST-IT-bury' can have a locative argument resulting in a motion accomplishment clause (e.g. (28)) which has the same LS as (27) (i.e. (29a)).

(27) Sia nda' m-apit (-m-apit) dii bali mi.
    3sNOM not ACY-stop by at house IpexcGEN
    'HE does not stop by our house.'

(28) Lori na ng-ge-lobokng (ng-g-lobong) dii sodi bali mi.\(^{10}\)
    truck DEF NPST-IT-bury at beside house IpexcGEN
    'THE TRUCK buried itself beside our house.'
    [Implied: It got stuck, burying itself in the mud.]

(29) a. LS for motion accomplishments: [do'(x)] CAUSE [BECOME be-at' (y,x)]
    x=effector-theme, y=locative-goal

b. LS for (27): [apit 'stop by' (sia 'he')] CAUSE
    [BECOME dii 'at' (bali mi 'our house', sia 'he')]  

c. LS for (28): [lobokng 'bury' (lori na 'the truck')] CAUSE
    [BECOME dii sodi 'beside' (bali mi 'our house', lori na 'the truck')]

Goal-oriented motion accomplishments have the same LS (i.e. (29a)), regardless of whether they are from the -m- group (e.g. (27)) or the g-/peg- group (e.g. (28)). The difference between (27) and (28) is that (28) has an iterative aspectual operator with a concomitant contrast in verbal cross-referencing (i.e. g- instead of -m-).

\(^{10}\)An epenthetic vowel is inserted between the prefix and the verb root to avoid impermissible syllable structures.
The verb *m-apit 'ACY-stop.by'* in (27) involves a solitary event on a single trajectory; its clause-specific LS is shown in (29b). The verb *ng-ge-lobokng 'NPST-IT-bury'* in (28) involves successive motion in which the driver of a truck rocks the truck back-and-forth resulting in the truck burying itself in the mud; its clause-specific LS is shown in (29c). Both verbs are motion accomplishments involving an effector-theme and a location.

There is an interesting contrast between the motion accomplishment verb *ng-ge-lobokng 'NPST-IT-bury'* in (28) and the regular accomplishment *nge-lobokng 'APL-bury'* in (30). The general LS for (30) is shown in (31a), the clause-specific LS in (31b). Whereas effector and theme are coreferential with motion accomplishment verbs (e.g. *mapit* in (27) and *nggelobokng* in (28); cf. (29a)), they are distinct arguments with regular accomplishments whose ψ portion contains an abstract locative predicate, *be-at' (x, y)*; e.g. *ngelobokng* in (30) (cf. (31a) and discussion in §2.4).

(30) *Sia nge-lobokng (ng-lobokng) banggi na.*
    3sNOM APL-bury corpse DEF

'HE is burying the corpse.'

(31) a. LS for regular accomplishments: [do' (x)] CAUSE [BECOME be-at' (y,z)]
    x=effector, y=locative-goal, z=theme

b. LS for (30): [do' (sia 'he')] CAUSE [BECOME be-at' (Ø, banggi na 'the corpse')]

From (26) and (28), one might conclude that *g-* only occurs with activity verbs in either activity clauses or motion accomplishment clauses (cf. §2.3.1). Although such a conclusion accounts for a large number of *g-* marked verbs, there are other *g-* marked verbs which are not activities. The verb *ng-g-ahut 'NPST-IT-shuttle'* (e.g. (32)) involves motion and belongs to the *g-/peg-* group.

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11 There are very few vehicles on Banggi Island and no paved roads. During the rainy season, it is inevitable that vehicles bury themselves in the mud.

12 Boutin (1991a:9f.) wrongly concluded that all *g-* marked verbs are activities. The failure to recognize different subtypes of *g-* marked verbs arose from focusing on the surface morphology and failing to construct LSs which reveal important semantic differences.
(32) Sia ng-g-ahut (ng-g-ahut) piasu.
3sNOM NPST-IT-shuttle coconut
'HE is shuttling coconut.' (Implied: He repeatedly carries bags of coconut copra
someplace near the river.)

The LS for (32) is provided in (33). In motion accomplishments, the effector and the theme
are the same argument (cf. (29a)). However, these two thematic roles are split between two
arguments in regular accomplishments whose $\psi$ portion contains an abstract locative predicate (cf.
(31a), (33a)).

(33) a. LS for regular
accomplishments:  
\[ \text{[do'(x)] CAUSE [BECOME be-at'} (y,z)] \]
\[ x=\text{effector}, y=\text{locative-goal}, z=\text{theme} \]
b. LS for (32):  
\[ \text{[do'(sia 'he')] CAUSE [BECOME be-at'} (\emptyset, piasu 'coconut'))\]

The verb ng-g-ahut 'NPST-IT-shuttle' is an iterative accomplishment verb. It refers to a
situation in which a person (the effector) makes multiple trips between two points in order to
transport goods (the theme) from one point to another point. The movement of goods by a person
makes the verb an accomplishment, whereas the multiple trips supplies the iterative component.
Thus, $g$- can occur in motion activity clauses (e.g. (26)), motion accomplishment clauses (e.g.
(28)), and iterative accomplishment clauses (e.g. (32)). (26), (28), and (32) all share the feature of
iterative movement. In (26) and (28), the effector-theme is relatively stationary, but moves back-
and-forth; in (32) the effector moves different themes multiple times from one point to another.

Another accomplishment verb which involves movement is the verb nggit 'bring/take/carry'
(e.g. (34)). This verb refers to a situation in which an effector makes a single trip between two
points which are some distance apart. The effector either takes another person (a theme) along
with him or carries something (a theme) with him on the trip. Direction can be either away from
the speaker (the 'take' interpretation) or toward the speaker (the 'bring' interpretation).

(34) Eisi ng-g-it (ng-g-it) kiou?
who NPST-VA-carry wood
'WHO is carrying wood?'

The LS for (34) is the same as the general LS for ng-g-ahut 'NPST-IT-shuttle' provided in
(33a). Nggit lacks the iterative interpretation described for other $g$- marked motion verbs. Perhaps
an iterative interpretation is still valid for nggit, if the event is viewed as a series of successive
stages along a trajectory. Although nggii is a poor exemplar of iterativity, it is unproblematic for the prototype analysis presented here.

The next set of g- marked verbs do not involve motion. The verb ng-g-adak
'NPST-VA-kiss/smell' is representative of this group, e.g. (35). The general LS for (35) is shown in (36a), the clause-specific LS in (36b). As seen in (36), these are accomplishments whose ψ portion contains a two-place abstract predicate, predicate'(x,y).

(35) Nda' kaap ng-g-adak pusud, sumbakng.
not able NPST-VA-kiss sibling, incest
'PEOPLE cannot kiss their sibling; it is incest.'

(36) a. LS for accomplishments where
ψ = BECOME predicate'(x,y): [do'(x)] CAUSE [BECOME predicate'(x,y)]
b. LS for (35):
[do'(Ø)] CAUSE
[BECOME adak 'smell'(Ø, pusud 'sibling')]

Verbs such as nggadak 'kiss' in (35) occur in two-argument clauses. The second argument is either unaffected or only partially affected. It is very different from a patient. §2.1.5 pointed out that the LS for all states can be generalized as either predicate'(x) or predicate'(x,y). Patient was defined as the argument in the LS configuration predicate'(x).

The first group of accomplishments described in §2.4 were accomplishments whose ψ portion includes the LS configuration predicate'(x). Their LS is: [do'(x)] CAUSE [BECOME predicate'(y)]. This turns out to be the LS for prototypical accomplishments which involve both a controlling agent and an affected patient. All prototypical accomplishment verbs take ng- as the actor-pivot form and not g-. g- marked verbs fall somewhere between prototypical accomplishments and prototypical activities.

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13 Kissing in Bonggi means touching with the nose, not the lips, which accounts for the two senses of the root adak.

14 The pivot is unspecified in the Bonggi. This is seen in the clause-specific LS in (36b), where the effector argument is unspecified, being filled by "Ø". 'People' and 'their' are used in the English free translation, although generic 'you' would also be appropriate.
The second argument of the verb *ng-g-ahut* 'NPST-IT-shuttle' in (32) is a theme which undergoes a change in location (cf. the LS in (33)). Theme was defined in §2.1.5 as the second argument in the LS configuration *predicate* '(x,y). Given this definition, the second argument 'y' of the LS in (36a) is also a theme. The theme in (33a) is different from the theme in (36a) in that the former involves movement (change of location), but the latter does not. This movement results from 'y' being an argument of the abstract locative predicate *be-at* in (33a), whereas the absence of movement results from 'y' being an argument of the nonlocative predicate, *predicate* in (36a). In neither case is the second argument affected like a patient.

Having concluded that (i) some *g*-marked verbs are accomplishments whose *ψ* portion contains the two-place abstract predicate, *predicate* '(x,y); and (ii) the second argument 'y' is a theme, a question might arise as to the nature of 'x' in the *ψ* portion. According to Table 2.7, 'x' is either an experiencer or a locative. If a thematic role is assigned to 'x', experiencer is the best fit. Thus, with these *g*-marked verbs, 'x' in (36a) is construed as an effector-experiencer.

Besides *nggadak* 'kiss' in (35), other *g*-marked accomplishments with the LS in (36a) are shown in (37) with their full-form (cf. (18)). The second argument of these verbs is unaffected in that it neither undergoes a change in state like a patient nor does it undergo a change in location like a theme in accomplishments with an abstract locative predicate. The verbs in (37) neither involve motion nor make reference to multiple events. These events imply duration over an interval of time.

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15Cf. Kroeger's (1988a:224) explanation for certain verbs in Kimaragang which have two arguments, with the second argument not being "a true patient."

16Cf. the discussion of experiencer and emotional states following Table 2.7. See also the discussion of thematic roles as mnemonics in §2.
The next set of g-/peg- marked verbs to be discussed is a small subset of the motion activity verbs described in the beginning of this section. Most motion activities are either -m- marked like m-apit 'ACY-stop.by' in (24) or g- marked like ng-g-isik 'NPST-IT-shake' in (26). As a general rule, there is no overlap; g-/peg- and -m-/0 are in complementary distribution with activity verbs taking one or the other, but not both.17 Motion activity verbs which are inherently iterative are g-marked (e.g. (26)); those which are noniterative are -m- marked (e.g. (24)). Noniterative (-m-marked) events cannot simply be marked with g- giving them an iterative meaning. In order to supply an iterative meaning to a noniterative verb such as m-apit 'ACY-stop.by', you must both reduplicate the root and add an iterative prefix such as g-, e.g. (38).18

(38) Ihi nda' na ng-g-apit-apit.
Ipr recNOM not PRF NPST-IT-stop.by-stop.by
'WE didn't keep stopping by people's places along the way.'

Posture verbs are somewhat of an exception to the general marking principles stated above. Posture verbs in Bonggi are generally lexicalized as 'getting-into-a-posture'.19 That is, Bonggi posture verbs like m-upug 'ACY-sit' (e.g. (39)) and m-usag 'ACY-stand' refer to 'getting-into-a-

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17g- and -m- occur in declarative mood; peg- and Ø are the corresponding imperative mood forms with Ø meaning the absence of an overt marker and not a zero morpheme.

18An iterative prefix is defined as a stem-forming prefix from the g-/peg- group; specifically, either g- or peg-. Reduplication with the noniterative -m- is normally ungrammatical. Thus, *m-apit-apit is ungrammatical. Details regarding reduplication are discussed later in this section.

19According to Talmy (1985:86) English verbs of posture are lexicalized as 'being-in-a-posture'. That is, English verbs like sit and stand normally refer to 'being-in-a-posture' and the verb must be augmented (e.g. sit down, stand up) to indicate 'getting-into-a-posture'. Cf. Talmy (1985:85ff.) for a detailed discussion of this phenomenon in different languages. Dowty (1979) and Van Valin (1990:228) treat English verbs of posture as agentive states.
posture'; a 'being-in-a-posture' meaning is obtained by prefixing g- to the root, e.g. g-upug 'VA-sitting' in (40) and g-usag 'VA-standing'.20

(39) Nggien ku m-upug (-m-upug)?
where 1sGEN ACY-sit
'Where do I sit down?'

(40) Nggien nu g-upug (g-upug)?
where 2sGEN VA-sit
'Where are you sitting?'

The 'being-in-a-posture' forms (e.g. (40)) are obtained via the reduced form /g-/ which was described in §3.1.1. However, like other -m- marked activity verbs (e.g. m-apit 'ACY-stop.by'),
the full form /ŋ-/ + /g-/ does not occur. That is, *nggupug and *nggusag are ungrammatical.
Also, like other -m- marked activity verbs, an iterative meaning can be supplied by reduplicating
the root and adding the iterative prefix g-, e.g. (41). The iterative meaning in (41) refers to
'getting-into-a-posture', not 'being-in-a-posture'.

(41) Nggien nu ng-g-upug-upug?
where 2sGEN NPST-IT-sit-sit
'Where do you keep sitting down?'

When posture verbs of the 'getting-into-a-posture' type occur in imperative mood (e.g. (42)),
they are unaffixed just like other -m- marked activity verbs (cf. (5)). Similarly, when posture verbs

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20A third possibility with posture verbs refers to 'putting-into-a-posture' which is obtained by
prefixing the causative p- to the root, e.g. p-upug 'sit someone down', p-usag 'stand someone up'
(cf. §2.4 for a discussion of causatives). Of the three forms, mupug 'sit.down', gupug 'sitting', and
pugug 'sit someone down', mupug is unmarked in terms of frequency. Of these three terms, mupug
is the one that my wife and I acquired first. Furthermore, I believe it is acquired first by native
speakers, but I do not have data to support this claim.

21For the most part, I have stayed with declarative and imperative clauses to illustrate Bonggi,
thereby avoiding interrogative clauses. This has been intentional since interrogatives introduce a
number of complexities. The WH-word nggien 'where' in (39) is the focus of the question. "The
focus of an utterance is the part that is asserted in a declarative utterance or questioned in an
interrogative utterance" (VV 1993:23). The syntactic pivot in (39) is the actor-effector ku, not the
locative question word nggien 'where'. Although one would expect the pivot pronoun to occur in
the nominative case (i.e. ou '1sNOM'), instead, it occurs in the genitive case (i.e. ku '1sGEN'; cf.
Table 1.2 for Bonggi pronouns). Some WH-words (e.g. eisi 'who' (cf. (34)) and onu 'what') refer
to core arguments and function as the syntactic pivot. Other WH-words (e.g. nggien 'where', mipa
'when', and punggga 'how') refer to adjuncts (location, time, and manner) and do not function as the
syntactic pivot. In the latter case, pivots occur in the genitive case (e.g (39), (40)).
of the 'being-in-a-posture' type occur in imperative mood (e.g. (44)), they are prefixed by peg- (cf. (3), (4)). Finally, when iterative posture verbs occur in imperative mood (e.g. (44)), they refer to 'getting-into-a-posture', not 'being-in-a-posture' (cf. (41)).

(42) *Dei upug dioo!*  
    do.not sit over.there  
    'Don't sit down over there!'

(43) *Dei peg-upug!*  
    do.not IMP-sit  
    'Don't stay seated!'

(44) *Dei peg-upug-upug!*  
    where IMP-sit-sit  
    'Don't keep sitting down!'

In the absence of language acquisition evidence (cf. footnote 20), I take the following to be evidence for 'getting-into-a-posture' as the primary lexicalization for posture verbs in Bonggi: (i) a much greater frequency of 'getting-into-a-posture' forms over 'being-in-a-posture' forms, and (ii) iterative posture verbs always refer to 'getting-into-a-posture'. Posture verbs which can occur with /g-/ supplying a 'being-in-a-posture' meaning are shown in (45) with *g-ogot* 'hold' being illustrated in (46).

<table>
<thead>
<tr>
<th>Root</th>
<th>Gloss</th>
<th>Getting-into-a-posture</th>
<th>Being-in-a-posture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Indicative</td>
<td>Imperative</td>
</tr>
<tr>
<td>usag</td>
<td>stand up</td>
<td>m-usag</td>
<td>usag</td>
</tr>
<tr>
<td>upug</td>
<td>sit down</td>
<td>m-upug</td>
<td>upug</td>
</tr>
<tr>
<td>ilakng</td>
<td>lie down</td>
<td>m-ilakng</td>
<td>ilakng</td>
</tr>
<tr>
<td>ogot</td>
<td>hold</td>
<td>m-ogot</td>
<td>ogot</td>
</tr>
</tbody>
</table>

(46) *Kahal a  g-ogot ny eili*?
    still 2sNOM VA-hold NPIV boy  
    'Are YOU still holding the boy?'
Although the term 'being-in-a-posture' suggests that the g- marked verbs in (45) are stative, they are activities and not states. I take the presence of imperative forms occurring with 'being-in-a-posture' verbs as evidence for their being activities and not states. I also take the use of g-/peg-group forms, specifically g- and peg-, as further evidence for 'being-in-a-posture' type verbs to be activities.

One reason for including 'being-in-a-posture' type verbs in the g-/peg-group constellation is that they share a feature which is common to some other members of this constellation; i.e. action drawn out in time. Iterative verbs, such as ng-g-ahut 'NPST-IT-shuttle' in (32), are drawn out in time, as are noniterative motion verbs such as ng-g-it 'NPST-VA-carry/take/bring' in (34) and ng-gi-liput 'NPST-VA-circle a place by traveling'.

Bonggi has at least one g- marked posture verb which is slightly different from the verbs in (45). It is derived from the root abag 'vertical'. §2.3.1 pointed out that there is a fundamental distinction among activity verbs between those which take a volitional argument with control, and those that do not. Whereas the verbs in (45) have volitional arguments that control the activity, the motion activity verb m-abag 'flare up' in (47) is not under the control of the actor.

(47) Api ku nda' m-abag (-m-abag).
    fire lsGEN not ACY-flare.up
    'MY FIRE is not flaring up.'

Activity clauses can have an antecedent cause adjunct marked by ga" from', e.g. (48). §2.1.3 pointed out that ga" from' marks effectors (antecedent cause) which would be expected to occur as

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22Talmy (1985) uses the term 'being-in-a-state' which suggest even more that they are states. Certainly the 'being-in-a-state' type verbs are more 'stative-like' than the 'getting-into-a-posture' type.

23I assume that imperatives can only be formed with verbs that take actors (cf. VV 1993:53). In an imperative, the speaker is telling someone to do something which suggests an activity. Cf. Morreall (1978) who claims stative commands can occur with verbs such as know, forget, believe, think, and have. Michel Achard and Wayne King have suggested (personal communication) that the solution to the question of imperative statives lies in assuming an accomplishment schema for the analysis of imperatives. Some imperatives focus on the initiating activity (e.g. Listen!), others on the resultant state (e.g. Be healthy!).
actor, but do not. In (48), the antecedent cause cannot be linked to actor because the effector (api 'fire') is already linked to actor.

(48) Api m-i-abag (-in--m-abag) ga' saa hu.  
    fire ACY-PST-flare.up from spouse 1sGEN  
    'THE FIRE flared because of my wife.'

Direct cause requires an accomplishment verb as in (49). The activities in (47) and (48) cannot occur in the imperative since the activity is not under the control of the actor.24 On the other hand, accomplishments can always occur in imperative mood as in (50).

(49) Saa hu ng-abag (ng-abag) api.  
    spouse 1sGEN APL-flare.up fire  
    'MY WIFE stirs up the fire so that it flares up.'

(50) Ebag-a' (abag-a') ba!  
    stir.up-IMP.UPL EMPH  
    'Stoke IT up!' (Stoke up the fire!)

The 'being-in-a-posture' form g-abag is illustrated in (51), where the verb in the embedded clause is not under the control of the actor lampu nu 'your lamp'.

(51) Kiid ou lampu ntu kahal g-abag.  
    see IsNOM lamp 2pGEN still VA-flare.up  
    'I see YOUR LAMP is still shining.'

Before discussing reduplication, I summarize the main points which have been made thus far regarding verbs in the g-/peg- group. First, the g-/peg- group derives its name from the imperative form. Second, all verbs in the g-/peg- group are either activities or accomplishments. Third, the actor is always the pivot in these clauses. Fourth, there are two stem-forming prefixes: g- for indicative mood and peg- for imperative mood. Fifth, two inflectional prefixes can occur: ng- 'nonpast tense' (cf. §3.1.1) and in- 'past tense'. Sixth, the morphophonemic alternations associated with the stem-forming prefixes and inflectional prefixes are complex. Seventh, verbs in the g-/peg-group are derived from both verb roots and noun roots. Eighth, the members of the g-/peg-group have different meanings which show a family resemblance to each other including: (i) iterative

24Since -m- marked activity verbs form their imperative with the bare root, if there were an imperative form, it would be *abag, which does not occur.
activities; (ii) iterative accomplishments; (iii) nonprototypical accomplishments whose undergoer is unaffected (neither a patient nor a theme which undergoes a change of location); and (iv) verbs which refer to 'being-in-a-posture'. Ninth, the affixes g- and -m- are in complementary distribution with activity verbs taking one or the other, but not both, with the exception being posture verbs.

Bonggi, like many other Western Austronesian languages, employs both full reduplication and partial reduplication in its verb morphology. Full reduplication is discussed here, whereas partial reduplication is described later.

One type of full reduplication in Bonggi involves reduplication of the root and the addition of the stem-forming prefix g-/peg-. Normally, the function of this type of full reduplication is to indicate that the event described is iterative in the sense that there are multiple repetitions of the event (e.g. (38)).

Like other g-/peg- marked verbs, fully-reduplicated verbs have the following characteristics. First, they form their imperative using peg- (e.g. (44)). Second, all fully-reduplicated verbs in the g-/peg- group are either activities (e.g. (38), (41), (44)) or accomplishments (e.g. (52)).

(52) Sia ig-timbak-timbak(g-timbak-timbak) sei.  
3sNOM IT-shoot-shoot only  
'All HE does is just keep shooting and shooting.'

The third characteristic of g-/peg- marked fully-reduplicated verbs is the actor is always the pivot in these clauses. Fourth, there are two stem-forming prefixes: g- for indicative mood (e.g. (38), (41), (52)) and peg- for imperative mood (e.g. (44)). Fifth, although the two inflectional

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25The 'full reduplication' discussed here refers strictly to verb stems formed with g-/peg-, including those derived from noun roots. Other reduplicated verbs which are not prefixed with g-/peg- are excluded here as are reduplicated noun stems which have a diminutive meaning in Bonggi. The use of full reduplication to indicate repetition/iterativity is both natural and iconic (cf. Spencer 1991:224).
prefixes *ng*- 'nonpast tense' (e.g. (38), (41)) and *in*- 'past tense' can occur with fully-reduplicated verbs, the latter is extremely infrequent.\(^{26}\)

Sixth, the morphophonemic changes in the prefixes of the reduplicated forms are similar to those occurring with nonreduplicated forms (cf. §3.1.1). Specifically, the full form is /ŋ-/ + /g-/ + Root + Root, then:

(i) if the root begins with a vowel, no further processes occur, e.g. (38);
(ii) if the root begins with a consonant, delete the /ŋ-/ and add an initial /i/ because the word initial cluster #/g/ + consonant is a deviant sequence in Bonggi, e.g. (52).

Reduced reduplicated forms are obtained by simply prefixing /g-/ to the reduplicated root, then:

(i) if the root begins with a vowel, no further processes occur, e.g. the reduced reduplicated form of *apit* 'stop by' is *gapit-apit* (cf. (38));
(ii) if the root begins with /g/, there is no reduced form;
(iii) if the root begins with a consonant, add an initial /i/ because the word initial cluster #/g/ + consonant is a deviant sequence in Bonggi. Thus, for consonant-initial roots, there is no distinction between full and reduced forms; both occur as: /ig/ + Root + Root.

To arrive at the past tense reduplicated forms:

prefix /i-/ to the stem if it begins with /g/, e.g. the past tense form of *gapit-apit* is *i-gapit-apit*;
prefix /n-/ to the stem if it does not begin with /g/, e.g. the past tense form of *ig-timbak-timbak* in (52) is *n-ig-timbak-timbak*.

\(^{26}\)Reduplicated verb forms are infrequent when compared to nonreduplicated forms. In an examination of 184 pages of glossed Bonggi texts for the purpose of checking the frequency of the fully-reduplicated forms described, I found: (i) three examples of uninflected (reduced) nonpast tense (i.e. *g-*); (ii) one example of an inflected (full) nonpast tense (i.e. *ng-g-*); and (iii) no examples in which the reduplicated verb is inflected for past tense (i.e. *in-g-*). Although one can invent past tense reduplicated forms that native speakers judge as 'well-formed', finding them in recorded texts or hearing them in actual conversation is another issue.
To arrive at the imperative reduplicated forms:

prefix /pa-/ to the root if the root begins with /g/, e.g. (53);

prefix /pag-/ to the root if the root does not begin with /g/, e.g. (44).

(53) Dei pe-ganti-ganti nyal
     do.not IMP-replace-replace 3sACC
     'Don't keep replacing him!'  

The seventh characteristic of g-/peg- marked fully-reduplicated verbs is they can be derived from both verb roots (e.g. (38), (41), (44), (52), (53)) and noun roots (e.g. (54)).

(54) Sia ng-g-oid-oid.
     3sNOM NPST-IT-boat-boat
     'HE repeatedly drives a boat.'

Reduplicated verbs are derived from noun roots (e.g. (54)), -m- marked activity verbs (e.g. (38)), g- marked activity verbs (e.g. ng-g-isik-isik 'NPST-IT-shake-shake', cf. (26)), regular accomplishment verbs (e.g. (52)), or iterative accomplishment verbs (e.g. (55)).

(55) Ngg-ahut-ahut a sei ga.
     IT-shuttle-shuttle 2sNOM only CONTRAST
     'All YOU do is transport things from one place to another.'

Reduplicated forms that are derived from verb roots used to form -m- marked activity verbs are shown in (56), where I provide examples of nonreduplicated forms and reduplicated forms including full, reduced, and past tense.27

<table>
<thead>
<tr>
<th>(56) ROOT</th>
<th>GLOSS</th>
<th>NONREDUPLICATED</th>
<th>REDUPLICATED FULL-FORM</th>
<th>REDUPLICATED REDUCED-FORM</th>
<th>REDUPLICATED PAST TENSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>abat</td>
<td>answer</td>
<td>m-abat</td>
<td>ng-g-abat-abat</td>
<td>g-abat-abat</td>
<td>i-g-abat-abat</td>
</tr>
<tr>
<td>apat</td>
<td>to land</td>
<td>m-apat</td>
<td>ng-g-apat-apat</td>
<td>g-apat-apat</td>
<td>i-g-apat-apat</td>
</tr>
<tr>
<td>apit</td>
<td>stop by</td>
<td>m-apit</td>
<td>ng-g-apit-apit</td>
<td>g-apit-apit</td>
<td>i-g-apit-apit</td>
</tr>
<tr>
<td>ilakng</td>
<td>lie down</td>
<td>m-ilakng</td>
<td>ng-g-ilakng-ilakng</td>
<td>g-ilakng-ilakng</td>
<td>i-g-ilakng-ilakng</td>
</tr>
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<td>inggat</td>
<td>chew betul</td>
<td>m-inggat</td>
<td>ng-g-inggat-inggat</td>
<td>g-inggat-inggat</td>
<td>i-g-inggat-inggat</td>
</tr>
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<td>odop</td>
<td>sleep</td>
<td>m-odop</td>
<td>ng-g-odop-odop</td>
<td>g-odop-odop</td>
<td>i-g-odop-odop</td>
</tr>
<tr>
<td>ohodn</td>
<td>eat</td>
<td>m-ohodn</td>
<td>ng-g-ohodn-ohodn</td>
<td>g-ohodn-ohodn</td>
<td>i-g-ohodn-ohodn</td>
</tr>
<tr>
<td>usag</td>
<td>stand up</td>
<td>m-usag</td>
<td>ng-g-usag-usag</td>
<td>g-usag-usag</td>
<td>i-g-usag-usag</td>
</tr>
<tr>
<td>lidik</td>
<td>slash brush</td>
<td>l-im-idik</td>
<td>ig-lidik-lidik</td>
<td>ig-lidik-lidik</td>
<td>n-ig-lidik-lidik</td>
</tr>
</tbody>
</table>

27 Glosses are not provided for the reduplicated forms in (56) since their meaning is the same as that of the nonreduplicated forms with the exception of the additional iterative component. Therefore, if the nonreduplicated verb means 'X', the reduplicated form can be glossed as either 'keep on Xing' or 'repeatedly X'.


Reduplicated forms that are derived from noun roots used to form -m- marked activity verbs are shown in (57), where I provide examples of nonreduplicated forms and reduplicated forms including full, reduced, and past tense.

(57) ROOT GLOSS NONREPLICATED REDUPLICATED REDUPLICATED REDUPLICATED
      FULL-FORM REDUCED-FORM PAST TENSE

dolok  rain   d-em-olok to rain ig-dolok-dolok ig-dolok-dolok n-ig-dolok-dolok
dudug  thunder d-um-udug to thunder ig-dudug-dudug ig-dudug-dudug n-ig-dudug-dudug
dudu'  breast d-um-udu' to nurse ig-dudu'-dudu' ig-dudu'-dudu' n-ig-dudu'-dudu'
sidu   urine s-im-idu urinate ig-sidu-sidu ig-sidu-sidu n-ig-sidu-sidu
suha   vomit s-um-uhu to vomit ig-suha-suha ig-suha-suha n-ig-suha-suha
tilug  egg   t-im-tilug lay an egg ig-tilug-tilug ig-tilug-tilug n-ig-tilug-tilug
toi    feces t-em-oi defecate ig-toi-toi ig-toi-toi n-ig-toi-toi

Reduplicated forms that are derived from g- marked activity verbs are shown in (58), where I provide examples of nonreduplicated forms and reduplicated forms including full, reduced, and past tense.

(58) ROOT GLOSS NONREPLICATED REDUPLICATED REDUPLICATED REDUPLICATED REDUPLICATED
      FULL-FORM REDUCED-FORM REDUCED-FORM PAST TENSE

ahal   trick; cheat ng-g-ahal ng-g-ahal-ahal g-ahal-ahal i-g-ahal-ahal
alis   pluck eyebrows ng-g-alis ng-g-alis-alis g-alis-alis i-g-alis-alis
it     bring ng-g-it ng-g-it-it g-it-it i-g-it-it
buat   make m-buat ig-buat-buat ig-buat-buat n-ig-buat-buat
replaceto牙齿 ng-ganti ng-ganti-ganti ig-ganti-ganti i-g-ganti-ganti
kogis   ig-kogis-kogis
labu   drop anchor ng-g-ge-labu ig-labu-labu ig-labu-labu n-ig-labu-labu
pihir   think m-pihir ig-pihir-pihir ig-pihir-pihir n-ig-pihir-pihir
rampus  angry ng-g-ge-rampus ig-rampus-rampus ig-rampus-rampus n-ig-rampus-rampus
ramu   copulate ng-g-ge-ramu ig-ramu-ramu ig-ramu-ramu n-ig-ramu-ramu
seidn   change clothes n-seidn ig-seidn-seidn ig-seidn-seidn n-ig-seidn-seidn
timung  put together n-timung ig-timung-timung ig-timung-timung n-ig-timung-timung
Reduplicated forms that are derived from noun roots used to form $g$-marked activity verbs are shown in (59), where I provide examples of nonreduplicated forms and reduplicated forms including full, reduced, and past tense.

(59) ROOT GLOSS NONREDUCED REDUPLICATED REDUPLICATED REDUPLICATED REDUPLICATED FULL-FORM REDUCED-FORM FULL-FORM REDUCED-FORM PAST TENSE

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>adab</td>
<td>respect</td>
<td>ng-g-adab</td>
<td>ng-g-adab-adab</td>
<td>g-adab-adab</td>
<td>i-g-adab-adab</td>
</tr>
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<td>perfume</td>
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<td>ng-g-amut-amut</td>
<td>g-amut-amut</td>
<td>i-g-amut-amut</td>
</tr>
<tr>
<td>ibal</td>
<td>companion</td>
<td>ng-g-ibal</td>
<td>ng-g-ibal-ibal</td>
<td>g-ibal-ibal</td>
<td>i-g-ibal-ibal</td>
</tr>
<tr>
<td>oig</td>
<td>boat</td>
<td>ng-g-oig</td>
<td>ng-g-oig-oig</td>
<td>g-oig-oig</td>
<td>i-g-oig-oig</td>
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<tr>
<td>ladu</td>
<td>illness</td>
<td>ng-ge-ladu</td>
<td>ig-ladu-ladu</td>
<td>ig-ladu-ladu</td>
<td>n-ig-ladu-ladu</td>
</tr>
<tr>
<td>lobokng</td>
<td>grave</td>
<td>ng-ge-lobokng</td>
<td>ig-lobokng-lobokng</td>
<td>ig-lobokng-lobokng</td>
<td>n-ig-lobokng-lobokng</td>
</tr>
<tr>
<td>saa</td>
<td>spouse</td>
<td>ng-ge-saa</td>
<td>ig-saa-saa</td>
<td>ig-saa-saa</td>
<td>n-ig-saa-saa</td>
</tr>
<tr>
<td>nana'</td>
<td>pus</td>
<td>ig-nana'</td>
<td>ig-nana'-nana'</td>
<td>ig-nana'-nana'</td>
<td>n-ig-nana'-nana'</td>
</tr>
<tr>
<td>piukng</td>
<td>umbrella</td>
<td>m-piukng</td>
<td>ig-piukng-piukng</td>
<td>ig-piukng-piukng</td>
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<td>ig-jaabm-jaabm</td>
<td>ig-jaabm-jaabm</td>
<td>n-ig-jaabm-jaabm</td>
</tr>
<tr>
<td>tiaa'</td>
<td>dear</td>
<td>n-tiaa'</td>
<td>ig-tiaa'-tiaa'</td>
<td>ig-tiaa'-tiaa'</td>
<td>n-ig-tiaa'-tiaa'</td>
</tr>
</tbody>
</table>

There are a few nouns in Bonggi which are always reduplicated, e.g. antikng-antikng 'earring'. A verb in the $g$-/peg- group can be derived from this root, e.g. nggantikng-antikng 'to wear earrings'. However, reduplication of inherently reduplicated forms in order to produce an iterative does not occur. That is, *nggantikng-antikng-antikng-antikng 'to repeatedly wear earrings' is ungrammatical.

In Bonggi verb morphology, the primary function of full reduplication is to indicate that the event described is iterative in the sense that there are multiple repetitions of the event (e.g. (38)). The term 'iterative' has been used in two different ways: (i) to refer to single events which are inherently iterative (e.g. ng-g-isk 'NPST-IT-shake' in (26) and ng-g-ahut 'NPST-IT-shuttle' in (32)), and (ii) to refer to multiple repetitions of an event in fully-reduplicated forms. These two types of iterativity are related, but distinct. Not surprisingly, they are both part of the $g$-/peg- constellation (cf. §3.1.3).
The use of fully-reduplicated forms is very infrequent when compared with nonreduplicated forms. The frequency with which full reduplication is used in Bonggi is comparable to the frequency that English speakers use terms such as *repeatedly* and *keeps* in phrases like: 'she repeatedly Xs' or 'she keeps Xing.' Therefore, in terms of both frequency and form, reduplicated forms are marked as opposed to nonreduplicated forms. This distinction between nonreduplicated forms and marked fully-reduplicated forms corresponds to a fundamental distinction in viewpoint aspect between what Smith (1983) refers to as 'simple aspect' and 'progressive aspect.' That is, simple nonreduplicated forms correlate with simple aspect. Marked fully-reduplicated forms correlate with progressive aspect.

Differences in viewpoint aspect refer to differences in the way a situation is presented, i.e. differences in perspective (cf. Smith 1983:480). Each event has a unmarked perspective associated with it. However, at times, a speaker can chose to take a perspective other than the normal or unmarked perspective. Just because fully-reduplicated forms provide a marked perspective on events, this does not necessarily imply that all nonreduplicated forms are unmarked with respect to viewpoint aspect.

Two primary groups of both activities and accomplishments have been described in this section: activities marked by -m- or g- and accomplishments marked by ng- or g-. That is, some g-marked verbs are activities and others are accomplishments.28 §2.3 described how actor-pivot activities are marked by -m-, and §2.4 described how actor-pivot accomplishments are marked by ng-. -m-marked activities and ng-marked accomplishments present situations from the perspective of simple viewpoint aspect. "In the perspective of simple aspect, an event is presented as a whole" (Smith 1983:482).

-m-marked activities and ng-marked accomplishments provide an unmarked perspective on activities and accomplishments, but what about g-marked forms? Do they correspond to simple

---

28Cf. the second point of the summary preceding the discussion of reduplication.
viewpoint aspect or to a marked viewpoint aspect? Actually, they are divided between the two, with some \textit{g}-marked forms providing an unmarked perspective and others a marked perspective.

In terms of the semantic distinctions which have been made in this category, the following provide an unmarked perspective or simple viewpoint aspect: (i) inherently iterative activities (e.g. \textit{ng-g-isik} 'NPST-IT-shake' in (26)); (ii) inherently iterative accomplishments (e.g. \textit{ng-g-ahut} 'NPST-IT-shuttle' in (32)); and (iii) nonprototypical accomplishments with an unaffected undergoer which is neither a patient nor a theme that changes location (e.g. \textit{ng-g-adak} 'NPST-VA-kiss' in (35)). On the other hand, a marked perspective is provided by verbs which refer to 'being-in-a-posture' (e.g. \textit{gupug} 'sitting' in (40)) and verbs which are reduplicated (e.g. \textit{nggupug-upug} 'repeatedly sit down' in (41)). The bases for this distinction between unmarked and marked perspective include: (i) frequency, (ii) what is normal, and (iii) the extent to which an event is presented as a whole. In Bonggi, unmarked perspective occurs more frequently and is the norm. It is also the citation form and is learned first. Unmarked perspective presents events as a whole. Even events that are inherently iterative such as \textit{nggisik} 'to shake' and \textit{nggahut} 'to shuttle back-and-forth' are presented as a whole, despite the fact that these events are internally complex. The internal complexity results in \textit{g}-forms as opposed to \textit{-m-} or \textit{ng}-forms, but the perspective is unmarked in each case.

According to Smith (1983:482), "Progressive aspect presents an interior perspective, from which the endpoints of an event are ignored." Smith's progressive aspect corresponds to what I call the marked perspective. The 'being-in-a-posture' posture verbs and fully-reduplicated verbs present an interior perspective.

There are two more semantic distinctions which have not yet been discussed that also are related to the category that I have referred to as the \textit{g/-peg-} group or the \textit{g/-peg-} marked verbs. They, too, conform to this general distinction between simple viewpoint aspect and marked viewpoint aspect. One takes the unmarked perspective and the other the marked perspective.

I started off in §2.3.2 and §3.1.1 referring to this category as the \textit{peg-} group based on the morpheme used to form the imperative. The morphophonemic description in §3.1.1 shows that in
terms of consistency of form, *peg-* is more consistent than any other form in the paradigm and thus a suitable morphological label.

Later I referred to this category as *g-* marked verbs since all the indicative forms and even the imperative have a /g/ in their stem-deriving prefix. Two other reasons for preferring the label 'g-marked verbs' as opposed to 'the *peg-* group' include: (i) the phonological parallel between *g-* and the two other primary stem-forming affixes, i.e. causative *p-* (cf. §2.4) and modal marker *k-* (cf. §3.2); and (ii) the imperatives probably arose historically from the cliticization of *pe* 'yet' to a reduced form (i.e. /g/ + Root; cf. §3.1.1). Normally, imperatives are the least complex form from the perspective of morphology.

Having introduced the distinction between simple viewpoint aspect and marked viewpoint aspect, I shift from a morphological label to a semantic label for this category. Since, at times, *g-* occurs with simple viewpoint aspect and at other times with marked viewpoint aspect, *g-* has a very general function as an indicator of viewpoint aspect. The exact interpretation of the viewpoint aspect which is indicated by *g-* depends upon both the morphological form and the semantics of the verb. Up to this point, I have avoided a semantic label because I believe it is a mistake to unify the various uses of *g-/peg-* in terms of a single semantic component such as [+iterative] or [+durative]. Such a single semantic component solution claims, in effect, that there is only one meaning of the aspectual operator *g-/peg*-. Instead, I have shown that *g-/peg-* has different meanings which show a family resemblance to each other. In what follows, I show how the remaining two semantic distinctions fit into this scheme.

The first of these semantic distinctions is reciprocals which are related to viewpoint aspect *g*-. Reciprocal events involve actions which are performed by two or more actors reciprocally on each other. Since reciprocals involve actors, only activities and accomplishments are potentially reciprocal events. Reciprocal verbs are marked by *ig-* as shown in (60) and (61) where *ig-* occurs with the accomplishment verb root *tibas* 'strike with a machete'. The nonreciprocal actor-pivot form of this verb is shown in (62) (cf §2.4).
Reciprocals share certain features with g- 'viewpoint aspect'. First, both reciprocal clauses and all clauses with g- 'viewpoint aspect' have actor-pivots. Second, reciprocals resemble fully-reduplicated verbs in that both involve repetitions of an event. In the case of reduplicated verbs, the repetition is performed by the same actor, thus supplying an iterative meaning. In the case of reciprocals, the repetition is performed by different actors. In both cases, the event is complex and a marked viewpoint is taken from which an interior perspective is provided. Third, reciprocals are not prototypical accomplishments. Whereas prototypical accomplishments involve a single controlling agent (the actor) who is unaffected by the event and a single patient (the undergoer) which is highly affected, in the reciprocal both arguments are at the same time actor and undergoer. Neither reciprocals nor g- 'viewpoint aspect' verbs that refer to nonprototypical accomplishments with an unaffected undergoer (e.g. (35), (37)) conform to the accomplishment prototype.

Besides being related to aspect, reciprocals are related to voice and are often discussed in the context of voice or valency (e.g. Anderson 1985:192f.).\footnote{Reflexive are also often discussed in the context of voice or valency. Reflexive clauses involve coreferential arguments resulting in a reduction in semantic valency. Whereas reciprocals are coded morphologically in Bonggi, reflexives are coded analytically, as in English, by the reflexive pronoun deirdn 'self' as seen in (i). Actually, a clause can be both reciprocal and reflexive as seen in (ii) (cf. (15)).}

\footnote{Reflexive are also often discussed in the context of voice or valency. Reflexive clauses involve coreferential arguments resulting in a reduction in semantic valency. Whereas reciprocals are coded morphologically in Bonggi, reflexives are coded analytically, as in English, by the reflexive pronoun deirdn 'self' as seen in (i). Actually, a clause can be both reciprocal and reflexive as seen in (ii) (cf. (15)).}

(i) \textit{Sia n-usa (ng-susa) deirdn na.}\n3sNOM APL-difficult self DEF
'SHE makes things difficult for herself.'

(ii) \textit{Sigelama na ig-limut (ig-limut) deirdn nda.}\n3pNOM DEF REC-slander self plural
'THEY slandered each other.'
reciprocals and aspect, as well as reciprocals and voice, is easily understood in the event framework of Chung and Timberlake (1985:203). According to this framework, events can be defined in terms of three components: (i) a predicate, (ii) an interval of time on which the predicate occurs, and (iii) a set of conditions under which the predicate occurs. Aspect is primarily concerned with the second of these components; that is, the relationship between the predicate and the time span in which it occurs (Chung & Timberlake 1985:214). Or, stated another way, aspect is concerned with the distribution of the event through time (cf. Talmy 1985:77). On the other hand, voice is primarily concerned with the third of these components; that is, the conditions under which the predicate occurs, specifically, the distribution of the arguments of the predicate. Reciprocals are interesting from the perspective of both aspect and voice.

When accomplishment roots such as *tibas* 'strike with machete' occur in a reciprocal form (e.g. (60), (61)), the reciprocals are a type of downgraded accomplishment. Reciprocals involve a reduction in both semantic and syntactic valency. The LS for nonreciprocal *tibas* 'strike with machete' is provided in (63a). The clause-specific LS for (62) is provided in (63b). Normally, the effector-theme (instrument), i.e. the machete, is implied with this verb (eg. (60), (61),(62)). When the effector-theme is implied, it is unspecified (Ø) in the clause-specific LS (e.g. (63b)). However, the effector-theme can be explicitly stated, in which case it usually occurs in syntax as an oblique argument *ma' badi* 'with a machete' and is specified in the clause-specific LS.

(63) a. LS for nonreciprocal

tibas:

\[
[[\text{do'} (x)] \text{CAUSE } [\text{do'} (y)] \text{CAUSE } [\text{BECOME be-at'} (z,y)]]
\]

\[x=\text{effector}, \ y=\text{effector-theme}, \ z=\text{locative-goal}\]

b. LS for (62):

\[
[[\text{do'} (\text{ou' T})] \text{CAUSE } [\text{do'} (\text{Ø})] \text{CAUSE } [\text{BECOME be-at'} (\text{kiou 'wood'}, \text{Ø})]]
\]

Reduction in semantic valency is seen by comparing the LS of the nonreciprocal verb (e.g. (63a)) with that of the reciprocal verb (e.g. (64a)). A reciprocal reading requires 'x' and 'z' to be both effectors and locative-goals resulting in a complex LS such as that shown in (64a) which is a
simple combination of two nonreciprocal events.\textsuperscript{30} In most reciprocal circumstances, the two actors 'x' and 'z' use different effector-themes as instruments, which is the rational behind the subscripts on 'y' in (64a). Absence of subscripts yields the unusual circumstance in which both actors use the same instrument, e.g. two people taking turns hitting each other with a stick. The clause-specific LS for the reciprocal in (61) is provided in (64b). Reduction in semantic valency results from 'x' being both an effector and a location.\textsuperscript{31}

\[(64)\text{ a. LS for reciprocal}
\text{tibas:}
\begin{align*}
\text{[[do' (x)] CAUSE [do' (y1)]] CAUSE [BECOME be-at' (z,y1)]} & \& \\
\text{[[do' (z)] CAUSE [do' (y2)]] CAUSE [BECOME be-at' (x,y2)]}
\end{align*}
\text{b. LS for (61):}
\begin{align*}
\text{[[do' (sia 'he')]} CAUSE [do' (\emptyset)] CAUSE} & \& \\
\text{[BECOME be-at' (Ubiadn 'Ubian', \emptyset)]} & \& \\
\text{[[do' (Ubiadn 'Ubian')] CAUSE [do' (\emptyset)] CAUSE} & \& \\
\text{[BECOME be-at' (sia 'he', \emptyset)]}
\end{align*}
\]

Reduction in syntactic valency is seen by comparing the reciprocal clauses in (60) and (61) with the nonreciprocal clause in (62). (60) has one core argument sigelama na 'they', (61) has one core argument sia 'he' and one oblique argument ma' Ubiadn 'with an Ubian', and (62) has two core arguments ou 'T' and kiou 'wood'.\textsuperscript{32}

The verb morphology of ig-tibas 'REC-strike with machete' in (60) and (61) requires a reciprocal reading since the root tibas 'strike with machete' is an accomplishment verb root (cf. §2.4). When the root tibas is prefixed with ig-, a second reading is possible if the root is fully reduplicated. The fully-reduplicated form ig-tibas-tibas 'repeatedly strike with machete' requires

\textsuperscript{30}If in (63a) 'x' and 'z' were coreferential, the result would be a reflexive reading.

\textsuperscript{31}This is reminiscent of Hopper and Thompson's (1980) property of individuation. Individuation refers to the distinction of the patient from the agent (1980:253). In reciprocal clauses, there is an absence of individuation.

\textsuperscript{32}The preposition ma' 'with' was discussed in §2.4 where I claimed that ma' 'with' marks effector-themes (instruments) under the following circumstances: (i) the effector and theme are coreferential; (ii) the effector is not an actor; and (iii) the theme is not an undergoer. As seen in (59), ma' 'with' also indicates a comitative relationship. Comitative arguments are coperformers of the action who are potential actors/agents. This dual function of ma' is comparable to English with which also marks instruments and comitatives. The semantic link between instruments and comitatives is that both are potential actors.
an iterative reading (cf. the iterative accomplishment *ig-timbak-timbak* 'repeatedly shoot' in (52)). When the root *tibas* is prefixed with *ig-* , a third reading is possible if the root is partially reduplicated. The partially-reduplicated form *ig-ti-tibas* 'continually strike each other with a machete' requires both a reciprocal and an iterative reading.

The nice thing about the accomplishment verb roots *tibas* 'strike with machete' and *timbak* 'shoot' is that the different readings are unambiguous and can be determined strictly from the verb morphology without having to make reference to syntactic arguments. However, once we go beyond these two accomplishment roots, it becomes increasingly ambiguous and difficult to determine the semantic reading on the basis of verb morphology alone. This leads us to the fourth feature which reciprocals share with certain *g-* 'viewpoint aspect' verbs. That is, the surface form which marks reciprocals is the same as that which marks many verb stems derived by *g-* 'viewpoint aspect'; specifically, verbs derived from roots beginning with an obstruent other than /g/, and not marked for nonpast tense. For example, the nonreciprocal verb *ig-bali* 'VA-play' in (13) has the same form as the reciprocal verb *ig-tibas* 'REC-strike with machete' in (60). Similarly, past tense

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33Partial reduplication usually involves reduplicating the initial CV of the stem; e.g. *suad* 'speak' becomes *su-suad*. Partial reduplication also has an aspectual function and is described later in this section. Partial reduplication in Tagalog has a similar form and function (cf. French 1988:23).

34Accomplishment verb roots were defined in §2.4 as roots that cannot be related to nouns, adjectives, stative verbs, achievement verbs, or activity verbs by any derivational process. The only other accomplishment verb root mentioned in §2.4 was *tobokng* 'cut down trees' which cannot occur as a reciprocal since it is not a process that animate entities can do to each other.

35Due to the morphophonemic changes which occur, Bonggi is an excellent example of how similarity in surface form is often a poor basis for semantic similarity. The relationship between the morphemes in the *g-* /peg- group and the surface phonological forms was described in §3.1.1 as being skewed by morphophonemic changes in the direction of one morpheme and many phonologically conditioned allomorphs (cf. also the discussion of the situation marking morphemes in §2, e.g. *m-* 'ST', *km-* 'ACH', *m-* 'ACY', *ng-* 'APL', and *-Vn* 'UPL'). In the case of reciprocal verbs and *g-* verb stems, I am suggesting just the opposite. Two morphemes (albeit with some semantic similarity) appear to share the same or a similar form. Two competing principles are operating (cf. Wurzel 1989): (i) the well-known one-form-one-function tendency, and (ii) the tendency for languages to employ a restricted number of morphological forms/shapes (cf. English plural *-s* and possessive *-s*).
n-ig-bali 'PST-VA-play' in (16) has the same form as past tense n-ig-tibas 'PST-REC-strike with machete' in (61).

With accomplishment verb roots the reciprocal reading can be determined strictly from the verb morphology, but the syntactic arguments must not contradict the verb morphology. Reciprocal verbs require one of the following two syntactic configurations. First, there can be one core argument, the pivot, e.g. sigelama na 'they' in (60). In this case, the pivot is plural (referring to both participants) and no other syntactic argument can occur except an oblique instrument. The plural is used when the focus is equally on both participants. Second, the pivot can be singular, e.g. sia 'he' in (61), in which case there is an oblique argument marked by comitative ma' 'with'. The singular is used when the focus is on only one of the two participants with the other occurring as an oblique argument (e.g. (61)). This second type of syntactic configuration can also have a plural pivot in which case the plural participant is viewed as acting as a reciprocal. In (65) the verb is marked by ig- indicating it is reciprocal. Morphological marking of reciprocals results in a single clause in Bonggi, whereas the English translation in (65) requires two clauses. Furthermore, many English verbs are ambiguous in terms of the reciprocal and nonreciprocal readings, e.g. English: They argued with me. English requires a reflexive pronoun with the verb argue in order to unambiguously have a reciprocal reading, e.g. English: They argued with each other.

(65) Sigelama na ig-tibas (ig-tibas) ma' diaadn.
3pNOM DEF REC-strike.with.machete with IsACC
'THEY struck me with machetes, and I struck them back.'

Since the surface form /ig-/ sometimes indicates simple viewpoint aspect and other times reciprocal viewpoint aspect with nonaccomplishment verb roots, the correct reading cannot be determined strictly from the verb morphology without reference to syntactic arguments. Certain roots (e.g. bunu 'argue') are normally treated as lexical reciprocals in that they involve two

---

36 When the pivot is plural, an adjunct can occur such as the temporal adjunct kina 'earlier' in (60).
participants who act upon one another. Lexical reciprocals usually receive a reciprocal interpretation even when the verb morphology is not marked with ig- 'reciprocal' (e.g. (69)). Other roots (e.g. bali 'play') do not imply that two participants are acting upon one another, so they receive a nonreciprocal interpretation when the verb morphology is ambiguous. Still other roots (e.g. tomu 'meet/find') can receive both interpretations depending upon the context.

The root bunu' 'argue' is representative of lexical reciprocals. It can occur as a regular accomplishment verb (e.g. (66)), in which case it does not have a reciprocal interpretation (cf. (62)). When bunu' 'argue' is prefixed with ig- 'reciprocal', it can occur in either of the two syntactic configurations described above; specifically, one syntactic argument which is a pivot that is semantically plural and refers to both participants in the reciprocal event (e.g. (67), cf. (60)) or one core pivot argument and one oblique argument with the participants being divided between the two (e.g. (68), cf. (61)). When bunu' 'argue' does not occur as a regular ng- marked accomplishment verb or an ig- marked reciprocal verb, it still receives a reciprocal interpretation, e.g. (69).

(66) Sia m-unu' (ng-bunu') pusud nya.  
3sNOM APL-argue sibling 3sGEN  
'HE scolds his sibling.'

(67) Sigelama na ig-bunu' (g-bunu').  
3sNOM DEF REC-argue  
'THEY are arguing with each other.'

(68) Sia ig-bunu' (ig-bunu') ma' pusud nya.  
3sNOM REC-argue with sibling 3sGEN  
'HE is arguing with his sibling.'

(69) Sia m-bunu' (ng-g-bunu') ma' pusud nya.  
3sNOM NPST-argue with sibling 3sGEN  
'HE is arguing with his sibling.'

Lexically reciprocal verbs in English (depending on context) include: kiss, meet, and shake hands.

As seen from this example, there are no "pure" lexical reciprocals in Bonggi. That is, there are no verb roots that must be interpreted as a reciprocal in every instance.
Other examples of reciprocal forms are shown in (70), where in most cases there are corresponding nonreciprocal accomplishments. When corresponding accomplishments exist, the reciprocal forms are downgraded accomplishments.

(70) | ROOT | GLOSS | ACTIVITY | ACCOMPLISHMENT | RECIPROCAL |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>goul</td>
<td>mix together</td>
<td>nge-goul</td>
<td>ig-goul</td>
<td></td>
</tr>
<tr>
<td>lujubm</td>
<td>trick</td>
<td>ngu-lujubm</td>
<td>ig-lujubm</td>
<td></td>
</tr>
<tr>
<td>ranggar</td>
<td>ram</td>
<td>nge-ranggar</td>
<td>ig-ranggar 'collide'</td>
<td></td>
</tr>
<tr>
<td>salabm</td>
<td>greet</td>
<td>n-alabm</td>
<td>ig-salabm</td>
<td></td>
</tr>
<tr>
<td>suntuk</td>
<td>punch; fist fight</td>
<td>n-untuk</td>
<td>ig-suntuk</td>
<td></td>
</tr>
<tr>
<td>tumbuk</td>
<td>punch; fist fight</td>
<td>n-umbuk</td>
<td>ig-tumbuk</td>
<td></td>
</tr>
<tr>
<td>tolu'</td>
<td>pursue; chase</td>
<td>n-olu'</td>
<td>ig-tolu'</td>
<td></td>
</tr>
<tr>
<td>mati</td>
<td>die</td>
<td>m-mati 'kill'</td>
<td>ig-pati</td>
<td></td>
</tr>
<tr>
<td>loon</td>
<td>oppose</td>
<td>l-em-oon</td>
<td>nge-loon</td>
<td>ig-loon</td>
</tr>
<tr>
<td>tomu</td>
<td>meet</td>
<td>t-em-omu</td>
<td>ig-tomu</td>
<td></td>
</tr>
<tr>
<td>tampiln</td>
<td>blame</td>
<td></td>
<td>ig-tampiln</td>
<td></td>
</tr>
</tbody>
</table>

The surface form /ig-/ can have a reciprocal meaning (e.g. (68)) and a nonreciprocal meaning (e.g. (13)). Similarly, the surface form /m-/ can occur with reciprocal verbs (e.g. (69)) and nonreciprocal verbs (e.g. (9)). Such neutralization of contrasts is a general problem that goes beyond the neutralization between reciprocal and nonreciprocal forms. This problem is especially acute before bilabial-initial roots as seen in (71).

(71) | AFFIXES | FUNCTION | ROOT | GLOSS | SURFACE FORM | REFERENCE |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>m-</td>
<td>'ST'</td>
<td>puti'</td>
<td>'white'</td>
<td>mputi'</td>
<td>§2.1.3</td>
</tr>
<tr>
<td>-m-</td>
<td>'ACY'</td>
<td>panu</td>
<td>'walk'</td>
<td>mpanu</td>
<td>§2.3</td>
</tr>
<tr>
<td>ng-g-</td>
<td>'NPST-VA'</td>
<td>bali</td>
<td>'play'</td>
<td>mbali</td>
<td>(9)</td>
</tr>
<tr>
<td>ng-g-</td>
<td>'NPST-VA'</td>
<td>bunu'</td>
<td>'argue'</td>
<td>mbunu'</td>
<td>(69)</td>
</tr>
</tbody>
</table>

On the other hand, Bonggi has an interesting means in one case of avoiding neutralization or semantic ambiguity. As mentioned above, /ig-/ sometimes indicates simple viewpoint aspect and other times reciprocal viewpoint aspect. There are instances in which a possible reciprocal reading is undesirable. To avoid the reciprocal reading, the morphophonemic rules described in §3.1.1 are

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39 The reciprocal form ig-pati 'kill each other' suggests the root is pati. Mati 'die' is an achievement verb and should not be considered the root. This verb is irregular.

40 Pe-tampiln is a causative stem meaning 'to blame someone else'.
overridden or modified slightly. Where, according to the rules in §3.1.1, we would expect g- to be deleted or realized as /ig-/; we find /gi-/ instead, e.g. (72) and (73).

(72) Lama ng-gi-taru' (ng-g-taru'). molok Gipudn.
   people NPST-VA-hide scared Japan
   'PEOPLE hid because they were scared of the Japanese.'

(73) Sia ng-gi-suru' (ng-g-suru') lama kerai.
   3sNOM NPST-VA-order people work
   'HE ordered people to work.'

According to §3.1.1, when the full form /ŋ- + /g-/ occurs before obstruents, the /g-/ is deleted and the /ŋ- assimilates to the point of articulation of the initial obstruent of the root (e.g. (9), (10)). When the reduced form /g-/ occurs before obstruents, an initial /i/ is added to avoid the deviant word-initial cluster /g- + obstruent (e.g. (13)). According to these rules, the full forms in (72) and (73) should be *ntaru' and *nsuru', but both of these are deviant. Furthermore, the reduced forms of these verbs should be igtaru' and igsuru', instead of gitaru' and gisuru' which are the actual reduced forms. The expected forms igtaru' and igsuru' are not deviant; instead, they are the reciprocal forms. The derived stems gitaru' and gisuru' occur in order to block the reciprocal interpretation that would otherwise occur. Although these forms are exceptions to the rules described in §3.1.1, they are exceptions with a purpose. To understand the function of these exceptions, one must not only examine the stem forming prefix g-, but also the relationship between g- and reciprocal ig-.

The final semantic distinction in the constellation of g- marked forms deals with the internal complexity of events. Iterative events (e.g. (26), (32)) and reciprocal events (e.g. (60), (61)) are not the only types of events with internal complexity. Other events with internal complexity are events that are perceived as occurring in stages such as those in (74) which are shown in their full-

---

41 The viewpoint aspect of mbali in (9) is simple, whereas the viewpoint aspect of mbunu' in (69) is interpreted as reciprocal since bunu' 'argue' is a lexical reciprocal.

42 Banggi Island was occupied by the Japanese during World War II.
form (cf. (18), (37)). The events in (74) involve a complex change of state instead of a single change of state.

(74) ng-g-api NPST-VA-cook m-buat NPST-VA-make
   ng-gi-liput NPST-VA-circle a place

The verbs in (74) are similar to iterative, reciprocal, and 'being-in-a-posture' type verbs in that they refer to action drawn out in time. Events which are iterative, reciprocal, or have stages are viewed as covering a longer period of time than noniterative, nonreciprocal, or single-stage events.

To summarize, g- marked verbs are a category whose members show a family resemblance to each other. All the members of the category fall into a semantic "gray area" between prototypical accomplishments and prototypical activities. This gray area arises because there is no single unifying feature such as [+iterative] or [-punctual] which accounts for all the various members of the category. The overarching meaning of this category is viewpoint aspect. Whereas prototypical accomplishments (ng- marked) and prototypical activities (-m- marked) have simple viewpoint aspect, g- marked verbs include both simple and marked viewpoint aspect. All g- marked verbs have some degree of complexity in their internal structure when compared to ng- marked accomplishments and -m- marked activities. The types of verbs associated with this category include: (i) iterative activities (e.g. (26)); (ii) iterative accomplishments (e.g. (32)); (iii) nonprototypical accomplishments whose undergoer is unaffected (e.g. (35), (37)); (iv) verbs which refer to 'being-in-a-posture' (e.g. (40), (45), (46), (51)); (v) reduplicated verbs with the reduplication supplying an iterative meaning, (e.g. (38), (41), (44), (52), (53), (54), (55), (56), (57), (58), (59)); (vi) reciprocal verbs (e.g. (60), (61), (67), (68), (70)); and (vii) verbs which refer to events that occur in stages (e.g. (74)). Not all the verbs in (18) and (23) fit neatly within these semantic distinctions; yet, they do not match the activity or accomplishment prototype, and they share at least one feature with some member of this category. For example, ng-g-apu'NPST-VA-grandfather' (call someone grandfather) is [-punctual], which correlates with iteratives which are also nonpunctual.
Several different morphemes (both derivational and inflectional) have been discussed in this section including: (i) stem-forming g- in indicative mood; (ii) stem-forming peg- in imperative mood; (iii) inflectional in- in past tense; (iv) inflectional ng- in nonpast tense; (v) fully-reduplicated roots to indicate iterative events; (vi) the reciprocal marker ig-; and (vii) partially-reduplicated roots in which the initial CV of the root is reduplicated to indicate events that are both reciprocal and iterative, e.g. (75) and (76) (cf. (72)).

(75) *Sigelama na ig-be-balas (ig-CV-balas) ig-ti-timbak (ig-CV-timbak) dii toidn.*
     3pNOM  DEF REC-IT-retaliate REC-IT-shoot  at jungle
'THEY keep retaliating against each other by shooting at each other in the jungle.'

(76) *Eihi n-ig-te-taru' (in-ig-CV-taru') tuba.*
     1pexcNOM PST-REC-IT-hide poisonous.root
'WE kept hiding the root from each other.'

Other roots which are both partially-reduplicated and reciprocal are shown in (77). The reduplicated syllables in (77) represent the same morphological element which is simply the skeletal pattern 'CV' added to the stem (cf. Anderson 1988a:157).

(77) | ROOT | GLOSS | ACCOMPLISHMENT | RECIPIROCAL & PARTIAL-REDUPLICATION |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>puun</td>
<td>take leave of</td>
<td>m-uun</td>
<td>ig-pu-puun 'keep taking leave of each other'</td>
</tr>
<tr>
<td>lapas</td>
<td>hit with switch</td>
<td>nge-lapas</td>
<td>ig-le-lapas 'keep hitting each other with switch'</td>
</tr>
<tr>
<td>suad</td>
<td>speak</td>
<td></td>
<td>ig-su-suad 'keep speaking with each other'</td>
</tr>
<tr>
<td>bali</td>
<td>play</td>
<td></td>
<td>ig-be-bali 'keep playing with each other'</td>
</tr>
</tbody>
</table>

3.1.3. Iterativity: Specific and Distributive Viewpoints

Events can be iterated or quantified in different ways. §3.1.2 described two general types of iterative events: those that are internally iterative and those that are externally iterative. Internally iterative events are events whose internal structure contains a number of subevents (microevents), e.g. *nggisik* 'shake' in (26), *nggahut* 'shuttle back-and-forth' in (32), *igbunu* 'argue' in (67), and

---

43 Tuba is a poisonous root which is used to stun fish at low tide. It is highly valued and hard to find.
mbuat 'make' in (74). Externally iterative events are macroevents that consist of a number of repetitions of an event, e.g. igtimbak-timbak 'keep shooting' in (52).

Accordingly, we can speak of three levels of events: (i) events, (ii) microevents which are subcomponents of events, and (iii) macroevents which contain repetitions of an event. The different types of microevents (internally iterative events) discussed in §3.1.2 are marked by the prefix g- or ig- (e.g. nggisik 'shake' in (26) and igure 'argue' in (67)), whereas macroevents (externally iterative events) are marked by full reduplication (e.g. igtimbak-timbak 'keep shooting' in (52)). Events that are both internally and externally iterative are marked by both a prefix (g- or ig-) and reduplication (full or partial), e.g. nggahut-ahut 'keep shuttling back-and-forth' in (55), and igtitimbak 'keep shooting at each other' in (75).

This section deals with two other ways in which events are iterated or quantified in Bonggi: (i) specific iteratives which involve a single repetition of an event, and (ii) distributive iteratives which involve many repetitions of an event on different occasions.

Whereas the aspectual distinctions which have been described thus far are formally expressed in the verb morphology, specific iteratives are indicated periphrastically via the aspectual word malik 'again', e.g. (78) and (79).

(78) Ou m-ohodn (-m-ohon) malik.
IsNOM ACY-eat again
'I am eating again.'

(79) Ibis-idn (abis-Vn) gulu noo, nubu' n-uga' (ng-suga') malik.
finish-UPL first that then APL-insert again
'First finish THAT, then put some more inside again.'

Although malik 'again' is discussed here because of its iterative function, it is different from viewpoint aspect g- in terms of scope. In (78) and (79) malik has scope over the whole clause.44 Other times, malik modifies nouns and only has scope within the noun phrase, e.g. (80).

44Cf. Talmy (1985:114) who treats English 'again' as an aspectual satellite.
(80) a) ari lima malik  
    day five  
    'next Friday'
b) toudn malik 
    year  
    'next year'c) minggu malik 
    week  
    'next week'

_Malik_ 'again' can occur with activities (e.g. (78)), accomplishments (e.g. (79)), and achievements (e.g. (81)).

(81) Budak ku k-i-m-ayad (-in-km-ayad) na malik.
    flower 1sGEN ACH-PST-@-pretty  PFT again
    'MY FLOWERS have become pretty again.'

_Malik_ 'again' differs in three respects from other aspectual words that are marked periphrastically: (i) syntactic position, (ii) scope, and (iii) ability to carry tense. _Malik_ occurs post-verbally, whereas other aspectual words occur pre-verbally within the verb phrase (cf. §3.1.4). _Malik_ has scope over the clause, whereas other aspectual words have scope over the nucleus (the predicate). _Malik_ can be inflected for tense, whereas other aspectual words cannot.45

When stems are inflected for tense in Bonggi, they are normally prefixed or infixed (cf. §3.3). A third process which occurs with some roots is stem modification involving vowel umlaut. This occurs in Bonggi where nonpast /malik/ occurs as /melik/ in past tense, e.g. (82). In (82) the aspectual word _melik_ 'again' agrees in tense with the verb _ipupuli_ 'return something'.

(82) Sia i-pu-puli' (in-p-puli') nya m-e-lik (-in-malik).
    3sNOM PST-CAU-return 3sACC @-PST-again
    'HE returned it again.'

Distributive iteratives are similar to macroevents marked by reduplication in that both involve multiple repetitions of an event. The primary difference is that reduplicated iterative events occur together; that is, they are viewed as a collective macroevent (e.g. (52), (55), (75)). In contrast, distributive iteratives consist of distinct and individuated events that do not occur together; that is, they are viewed as events occurring on many different occasions (cf. Chung & Timberlake 1985:221). Distributive iteratives are marked by _meg-/beg-_ which is a prefix that attaches to both verb roots, e.g. (83) (cf. (70)), and denominal verbs, e.g. (84) (cf. (52)).

---

45 Since _malik_ 'again' is treated differently than other aspectual words, it could be regarded as an adverb. However, it differs from adverbs, which cannot be inflected for tense.
(83) Tapi' meg-loon, nda' m-iaa'(ng-biaa') suad i Mual.  
but DIS-oppose not APL-follow say NPIV Mual  
'But SHE always opposes people, and does not follow what Mual says.'

(84) Sia meg-lahi sei.  
3sNOM DIS-male only  
'All SHE does is chase after men.'

Conditions on the choice between meg- and beg- are not clear yet. meg- occurs much more frequently than beg- which occurs in the imperative (cf. (94)). One difference may have to do with main clauses where meg- is used (e.g. (83), (84)) versus subordinate clauses where beg- is used (e.g. (85)). This distinction is related to the general problem of when to use full-forms (in this case meg-) versus reduced forms (beg-).

(85) Ig-bunu' (ig-bunu') sampai beg-bubus raa'.  
REC-argue until DIS-spill blood  
'THEY argued with each other until blood was spilt.'

The prefix meg- marks events which are viewed as occurring more or less on a regular basis. This prefix is often translated as 'always'. Sometimes, instead of using verbal affixation, this type of iteration is indicated by adverbs, either meseirt na 'always' or selalu 'always'. Selalu is borrowed from Malay and may be an important sociolinguistic indicator based on age as it is used...
more frequently by younger speakers than older speakers.⁴⁸ One result of using adverbs instead of verb morphology to indicate distributive aspect is that the adverbs contrast with other temporal adverbs that express temporal notions which are not indicated in the verbal system. Other temporal adverbs which are treated syntactically like *meseirt na 'always' include *kali-kali 'occasionally' and *kadakng-kadakng 'sometimes; now and then'.⁴⁹ All three of these adverbs refer to iteration that occurs more or less on a regular basis (Chung & Timberlake 1985:221).

Distributive iteratives can cooccur with reduplicated forms including fully-reduplicated forms (e.g. (86); cf. (84)) and partially-reduplicated forms (e.g. (87); cf. (76)). The partial-reduplication in (87) indicates that the event is both reciprocal and iterative, whereas *meg- indicates that it occurs on different occasions.

(86) *Meg-lahi-lahi nda' totog, nd-ou mingin.
  DIS-male-male not certain NOT-1sNOM want
  'I don't want her to always be repeatedly chasing after men.'⁵⁰

(87) *Sigelama na megt-te-taru' (meg-CV-taru').
  3pNOM DEF DIS-REC-hide
  'THEY always play hide and seek with each other.'

Other examples of reduplication with *meg- and *beg- are shown in (88).

(88) meg-balik-balik / beg-balik-balik  'keep going back to a place'
    meg-biid-biid  'keep turning over'
    meg-bolos-bolos  'keep borrowing'
    meg-ganti-ganti  'keep replacing someone'

---

⁴⁸Similarly, *kahal 'still' is an indigenous aspectual word (cf. §3.3), whereas *masi is borrowed from Malay *masih 'still' and used by some young Bonggi. Differences in the aspectual system may be very significant as both sociolinguistic indicators and indicators of language change (John Rickford, personal communication). I have not done frequency counts on the use of *kahal and *masi or that of *meg-, *meseirt na, and *selalu by speakers of different ages in order to determine the extent to which these are sociolinguistic indicators or indicators of language change. One might predict the loss of the prefix *meg- and the rise of the borrowed forms such as *selalu and *masi over time; however, *masi is highly stigmatized among older speakers and even disdained by many younger speakers. In §1.1, I pointed out that Bonggi speakers have a very ethnocentric perspective of their own dialect. The home village cluster is always the best. Other villages, especially Limbuak, are often accused of perverting the language with words like *masi.

⁴⁹Palmer (1986:12) points out that these are treated as temporal modalities in some frameworks.

⁵⁰This is part of text provided by a mother to explain what she wanted for her teenage daughter.
meg-lobot-lobot 'keep crossing over'
meg-limut-limut 'keep slandering'
meg-le-lapas 'keep hitting each other with a switch/rod'
beg-de-doot 'keep being bad'
beg-ri-risak 'keep bumping into and shoving others'
meg-odop-odop manuk 'keep sleeping restlessly' (like a chicken)

Other meg- marked verbs which indicate distributive aspect and are derived from noun roots are shown in (89).\(^{51}\) These verbs always have actor pivots, and meg- has been claimed to mark both actor pivot and aspect in some Austronesian languages (cf. Milner 1980:15).

<table>
<thead>
<tr>
<th>(89) ROOT</th>
<th>GLOSS</th>
<th>DERIVED FORM</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>suruar</td>
<td>'long pants'</td>
<td>meg-suruar</td>
<td>'always wears long pants'</td>
</tr>
<tr>
<td>baju'</td>
<td>'shirt'</td>
<td>meg-baju'</td>
<td>'always wears a shirt'</td>
</tr>
<tr>
<td>meikap</td>
<td>'make-up'</td>
<td>meg-meikap</td>
<td>'always wears makeup'</td>
</tr>
<tr>
<td>piukng</td>
<td>'umbrella'</td>
<td>meg-piukng</td>
<td>'always uses an umbrella'</td>
</tr>
<tr>
<td>sigup</td>
<td>'tobacco'</td>
<td>meg-sigup</td>
<td>'always chew tobacco'</td>
</tr>
<tr>
<td>siidn</td>
<td>'money'</td>
<td>meg-siidn</td>
<td>'always has money'</td>
</tr>
<tr>
<td>libudn</td>
<td>'women'</td>
<td>meg-libudn</td>
<td>'always chasing after women'</td>
</tr>
<tr>
<td>perakng</td>
<td>'war'</td>
<td>meg-perakng</td>
<td>'always be at war'</td>
</tr>
<tr>
<td>kungguru'</td>
<td>'pillow'</td>
<td>meg-kungguru'</td>
<td>'always be using a pillow'</td>
</tr>
<tr>
<td>miting</td>
<td>'meeting'</td>
<td>meg-miting</td>
<td>'always be having meetings'</td>
</tr>
<tr>
<td>kedai</td>
<td>'store'</td>
<td>meg-kedai</td>
<td>'operate/run a store'</td>
</tr>
<tr>
<td>rumun</td>
<td>'nest'</td>
<td>meg-rumun</td>
<td>'live in a nest'</td>
</tr>
<tr>
<td>kuman</td>
<td>'uncle'</td>
<td>meg-kuman</td>
<td>'call someone uncle'</td>
</tr>
</tbody>
</table>

The denominal verbs in (89) illustrate the distributive property of meg-. For example, megkuman does not mean to 'call someone uncle' one time, but rather, to call them kuman 'uncle' any time over any number of possible occasions.\(^{52}\) According to Pittman (1966:14), mag- in Tagalog occurs with denominal verbs indicating personal and occupational actions.\(^{53}\) The examination of the function of Bonggi meg- within the domain of kinship is quite instructive. (90) provides a list of denominal verbs in Bonggi which are derived from kinship terms.

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51 This prefix occurs in a number of Western Austronesian languages where it is usually mag-. For example, Antworth (1979:15) states that in Botolan Sambal mag- forms intransitive verbs from nouns (e.g. magtagalog 'to speak Tagalog').

52 Kuman 'uncle' is both a term of reference and a term of address, whereas megkuman is a denominal verb. Cf. Boutin (1984) for a discussion of Bonggi kinship.

53 Pittman (1966) describes a number of features associated with mag- in Tagalog; some of them are comparable to Bonggi g- (cf. §3.1.2) including reciprocal and iterative. This is interesting since Pittman and others analyze Tagalog mag- as two morphemes m- 'nonpast' and ag- (cf. Bonggi ng-g-).
### VERBALIZED KINSHIP TERMS

<table>
<thead>
<tr>
<th>ng- + g- + ROOT</th>
<th>meg- + ROOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ng-kuman</td>
<td>'call someone uncle'</td>
</tr>
<tr>
<td>m-pusud</td>
<td>'call someone sibling'</td>
</tr>
<tr>
<td>m-biras</td>
<td>'call someone biras which refers to the relationship between two people who are married to siblings/cousins'</td>
</tr>
<tr>
<td>ng-g-ama'</td>
<td>'call someone father'</td>
</tr>
<tr>
<td>ng-g-indu'</td>
<td>'call someone mother'</td>
</tr>
<tr>
<td>ng-g-apu'</td>
<td>'call someone grandfather/grandchild'</td>
</tr>
<tr>
<td>ng-g-otud</td>
<td>'call someone great-grandparent/grandchild'</td>
</tr>
<tr>
<td>ng-g-odu'</td>
<td>'call someone grandmother'</td>
</tr>
<tr>
<td>ng-ge-langu'</td>
<td>'call someone brother/sister-in-law'</td>
</tr>
<tr>
<td>ng-g-ipag</td>
<td>'call brother/sister-in-law ipag after connecting relative is deceased'</td>
</tr>
<tr>
<td>ng-g-ompu'</td>
<td>'call aunt/uncle ompu' after connecting parent is deceased'</td>
</tr>
<tr>
<td>meg-mentamang</td>
<td>'call someone parent-in-law'</td>
</tr>
<tr>
<td>meg-minyien</td>
<td>'call someone son/daughter-in-law'</td>
</tr>
<tr>
<td>meg-menahadn</td>
<td>'call someone niece/nephew'</td>
</tr>
<tr>
<td>meg-sihu</td>
<td>'call someone great-great-grandparent/grandchild'</td>
</tr>
<tr>
<td>meg-madu'</td>
<td>'call someone a cowife'</td>
</tr>
<tr>
<td>meg-mien</td>
<td>'call someone aunt'</td>
</tr>
<tr>
<td>meg-kuman</td>
<td>'call someone uncle'</td>
</tr>
</tbody>
</table>

---

54 Meg-mentamang means to call someone mentamang which is the term for mother/father-in-law. In English, terms such as 'mother-in-law' cannot be used as forms of address, but this is not the situation in Bonggi.

55 Some cultures of Borneo, including Bonggi, have "elbow" relatives who are several generations removed from ego. "Elbow" relative terms are derived from body parts. For example, Bonggi uses otud 'knee' as either a term of reference or address for consanguineal relatives three generations from ego, and sihu 'elbow' as either a term of reference or address for consanguineal relatives four generations from ego. These terms are verbalized as nggotud and mgsihu. Bornean kinship systems are mainly cognatic (Murdock 1960; Bellwood 1978; Boutin 1984).

56 Polygamy is permitted in Malaysia. Two women who are married to the same man are in the kinship relation known in Bonggi as madu 'cowives'.

57 Biras is a kinship relationship which is, unfortunately, not expressed in English. For example, my wife has a brother who is married; his wife is my biras.

58 Cf. footnote 55.

59 Bonggi has an interesting set of kinship terms which apply after the death of certain relatives. Unlike English widow which only occurs as a term of reference, these "death-names" or necronyms, as they are referred to in the anthropological literature, can also occur as terms of address (cf. Boutin 1991b). "Death-names" are quite common in the languages of Borneo; see for instance, Needham (1954).
The verbalized kinship terms in (90) take either g- (column 1) or meg- (column 2). Except for the occurrence of both affixes with the term for uncle (kuman), the terms appear to be in complementary distribution with respect to the affix they take.\(^{60}\) Since both affixes serve the same function (i.e. given a kinship term, addition of either of the affixes means to call someone by that term), the data in (90) demands some explanation. The simplest explanation would appear to be phonological. From §3.1.1, however, we know that phonological/morphophonemic explanations are not always 'simple' in Bonggi.

Another possible explanation for the verbalized terms in (90) is they all belong to the class of g- marked verbs described in §3.1.2, and meg- is actually two prefixes, m- 'stative' (cf. §2.1.3) and g- 'viewpoint aspect' (cf. §3.1.2) with an epenthetic vowel occurring between them. This explanation is appealing for at least three reasons. First, it accounts for the semantic connection of iterativity between the g- marked forms described in §3.1.2 and the m-g- (/mag/) marked forms described in this section. That is, both sets of forms are marked by the same morpheme g-, and one of the functions of g- is to indicate iterativity. Second, it provides an explanation for why m-g- marked verbs are never inflected for tense, but g- marked verbs can be inflected for either past (e.g. (91)) or nonpast tense (e.g. (90)).\(^{61}\) Verbs which are prefixed with m-g- cannot be inflected for

\(^{60}\) I am of the opinion that meg- cannot occur with the following terms because I have unsuccessfully tried to elicit them with meg-: ama' 'father', indu' 'mother', apu' 'grandfather/grandchild', and odu' 'grandmother'. On the other hand, although I have no instances of ??meg-pusud 'call someone sibling' or ??meg-biras in my data, both my wife and I share the Austronesian intuition that they are possible. Which is to say that their absence in (89) is at least questionable, and I would not make any claims based on their absence. One of the reasons that ??meg-pusud and ??meg-biras seem to be good forms is that ig- 'reciprocal' occurs with both of these roots; e.g. ig-pusud 'be in a sibling relationship with each other'. Other relationships in (89) which are reciprocal can also occur with ig-, e.g. ig-madu' 'be in a cowife relationship with each other'.

\(^{61}\) Cf. Timugon: mag- 'nonpast' and nag- 'past' (Brewis & Levinsohn 1991:31); Labuk Kadazan: mog- 'noncompletive' and nog- 'completive' (Hurlbut 1988:52-53); Ilokano: Pag- 'noncompletive' and nag- 'completive' (Reid 1992); Tagalog: mag- 'imperfective' and nag- 'perfective' (Schachter & Otanes 1972:364); and Tagbanwa: ag- 'durative action' and n-ag- 'past-durative action' (Ruch 1974:47). The replacement of an initial /m/ by /n/ to indicate past tense also occurs in Malagasy, an Austronesian language of Madagascar (Dahl 1986).
past tense (e.g. (83), (84), (86), (87)), which is a general characteristic of all stative verbs in Bonggi (cf. §2.1), not just condition statives marked by m- (cf. §2.1.3). That is, states in Bonggi are not inflected for tense.\textsuperscript{62} Third, stative m- accounts for the distributive meaning and g- for the iterative meaning. Distributives are more stative-like than nondistributives in that distributives have greater time-stability (cf. Givón 1984:51f.) or durativity (Givón 1984:274f.).

\begin{center}
\begin{tabular}{llll}
Sia & nda' & bas & i-g-ama' (in-g-ama') ama' nya. \\
3sNOM & not & PST & PST-VA-father father 3sGEN \\
\end{tabular}
\end{center}

Distributives view an event over a number of possible occasions, thus removing the sense of change over time that is normally associated with events. According to Chung and Timberlake (1985:215), the basic mechanism for converting an event to a state is to remove the sense of change over time, and present the verb as a property of its arguments.

Granted that distributives are more stative-like than nondistributives, what does it mean to claim that the use of a distributive affix converts an event into a state? For example, Walton (1983:54-55) makes a specific claim regarding mag- in Sama Pangutaran. He maintains that it derives agentive states from nouns. One of the problems inherent in any discussion of states is the need to define specifically what is a state or stative (cf. footnote 62). It makes very little sense to compare Chung and Timberlake's (1985) discussion of states, Kroeger's (1990) argument regarding statives, and my discussion of states without first examining what each of us means by states/statives.

\textsuperscript{62}Past tense stative verbs are marked by the auxiliary bas 'PST'. In RRG, states are defined as verbs whose LS is either predicate(x) or predicate(x,y). Verbs with these types of LSs are not inflected for tense in Bonggi. On the other hand, achievements, activities, and accomplishments are events, not states. Achievements and accomplishments have an underlying stative (i.e. predicate(x) or predicate(x,y)) as part of their LS. Achievements and accomplishments involve events terminating in a resultant state. That is, they involve a change in state. A misunderstanding can arise if states are not distinguished from resultant states. Achievements and accomplishments (both of which involve resultant states) can be inflected for tense.

\textsuperscript{63}Social reasons for not calling one's biological father 'father' include the parents divorcing when the child is very young and the biological father not providing any financial support for the child.
States are verbs whose LS is either \textit{predicate}'(x) or \textit{predicate}'(x,y). Achievements are verbs whose LS is either BECOME \textit{predicate}'(x) or BECOME \textit{predicate}'(x,y). There are different types of accomplishment verbs (cf. §2.1.4), but accomplishments which correspond to these states and achievements are verbs whose LS is either [do' (x)] \textit{CAUSE} [BECOME \textit{predicate}' (y)] or [do' (x)] \textit{CAUSE} [BECOME \textit{predicate}'(y,z)].

Walton (1983:54-55) provides the following examples of \textit{mag-} in Sama, a language of the southern Philippines. According to him, (92a) is a condition state and (92b) an agentive state.

\begin{enumerate}
\item \textit{Dupang anak ta iyu.} Sama Pangutaran
  \begin{itemize}
  \item foolish child 1dGEN that
  \item 'THAT CHILD OF OURS is foolish.'
  \end{itemize}

\item \textit{Mag-dupang anak ta iyu.} Sama Pangutaran
  \begin{itemize}
  \item affix-foolish child 1dGEN that
  \item 'THAT CHILD OF OURS is being foolish.'
  \end{itemize}
\end{enumerate}

Bonggi clauses corresponding to Walton’s examples are provided in (93a) and (93b). Both (92a) and (93a) are condition states whose LS is \textit{predicate}'(x).

\begin{enumerate}
\item \textit{Anak ta n-dupakng (m-dupang) guakng.}
  \begin{itemize}
  \item child 1dGEN ST-foolish spirit
  \item 'OUR CHILD is foolish.'
  \end{itemize}

\item \textit{Anak ta meg-dupakng (m-g-dupang) guakng.}
  \begin{itemize}
  \item child 1dGEN DIS-foolish spirit
  \item 'OUR CHILD is always foolish.'
  \end{itemize}
\end{enumerate}

The LS for (92b) and (93b) is \textit{do'} (x, \textit{predicate}'(x)) which is the LS for activity verbs (cf. §2.3). Walton (1983:83) claims that in Sama, \textit{mag-} indicates ‘agentive aspect’ and changes the LS from \textit{predicate}'(x) to a LS which includes DO as an operator. Sama \textit{mag-} and Bonggi \textit{meg-} are derivational affixes which derive activity verbs from both nouns (e.g. Bonggi: (84), (86), (89), (90)) and condition statives (e.g. Sama: (92b); Bonggi: (93b)).

Dowty (1979), Van Valin (1993:48), and Walton (1983) claim that agentive states are possible, but unusual. My claim is, that at least in Bonggi, there are no agentive states.

\footnote{Bonggi \textit{meg-} also occurs with verb roots such as \textit{taru} 'hide' (cf. (87)).}
Furthermore, there are good reasons for excluding them in other languages. Any LS which contains the abstract predicate do' is defined here as either an activity or an accomplishment.

Bonggi m-g- does not convert an event (activity) into a state, although it does make events derived from verb roots more stative-like. For example, taru' 'hide' is a verb root which can occur as: (i) an accomplishment n-aru' (ng-taru' 'APL-hide'), in which case an agent-actor hides something; (ii) a downgraded accomplishment ng-gi-taru' (ng-g-taru' 'NPST-VA-hide'), in which case an agent-actor hides himself from someone else (cf. (72)); (iii) a further downgraded accomplishment ig-te-taru' (ig-CV-taru' 'REC-IT-hide'), in which case two agent-actors hide themselves or something from each other (cf. (76)); or (iv) an even further downgraded accomplishment me-g-te-taru' (m-g-CV-taru'DIS-REC-YT-hide'), in which case two agent-actors continually hide themselves or something from each other (cf. (87)).

Therefore, we can view accomplishments as a continuum with some accomplishments being more event-like and others more state-like. However, being more event-like does not make one accomplishment more of an accomplishment than another. The difference results from contrasts in viewpoint aspect. Changes in viewpoint aspect do not result in changes in situation type. In the example above, all four of the forms derived from the verb root taru' 'hide' are accomplishments. The more stative-like accomplishments are the result of taking a more stative viewpoint on an event with a distributive viewpoint being most stative-like and a simple viewpoint in which there is no iterativity or durativity being most event-like.65

The relationship between viewpoint aspect and situation type is that shown in Figure 3.1 at the beginning of this chapter. Viewpoint aspect belongs to the operator projection, whereas situation type belongs to the constituent projection. Changes in viewpoint aspect only result in superficial changes in constituent structure. For example, given an accomplishment with a distinct

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65 Chung and Timberlake (1985:231) reach a similar conclusion for Chamorro which is also a Western Austronesian language. They point out that iterative events are possibly intermediate between a state and a process. Iterative events are stative in that the macroevent holds throughout the time frame, but dynamic in that there is change in individual events.
actor and undergoer, a reciprocal viewpoint results in the actor and undergoer being coreferential. Such changes dealing with the referentiality of arguments are affected by aspect, but not the presence or absence of arguments. A problem arises in studies of aspect when viewpoint aspect and situation type are not kept distinct.

The analysis proposed here also simplifies the question of whether or not statives can have imperative forms (cf. footnote 23). Only verbs which have do' in their LS can occur as imperatives. That is, only activities and accomplishments can occur as imperatives. In many cases, the focus of the imperative in accomplishment situations is on the resultant state. This means that given the LS for accomplishments, $\phi$ CAUSE $\psi$, the focus of the imperative is on the achievement portion $\psi$, and the $\phi$ portion is ignored.

According to my claim that $m$-$g$- marked verbs in Bonggi are not states, but rather activities or accomplishments, they should be able to occur in imperative forms and, in fact, they do, as seen in (94). The reduced form $beg$- occurs in the imperative. The prefix $beg$- in (94) (analyzed as $b$-$g$-, following the suggestion above for $m$-$g$-) occurs with a causative verb stem ($pe$-$tampidn$ 'CAU-blame').

(94) Dei $u$ be-$g$-$pe$-$tampidn$ ($b$-$g$-$p$-$tampidn$) $ba$ $tel'$!
     do.not 2pNOM DIS-IT-CAU-blame        EMPH -
'Don't YOU keep laying the blame on each other!'

The full form $m$-$g$- cannot occur with roots which begin with /g/, e.g. gagi 'wage' in (95) and ganad 'study' in (96). Verbs which are prefixed $b$-$g$-, like those prefixed with $m$-$g$-, cannot occur with a past tense.66

(95) Be-$g$agi ($b$-$g$-$gagi$) $ou$ dii Sina'.
     DIS-wage 1sNOM at Chinese
     'I am earning wages working for a Chinese.'

(96) Si Mekul be-$ganad$ ($b$-$g$-$ganad$) uubm Bonggi.
     PIV Michael DIS-study language Bonggi
     'MICHAEL is studying the Bonggi language.'

66 These verbs are referred to as steady-states in Talmy (1985:77).
Bonggi *beg/-meg-* is similar to Malay *ber-*, both in phonological form and in the types of verbs with which it occurs. For example, compare Malay *bel-ajar* 'study' with Bonggi *be-ganad* 'study'. Malay words which take the *ber-* prefix and are borrowed in Bonggi occur with *beg-*; e.g. Malay/Bonggi: *puasa* 'a fast', Malay: *ber-puasa* 'to fast', and Bonggi: *beg-puasa* 'to fast'. Malay *ber-* occurs with intransitive verbs whose single argument is an actor; similarly, Bonggi *beg/-meg-* always occurs with actor pivots. Even with a seemingly transitive verb such as *ganad* 'study', if you want to ask someone what they are studying, you must use an actor pivot as in (97), where a relative clause is used in order to keep the actor the pivot.67

(97) *Onu gien nu be-ganad?*  
what that 2sGEN DIS-study  
"What is it that YOU are studying?"

3.2. Viewpoint Aspect inside Verb Phrases

Two major types of aspect have been discussed: situation aspect (§1.2, §2) and viewpoint aspect (§1.2, §3). The relationship between these two types of aspect and formal expression has been described as follows. Bonggi verb morphology marks situation type with differences in situation type accounting for differences in situation aspect (i.e. *Aktionsart*). With the exception of *malik* 'again', the viewpoint aspect described thus far is also marked in the verb morphology. This section describes viewpoint aspect which, like *malik* 'again', is expressed syntactically. Viewpoint aspect which is expressed syntactically is divided between that which occurs within the verb phrase (§3.2) and that which occurs outside the verb phrase (§3.3). In this respect, the viewpoint aspect described in this section is unlike *malik* 'again' which occurs outside the verb phrase.

This overview of the relationship between aspect and formal expression raises three important questions. First, why are certain viewpoint aspectual distinctions lexicalized (e.g. *mulei*

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67The pivot occurs in the genitive case and not the nominative case in relative clauses (cf. footnote 21).
'started/begun'), whereas others are grammaticalized (e.g. meg- 'distributive')? Second, how are viewpoint aspectual distinctions which are lexicalized distinguished from adverbs and other verbal categories such as modal auxiliaries? Third, are the viewpoint aspectual distinctions that are encoded in the verb morphology inflectional or derivational? The first two questions are addressed in this section as I examine viewpoint aspectual distinctions which are lexicalized. The third question is addressed in §4.

Viewpoint aspect is concerned with the relationship between the predicate and the time interval in which it occurs (cf. Chung & Timberlake 1985:214). At least four viewpoint aspectual distinctions which are lexicalized within the verb phrase refer to different phases of this time interval. They are shown in (98) along with a schematized situation.

(98) |---------------------------------------------------------------|
\[ mulei \] 'started' \[ beranti \] 'stopped' \[ nambukng \] 'continued' \[ punga \] 'finished' \[ \]
When a situation is viewed from the perspective of its inception or beginning, it is marked by \textit{mulei} 'started/begun'. Syntactically, the four phases of a situation referred to in (98) can normally occur as either an aspectual auxiliary (e.g. (99)) or a main verb. However, when \textit{mulei} appears to be a main verb as in (100), some event is always implied being understood from the previous discourse context. Thus, \textit{mulei} is an aspectual auxiliary in (100) and the main verb is implied.

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68I use the term lexicalized to refer to items occurring as independent grammatical forms outside of the verb morphology; likewise, I use the term grammaticalized to refer to items occurring as bound grammatical forms within the verb morphology. I am not making any claims here with respect to historical direction. Compare the use of the term grammaticalization for a process whereby lexical items acquire new status as grammatical, morphosyntactic forms (e.g. Hopper & Traugott 1993).

69In this section, all references to lexicalized viewpoint aspect exclude \textit{malik} 'again' unless specifically stated otherwise (cf. §3.1.3).

70Some speakers use /mulai/ 'started/begun' instead of /mulei/, which is probably the result of influence from Malay \textit{mulai} 'to begin'.
Viewpoint aspectual auxiliaries always precede the main verb. In nonsubordinate clauses, usually aspectual auxiliaries immediately precede the verb (e.g. (99) where mulei 'started' immediately precedes mbubuat 'building'). However, aspectual auxiliaries in nonsubordinate clauses can be separated from the main verb by clitics which are not phonologically attached to either the auxiliary or the main verb. For example, in (101) the pivot ou 'I' is a clitic pronoun occurring between the auxiliary and the main verb.  

71 The temporal adverb nehaa' na 'now' in (101) has a deictic function locating the situation in time. 

If the negator nda' 'not' (in declarative clauses) or dei 'don't' (in imperative clauses) occurs, the aspectual auxiliary occurs between the negator and the main verb as in (102) where mulei 'started' occurs between nda' 'not' and kerai 'work'. The first constituent of the verb phrase in (102) is nda' 'not'. The basic word order of verb phrases in nonsubordinate declarative clauses is shown in (103) with illustrative data from (102).

71 Nominative case clitic pronouns are phonologically reduced forms except ou 'IsNOM' which has the same form whether it is a clitic or nonclitic. This is because ou is monosyllabic [oʊ], whereas the other nominative case pronouns are at least disyllabic (cf. Table 1.2 in §1.3).
First position in verb phrases is occupied by either: (i) a negator (e.g. *nda* 'not' in (100), (102)); (ii) an aspectual auxiliary (e.g. *mulei* 'started' in (99), (101)); (iii) a main verb (e.g. *begagi* 'earn wages' in (95) and *beganad* 'study' in (96)) or (iv) *bas* 'PST' which is discussed shortly (e.g. (120)). Second position is reserved for clitics which are either particles (e.g. *pa* 'yet' in (100), (102)) or pronouns (e.g. *ou* 'I' in (95) (101)). Auxiliaries occur in third position if there is both a negator and an auxiliary. The main verb is normally the last element in the verb phrase, unless the VP contains neither a negator or an auxiliary in which case the main verb is first and can be followed by a clitic (e.g. (95)).

In some instances *mulei* 'started/begun' is not an aspectual auxiliary; instead, it is like a gerund functioning as a temporal noun. For example, in (104) the temporal phrase *mulei tidii nehaa* 'starting from now' has a temporal adjunct function.

(104) *Mulei tidii nehaa* na, *sia nda* na *kerja nelayan,*
     start from now - 3sNOM not PFT work fishing boat
     'Starting from now, HE is not going to work on a fishing boat.'

Bonggi also has a temporal adverb *mulei-mulei* 'in the very beginning' which is related to *mulei* 'started/begun'. The aspectual auxiliary is distinguished from this temporal adverb both morphologically and syntactically. In (105) the reduplicated adverb (*mulei-mulei* 'in the very beginning') is not part of the verb phrase being separated from the verb (*sumbakng* 'commit.incest') by the pivot (*si Domon* 'Domon'). Similarly, in (104) the temporal phrase (*mulei tidii nehaa* 'na

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72Cf. the discussion below regarding various syntactic functions of *pun* 'finish'. Whether a distinction needs to be made between gerunds and temporal adverbs is not at issue here. The point is that *mulei* 'started/begun' has more than one syntactic function.

73*Mulei-mulei* 'in the very beginning; to begin with' appears to be borrowed from Malay *mula-mula* 'to begin with'. It is usually found in Malayized texts such as the one from which (105) came. Malayized texts are texts with an inordinate use of Malay. The text from which (105) came was provided by a male native speaker over 50 years old from the village of Limbu Dara. It was the first time he had ever been recorded, and he was quite uncomfortable speaking into a microphone. Unfortunately, microphones seem to elicit Malayized texts from many speakers. Bonggi speakers do not normally use the adverb *mulei-mulei* as they already have a temporal adverb with a similar meaning, i.e. *bu*-bu' 'long ago; to begin with'. Reduplication of adverbs intensifies the meaning of the adverb, e.g. *ringa* 'bu' 'in the past; before' is reduplicated as *ringa* *bu*-bu' 'very long ago in the past' (cf. footnote 25).
'starting from now') is separated from the the verb phrase (nda' na kerai 'not work') by the pivot (sia 'he'). Temporal adverbs and temporal phrases occur both before the pivot (e.g. nehaa' na 'now' in (101), mulei tidii nehaa' na 'starting from now' in (104), and mulei-mulei 'in the very beginning' in (105), cf. also (103)) and after the pivot (e.g. hina 'earlier' in (99)).

(105) Mulei-mulei si Domon sumbakng ma' pusud na.
     very.beginning PIV Domon commit.incest with sibling DEF
     'In the very beginning DOMON committed incest with his sister.'74

The pivot occurs before the verb phrase in (99), (100), (102), and (104), whereas in (101) the pivot (ou 'I') is a special clitic occupying a syntactic position within the verb phrase.75 Two syntactic features distinguish viewpoint aspectual auxiliaries from temporal adverbs and phrases:
(i) aspectual auxiliaries can occur within a verb phrase following nda' 'not' (e.g. mulei 'started/begun' in (102)), but temporal adverbs and temporal phrases cannot (e.g. mulei tidii nehaa' na 'starting from now' in (104)); and (ii) aspectual auxiliaries can occur in first position of a verb phrase, but temporal adverbs and temporal phrases cannot. Evidence for first position is found from special clitics which always occur in second position.

The viewpoint aspectual auxiliary punga 'finished' is similar to mulei 'started/begun'. Punga 'finished' can occur as: (i) an aspectual auxiliary, e.g. (106) (cf. (102)); (ii) a main verb, e.g. (107) (cf. (100)); or (iii) have a temporal linkage function in discourse. For instance, punga frequently occurs with anaphoric ina 'that', in which case it has a cohesive function connecting two sequential events in discourse, e.g. (108). In (108) punga functions syntactically like a preposition. In other instances, punga functions syntactically like a conjunction introducing subordinate temporal clauses, e.g. (109). Sometimes punga is prefixed with peg- which gives the temporal clause a sense of immediacy, e.g. (110).

74 Domon is the major hero in Bonggi folktales (cf. Boutin, in press). For a discussion of Bonggi incest taboos see Boutin (1990:104).

75 Special clitics are items whose position within some phrasal unit is determined by principles other than those of the nonclitic syntax (Anderson 1993:74). See Zwicky (1977), Zwicky (1985), and Jeffers and Zwicky (1980) for a discussion of special clitics.
(106) Sia nda' pa puna kerai.
3sNOM not yet finished work
'SHE has not yet finished working.'

(107) Punga na.
finished PFT
'I am finished.'

(108) Punga ina, ng-inum kupt'. Punga ina, m-apit ng-indahad lugus.
after that APL-drink coffee after that ACY-stop by APL-climb tree betel.nut
'After that, SHE drinks coffee. After that, SHE stops by to climb a betel nut tree.'

(109) Punga na ng-g-uhubm, m-iaa' na m-uli'.
after PFT NPST-VA-litigate APL-follow PFT ACY-return
'After the litigation is completed, HE follows her home.'

(110) Peg-pungaan ku n-dabu', m-i-li' (-in-m-uli') ihi kindii bali raya.
as soon as-finish 1sGEN PST.ACH-fall ACY-PST-return 1pexcNOM go.to center
'As soon as I fell down, WE returned to the community center.'

Although puna 'finished' sometimes functions in syntax as an auxiliary indicating viewpoint aspect (e.g. (106)), it also can function as a verb (e.g. (107)), a temporal preposition (e.g. (108)), and a temporal subordinate conjunction (e.g. (109), (110)). Similarly, mulei 'started/begun' functions in syntax as an auxiliary indicating viewpoint aspect (e.g. (99), (100), (101), (102)), a temporal phrase introducer (e.g. (104)), and mulei-mulei functions as a temporal adverb (e.g. (105)). Each of these functions are uniquely defined morphosyntactically, so that viewpoint aspectual auxiliaries can be distinguished from other lexical categories.

As stated above, puna 'finished' is a main verb in (107). This verb is stative and has the LS predicate'(x). On the other hand, when puna 'finished' occurs as a viewpoint aspectual

76Pivots are frequently unspecified in discourse. The absense of the clause pivot signals topic continuity, e.g. (107), (108), and (109). Cf. Givón (1983) and Levinsohn (1991).

77The prefix peg- in (110) does not belong to the peg- group described in §3.1.1 and §3.1.2. That is, it has the same form, but a different function. In (110) peg- shifts the reference time of the main event. It conveys a sense of immediacy which does not occur with other temporal clause introducers. Cf. Labuk Kadazan pog- 'as soon as' which has a similar function (Hurlbut 1988:73). In Tagalog, pog- is used to form gerunds according to Schachter and Otanes (1972:159ff.). Bonggi peg- marked constructions, such as (110), could be construed as a gerund functioning as a temporal noun (cf. Matthews 1981:12f.). The temporal noun is always an adjunct to a predicate, never an argument.
auxiliary (e.g. (106)), it is incompatible with states because the termination of a state is not part of the state.\textsuperscript{79} As a verb, \textit{punga} 'finished' can occur as a state (e.g. (107)), an achievement (e.g. (111)), or an accomplishment (e.g. (112)).

(111) \textit{Nda' na me-leid, kum-punga (km-punga) kerai sigelama na.}  
not now ST-long.time ACH-finished work 3pGEN DEF  
'Not long from now, THEIR WORK will be finished.'

(112) \textit{Eisi pa m-unga (ng-punga)?}  
who yet APL-finish  
'WHO will finish it?'

All four of the viewpoint aspectual distinctions in (98) are incompatible with states since they deal with phases in an event. As a viewpoint aspectual auxiliary, \textit{beranti} 'stopped' (cf. Malay \textit{berhenti}) indicates that the event is terminated but not yet finished. \textit{Beranti} 'stopped' can occur as an aspectual auxiliary (e.g. (113)) or as a main verb (e.g. (114)).

(113) \textit{Sia nda' pa beranti kerai.}  
3sNOM not yet stopped work  
'SHE has not yet stopped working.'

(114) \textit{Gipad puhul sebelas beranti.}\textsuperscript{80}  
near o'clock eleven stop  
'About 11:00 o'clock they stopped.'

The other phase of an event found in (98) is \textit{nambukng} 'continue'. Unlike the other phases in (98), \textit{nambukng} 'continue' is not a bare root. The root is \textit{sambukng} 'continue' (cf. Malay \textit{sambung}) which occurs here with actor pivot accomplishment morphology (\textit{ng-}), e.g. (115). The syntactic position of \textit{nambukng} 'continue' in (115) is the same as that of \textit{mulei} 'started/begun' in (100), \textit{punga} 'finished' in (106), and \textit{beranti} 'stopped' in (113). Yet, the morphology of \textit{n-ambukng}

\textsuperscript{78}\textit{As a stative verb, \textit{punga} 'finished' is unaffixed. Cf. §2.1.3 and §2.1.5 for other stative verbs which are unaffixed.}

\textsuperscript{79}Similarly, the viewpoint aspectual auxiliary \textit{mulei} 'started/begun' is incompatible with states, because the inception of a state is not part of the state.

\textsuperscript{80}References to the time of day use borrowed Malay numbers, e.g. \textit{sebelas} 'eleven'.
'APL-continue' suggests that it is a full verb, whereas the absence of verbal morphology in the other three suggests they are not full verbs but only auxiliaries. *N-ambukng* 'APL-continue' is more like a phasal predicate with a complement than an aspectual auxiliary. Furthermore, *nambukng* can occur as a main verb (e.g. (116)) and the root *sambukng* 'continue' takes all the affixes that accomplishment verbs can take, e.g. -*Vn* as in (117) (cf. §2.4). *Nambukng* is used when an event is temporarily terminated and then continued.

(115) *Sia nda* pa *n-ambukng* (ng-*sambukng*) *kerai*.  
3sNOM not yet APL-continue work  
'SHE has not yet continued working.'

(116) *N-ambukng* (ng-*sambukng*) *ou* *dii* Kudat.  
APL-continue 1sNOM in Kudat  
'I will continue in Kudat.'

(117) *Sumbung-un* (sambukng-*Vn*) *ku* gulu.  
continue-UPL 1sGEN first  
'I'll join IT together first.'

As seen from the discussion above, the different phases of an event which are lexicalized are not a unified category in terms of Bonggi morphosyntax. However, from the perspective of semantics, they are unified in that all four phases focus on different temporal phases of events. This temporal emphasis provides a semantic link to temporal adverbs, which in turn explains the formal link to temporal adverbs in some cases (e.g. *mulei* 'started/begun' and *punga* 'finished').

On the one hand, phasals are not a very homogeneous morphosyntactic category. They generally occur as auxiliaries with some members of the category overlapping with adverbs (e.g. *punga* 'finished') and others with verb morphology (e.g. *nambukng* 'continue'). On the other hand, they are a homogeneous semantic category with each member focusing on a different phase of events. The broad picture of the relationship between form and function is shown in (118). The verb morphology described in §2 signals situation type. Different viewpoints can be taken on an event. Viewpoints that treat the event as a whole, dealing with notions such as iterativity or

duration of the event, are also handled in the verb morphology (cf. §3.1.1-§3.1.3). Viewpoints that dissect the event into parts are primarily treated as auxiliaries (this section). Finally, temporal adverbs locate the event or situation in time.

(118) Morphosyntactic Category | Adverbs | Auxiliaries | Verb Morphology | Verb Morphology | Root
--- | --- | --- | --- | --- | ---
Semantic function | Set temporal frame for event | Indicate viewpoint aspect: phases of events | Indicate viewpoint aspect: iterativity & duration of event | Indicate situation type | 
Reference | §3.1.4 | §3.1.1-§3.1.3 | §2 | 

← increasing distance from verb root

As seen in (118), there is a strong correspondence between linguistic form and semantic function (cf. Bybee 1985:7). However, the categories are not always discrete, and the correspondences are not exact. Thus, for example, the correspondence between phasal viewpoint aspect and auxiliaries is not perfect. For instance, not all auxiliaries indicate phasal viewpoint aspect (e.g. modal auxiliaries which are not discussed here), and phases of events are marked not only in auxiliaries (e.g. (106)) but also in verbs (e.g. (111)) and outside the verb phrase (e.g. (108)). Thus, phasal viewpoint aspect shares similarities with both verbs and temporal adverbs.

One question that was raised at the beginning of this section was, how are viewpoint aspectual auxiliaries (e.g. mulei 'started/begun') distinguished from temporal adverbs (e.g. meseirt na 'always' and kadakng-kadakng 'sometimes')? As pointed out above, special clitics are a good syntactic test to determine whether or not a constituent belongs to the verb phrase. Bonggi special clitics always occur in second position; however, second position is defined in different ways. Special clitics are always enclitics since their position depends upon the preceding word. There are two types of enclitics in Bonggi: particles and personal pronouns (cf. Schachter &Otanes

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82Bybee (1985:147f) points out that inceptive aspect is rarely an inflectional morpheme.

1972:184, 411ff. for Tagalog). Both types are always monosyllabic. Although all the constraints on clitic order have not yet been worked out, enclitic pronouns normally precede enclitic particles.

Second position is defined in terms of verb phrases and clauses. With respect to verb phrases, enclitic particles occur in second position following the first constituent of the verb phrase (cf. (103)). The two most frequent enclitic particles are na 'PRF' and pa 'yet'. Specifically, enclitic particles can follow:

(i) the negative imperative dei 'don't'
    (e.g. enclitic na follows dei in (6));

(ii) the negative nda' 'not'
    (e.g. enclitic na follows nda' in (38) and (111), and
        enclitic pa follows nda' in (100), (102), (106), (113), and (115));

(iii) the head word in a verb phrase
    (e.g. enclitic na follows a verb in (81) and (109)); and

(iv) viewpoint aspectual auxiliaries
    (e.g. enclitic na follows punga 'finish' in (107)).

With respect to clauses, enclitic particles occur in second position within the clause immediately following the clause-initial element. Specifically, enclitic particles can follow:

(i) subordinate clause introducers
    (e.g. enclitic na follows punga 'after' in (109)); and

(ii) WH-words that refer to arguments
    (e.g. enclitic pa follows eisi 'who' in (112)).

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There are two types of enclitic pronouns: phonologically reduced forms of nominative case pronouns and actor pivot pronouns which occur in genitive case. Although both types of enclitic pronouns occur in second position, their semantic environments are in complementary distribution.

With respect to verb phrases, nominative case enclitic pronouns occur in second position following the first constituent of the verb phrase. Specifically, these enclitic pronouns can follow:

(i) the negative imperative dei 'don't'
   (e.g. enclitic u '2pNOM' which is the reduced form of uhu in (94));
(ii) the head word in a verb phrase
   (e.g. enclitic ou '1sNOM' (cf. footnote 71) follows a verb in (51), (62), (95), (116), and enclitic a '2sNOM' which is the reduced form of aha follows a verb in (55)); and
(iii) viewpoint aspectual auxiliaries
   (e.g. enclitic ou '1sNOM' follows mulei 'started' in (101)).

With respect to clauses, nominative case enclitic pronouns occur in second position following the first constituent of the clause. Specifically, they can follow temporal words (e.g. enclitic a '2sNOM' follows a temporal word in (46), (119)).

(119) Kahal a kintabm n-apu' nu
still 2sNOM remember DEAD-grandfather 2sGEN
'Do YOU still remember your dead grandfather?'

85 The second example of na in (109) is referred to here; i.e. after the verb m-iaa 'APL-follow'.

86 N-apu 'DEAD-grandfather' is interesting linguistically and anthropologically. From the perspective of linguistics, n- is either a prefix or a clitic. It is similar to the grammatical markers sī and nī which occur before personal names and certain kinship terms (cf. §1.3.1). Nī is reduced to [n] before names and kinship terms beginning with a vowel (cf. footnotes 26 and 27 in §1.3.1; cf. also footnote 107 in §2.3.1). Thus, in (119) if the addressee's grandfather is alive, the correct form is normally ny apu' 'NPIV grandfather'. I say "normally" because a third form marked by d- is used to refer to close kin (parents or grandparents) when they are alive, but physically distant. I follow an orthographic convention in attaching n- and d- to apu', but do not attach the normal grammatical marker ny. Phonologically, there is no reason to distinguish the three. n- and d- only occur with kinship terms which refer to 'mother', 'father', 'grandfather', and 'grandmother'. This, along with the connection to necronyms mentioned in footnote 59, is anthropologically interesting. Hockett (1958:238) refers to a similar phenomena which he calls "noun tenses."
With respect to verb phrases, genitive case enclitic pronouns occur in second position following the word bas 'PST', e.g. in (120) ku 'lsGEN' follows bas.

(120) Bas ku kerai dii Kudat.
      PST lsGEN work in Kudat
      'I worked in Kudat.'

Enclitic pronouns were not included in Table 1.2 ($1.3.1$) when case and pronouns were first introduced. Table 3.1 is a revision of Table 1.2. It includes full forms, reduced clitic forms, and negated pronouns.$^{87}$

Table 3.1: Bonggi Pronouns (Revised)

<table>
<thead>
<tr>
<th>NOMINATIVE</th>
<th>GENITIVE</th>
<th>ACCUSATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full form</td>
<td>Enclitic</td>
</tr>
<tr>
<td>1singular</td>
<td>ou</td>
<td>ou</td>
</tr>
<tr>
<td>1dual</td>
<td>kita</td>
<td>ta</td>
</tr>
<tr>
<td>1plural-inclusive</td>
<td>kiti</td>
<td>ti</td>
</tr>
<tr>
<td>1plural-exclusive</td>
<td>ihi</td>
<td>i</td>
</tr>
<tr>
<td>2singular</td>
<td>aha</td>
<td>a</td>
</tr>
<tr>
<td>2plural</td>
<td>uhu</td>
<td>u</td>
</tr>
<tr>
<td>3singular</td>
<td>sia</td>
<td></td>
</tr>
<tr>
<td>3plural</td>
<td>sigelama</td>
<td></td>
</tr>
</tbody>
</table>

Bonggi enclitics are always monosyllabic. With the exception of first person singular ou which is monosyllabic, nominative case enclitics are phonologically reduced from the full forms. Only first and second person pronouns occur as nominative case enclitics.

$^{87}$Negated pronouns were mentioned in footnotes 53 and 55 of Chapter 2.
All genitive case pronouns have the same form, whether or not they are enclitic. However, third person plural sigelama cannot be an enclitic since it is polysyllabic. Genitive case pronouns always follow their head.\(^{88}\) Nonclitic genitive case pronouns occur in syntactic environments following:

(i) their nominal head in possessive NPs

(e.g. ku '1sGEN' in (47), (48), (49),\(^{89}\) (81),

\(ta\) '1dGEN' in (93a), (93b),

\(mi\) '1pexcGen' in (27), (28),

\(nu\) '2sGEN' in (10), (14), (119),

\(nyu\) '2pGEN' in (51),

\(nya\) '3sGEN' in (66), (68), (69), (91), (99), and

\(sigelama na\) '3pGEN' in (111), (cf. §1.3.2));

(ii) their verbal head when the pronoun is a nonpivot actor

(e.g. ku '1sGEN' in (117) (cf. §1.3.1).

(iii) WH-words that refer to adjuncts

(e.g. ku '1sGEN' follows nggien 'where' in (39), and

\(nu\) '2sGEN' follows nggien 'where' in (40), (41), (cf. footnote 21));

(iv) subordinate clause introducers

(e.g. ku '1sGEN' follows pegpungaan 'as soon as finished' in (110)); and

(v) relative pronouns

(e.g. nu '2sGEN' follows gien 'that' in (97) (cf. footnote 67)).

\(^{88}\)Dyen (1974) reconstructs the genitive pronouns for Proto-Austronesian and refers to them as enclitics. However, he provides no criteria for distinguishing them as clitics other than the fact that they are postposed (1974:19; cf. Nevis & Joseph 1992:94ff. for a discussion of criteria).

\(^{89}\)Note that in (48) and (49), [k] is weakened to [h].
Genitive case enclitic pronouns occur in second position of verb phrases following the tense marker bas 'PST', e.g. (120). Unlike the full-form genitive pronouns described above, third person plural (sigelama) cannot occur as an enclitic so it always precedes bas 'PST' as in (121).

Similarly, nonpronominal pivots (e.g. si Nunga 'Nunga' in (122)) must precede bas 'PST' since they cannot occur in the enclitic position.

(121) Sigelama na bas kerai dii Kudat.
     3pNOM DEF PST work in Kudat
     'THEY worked in Kudat.'

(122) Si Nunga bas kerai dii Kudat.
     PIV Nunga PST work in Kudat
     'NUNGA worked in Kudat.'

When verbs are negated, nda' 'not' occurs as the outermost constituent of the verb phrase. In negated past tense verb phrases, bas 'PST' follows the negator, e.g. nda' bas in (91). Thus, according to the constituent order for verb phrase elements presented in (103), bas in (91) is either in second position (enclitic position) or auxiliary position. Unlike the viewpoint aspectual auxiliaries in (98) which are polysyllabic, the past tense marker is monosyllabic. Thus, the phonological evidence suggests that bas may itself be functioning as an enclitic in second position of the verb phrase. However, the syntactic evidence suggests that bas occurs in auxiliary position because: (i) bas, like viewpoint aspectual auxiliaries, can occur in sentence intial position (e.g. (120)); (ii) bas, like viewpoint aspectual auxiliaries, can occur in initial position within a verb phrase and be followed by an enclitic (e.g. (120)); and (iii) bas, like viewpoint aspectual auxiliaries, can be preceded by an enclitic (e.g. in (123) bas is preceded by pa 'yet').

(123) Mingin nda' pa bas ki-saa.
     want not yet PST have-spouse
     'I want someone who has never been married.'

Since the syntactic environment for bas is so similar to the syntactic environment of the phasal auxiliaries described in this section, why not just consider bas to be a nonphasal aspectual auxiliary indicating perfective viewpoint aspect? In such an analysis, bas is comparable to Malay sudah 'already'. In fact, this is exactly what I did in Boutin (1991a:13). However, my 1991 analysis failed to take into account the analysis of enclitics presented here. The two sets of enclitic
pronouns (nominative and genitive case) suggest two different functions. Why should the phasal aspectual auxiliaries occur with nominative case enclitic pronouns, but \textit{bas} occur with genitive case enclitic pronouns? If all of these auxiliaries deal with viewpoint aspect, we would expect them to be treated the same with respect to enclitics.

The solution suggested here is that \textit{bas} is primarily a tense operator and phasal auxiliaries are primarily viewpoint aspect operators. I use the term 'primarily' since tense, mode, and aspect are not always as separate and distinct as people have tended to conclude (cf. Wallace 1979; Wallace 1982). In fact, aspect is intricately related to two other verbal categories - modality and tense. An interesting question, which is beyond the scope of this work, is how aspect as described here is related to modality and tense. Without a careful investigation of the function of \textit{bas} in large amounts of text, I hesitate to pigeon-hole \textit{bas} as belonging to one grammatical category as opposed to another. Actually, since \textit{bas} has certain temporal, aspectual, and modal features associated with it, \textit{bas} appears to be a prime candidate for a "fuzzy" category (cf. the analysis of \textit{g}-marked verbs in §3.1.2).

In the remainder of this section, I present evidence which suggests that \textit{bas} is primarily a tense operator, but not a discrete category. I begin with information from related languages.

According to Anderson (1988b:339), Samoan has a set of preverbal subject clitics, which appear as clitic elements following a sentence-initial tense marker and preceding the verb. This is the same syntactic pattern that Bonggi has if \textit{bas} is analyzed as a tense marker. Whereas Bonggi enclitic pronouns occurring with \textit{bas} are in the genitive case and contrast with nominative case pronouns, Anderson says nothing about case. However, Chung (1978:31) states that clitic pronouns have special clitic morphology and are not marked for case. According to Chung (1978:35), clitic placement in Samoan moves pronominal subjects to second position in the clause, immediately following a tense-aspect-mood particle. This tense-aspect-mood particle in Samoan has several functions (Chung 1978:20) apparently defying a discrete category analysis.

According to Walton (1983:3) past tense in Sama Pangutaran is not indicated by verbal inflection but by the particle \textit{bay}. On the other hand, Pallensen (1985:101) claims that the basic
word in the verb phrase of Proto-Sama-Bajaw is: aspect marker - state marker - verb (e.g. (124)), and bai indicates completive aspect.90

(124) Bai na amatay.
    aspect-COMPLETIVE state-ACHIEVED verb-DIE
    'Dead already.'

Proto-Sama-Bajaw (Pallensen 1985:102)

As stated above, the categories viewpoint aspect, tense, and modality are intricately related. A definitive analysis of any of the three requires an examination of how they interface with each other. This section on viewpoint aspect within the verb phrase has dealt primarily with viewpoint aspectual auxiliaries, but I have suggested that there is also a tense auxiliary which occurs within the verb phrase. Nothing has been said regarding modal auxiliaries which also occur. Auxiliaries which primarily have a modal function include: kaap 'can' (permission), mistii' 'must' (obligation), and kali 'maybe' (possibility). The permission and obligation modal auxiliaries can be negated (e.g. nda' kaap 'cannot', nda' mistii' 'do not have to'), but the possibility modal cannot. The modal auxiliaries have a distribution like that of the phasal viewpoint auxiliaries including their position with respect to enclitics. Furthermore, they are like phasal viewpoint auxiliaries in that they occur with nominative case enclitics.

There is another auxiliary adak 'almost' which has both a temporal and a modal function.91 It contrasts with both the auxiliary bas and phasal viewpoint auxiliaries which primarily have a temporal function. Adak 'almost' refers to a situation prior to the time of utterance that the speaker believes was possible, but that did not actually occur. Adak can occur with achievements (e.g. (125)), activities (e.g. (126)), and accomplishments (e.g. (127)).92

90The Bonggi clause corresponding to (124) is: Bas na meti 'dead already'. Topping and Dungca (1973:262) have a very interesting note on the origin of bai, which marks future tense in Chamorro.

91Palmer (1986:209) states that the category which is most frequently and most closely related to modality is tense.

92Compare bas which occurs as an auxiliary with all four situation types: states, achievements, activities, and accomplishments (Boutin 1991a:13).
(125) \textit{Adak} ku me-dabu' (mV-dabu').
\hspace{0.5em} almost 1sGEN ACH-fall
'I almost fell.'

(126) \textit{Adak} ku m-ohodn (-m-ohodn).
\hspace{0.5em} almost 1sGEN ACY-eat
'I almost ate it (and was not supposed to).'

(127) \textit{Adak} ku ng-orikng (ng-korikng).
\hspace{0.5em} almost 1sGEN APL-dry
'I almost dried it (and was not supposed to).'

The implication associated with \textit{adak} is that, had the situation happened, it would have had a negative consequence. For instance, in (126) the food which the actor almost ate was not intended for him; had the actor eaten it, there would have been negative consequences for the person for whom the food was intended. That is, the actor unknowingly almost did something that he was not supposed to do.

\textit{Adak} 'almost', like \textit{bas}, occurs with genitive case enclitic pronouns (e.g. (125), (126), (127)). These two auxiliaries are unique in this respect. All other auxiliaries occur with nominative case enclitic pronouns. Furthermore, \textit{adak} and \textit{bas} are in complementary distribution; i.e. they are incompatible with each other. These two characteristics of \textit{adak} and \textit{bas} suggest that they belong to the same grammatical category. Both \textit{adak} and \textit{bas} refer to situations that occurred before the time of utterance. The difference between the two is modal. \textit{Bas} refers to situations that really occurred, whereas \textit{adak} refers to situations that did not really occur; i.e. the situation was not actually realized.

\textit{Adak} 'almost', like \textit{bas}, is not restricted to clause-initial position, e.g. (128b). 93

(128) a. ... \textit{Adak} bali i Meku i mu-tukng.
\hspace{0.5em} almost house NPIV Michael ACH-burn
\hspace{0.5em} 'MICHAEL'S HOUSE almost burned down.'

\begin{footnotesize}
93 The sentences in (128) are taken from a text which was recorded the day after a forest fire almost destroyed the village of Limbuak Darat on April 15, 1983. The numbers on the right refer to clause numbers in the text. Cf. Beaman, et al. (1985) for a discussion of forest fires in Sabah in 1983.
\end{footnotesize}
b. *Bali hu adak mu-tukng.* *Bali raya puin adak mu-tukng.* (4-5)
house 1sGEN almost ACH-burn house community also almost ACH-burn
'MY HOUSE almost burned down.' 'THE COMMUNITY CENTER also almost
burned down.'

c. *Bali n Tingi' adak mu-tukng.* *Bali n Tibai adak mu-tukng.* (9-10)
house NPIV Tingi' almost ACH-burn house NPIV Tibai almost ACH-burn
'TINGI'S HOUSE almost burned down.' 'TIBAI'S HOUSE almost burned down.'

d. *Sampai ma' diaadn puin, adak ku mu-tukng kai.* (11)
until with 1sACC also almost 1sGEN ACH-burn too
'Finally it reached me, and MY HOUSE also almost burned down.'

One other difference between *adak* 'almost' and *bas* 'PST' is that the main verb in clauses with
the auxiliary *bas* can be inflected with *-in-* (e.g. (129), (130), (131)), whereas the main verb in
clauses with the auxiliary *adak* cannot be inflected with *-in-* (e.g. (125), (126), (127), (128)). This
raises an important question regarding *-in-*; does it indicate tense or aspect? I have conveniently
labeled *-in-* as a past tense marker without justifying its status as either tense or aspect.95 If *bas*
and *adak* are both past tense markers with the latter referring to events that did not actually occur,
there are two reasons why *-in-* is more likely an aspect marker than a tense marker. First, if *-in-*
marks past tense, then in some cases tense is formally marked twice, once on the auxiliary and once
on the verb. Such "double" marking is not impossible, but it is inefficient. Second, if *-in-* marks
perfective/completive aspect, this accounts for the correlation of *bas* with *-in-* and *adak* with the
absence of *-in-*.

On the one hand, perfectives view a situation as a whole, without paying attention to the
internal structure of the situation. On the other hand, imperfectives pay attention to the internal
structure of the situation (Comrie 1976:16). Imperfectives refer to situations that are incomplete,
including functions such as 'try to' and 'almost'. If the primary function of *-in-* is to mark
perfective events, the absence of *-in-* with *adak* 'almost' is predictable in that *adak* 'almost' falls

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94This is a good example of metonymy where the speaker substitutes himself for the place.

95Boutin (1991a) described *-in-* as discourse-pragmatic tense-aspect.
under the domain of imperfective events. The absence of -in- with stative verbs can be explained in terms of a natural correlation between statives and imperfectives. Furthermore, it is common for languages not to allow a combination of stativity and perfectivity (Comrie 1976:51).

(129) Bas i-g-anak ba!
PST PST-VA-child EMPH
'SHE gave birth.'

(130) Kutuluadn nda' bas i-k-odop.
three.days not PST PST-NV-sleep
'HE had not slept for three days.'

(131) Terpaksa' dunya' m-ansur. Bas s-i-umpa n Domon.
forced world ACH-dissolve PST @-PST.UPL-oath NPIV Domon
'THE WORLD must be dissolved (if that happens). Domon vowed IT.

It is well-known that Philippine-type languages contain only two infixes -in- and -um-. These two infixes show up in different forms and different orders in Austronesian languages. -in- has been treated as both a tense marker and an aspectual marker in different languages (cf. Reid 1992).

Although an investigation of the function of -in- in Bonggi is directly relevant to this study, it is beyond the scope of this work.

This section introduced the different types of auxiliaries including phasal aspectual auxiliaries. It also illustrated how viewpoint aspect is intricately related to tense and mood by briefly examining the auxiliary bas and comparing it to other auxiliaries including adak 'almost'. I also introduced enclitics, primarily as a syntactic test to distinguish elements of the verb phrase from elements outside of the verb phrase. The discussion of enclitics dealt primarily with syntactic distribution and said very little about the semantics of enclitic particles.

The two enclitic particles which occur most frequently are na 'PRF' and pa 'yet'. Both of these enclitics deal with the perfect (Boutin 1991a:20f.). The prototypical feature of the perfect is

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96 This analysis agrees with Hopper and Thompson's Transitivity Hypothesis (1980:255). The hypothesis claims there is a correlation between perfective, realis, and high transitivity versus imperfective, irrealis, and low transitivity. In this view, Bonggi adak is an indicator of low transitivity marking irrealis, whereas -in- is an indicator of high transitivity marking perfective.
current relevance (cf. Comrie 1976:52; Li, Thompson & Thompson 1982).\textsuperscript{97} The perfect normally indicates the continuing (current) relevance of a past situation. In Bonggi, situations which have current relevance and are viewed as having taken place in the past are marked with \textit{na}. Situations which have current relevance and are viewed as yet to take place are marked with \textit{pa} (cf. King 1991). The enclitics themselves provide an important contribution to viewpoint aspect. For example, \textit{pa} views a situation as not having occurred yet or as potential (Boutin 1991a:15).

The perfect signals a situation that is relevant to another situation. It has a deictic function which is similar to tense because its meaning deals with the time of a situation relative to another time (cf. Bybee 1985:159).\textsuperscript{98} Further analysis needs to be done on the semantics of \textit{na}, \textit{pa}, and other enclitics; specifically, how they interact with other elements of the verb phrase, especially \textit{bas} and -\textit{in}-(cf. Antworth 1979:69; Schachter & Otanes 1972, §6.3, §6.4, and §6.5).

3.3. Viewpoint Aspect outside Verb Phrases

Viewpoint aspect in Bonggi is marked by verb affixation, e.g. \textit{g}- (cf. §3.1); by a system of free form auxiliaries, e.g. \textit{punga} 'finished' (cf. §3.2); by a system of enclitic particles, e.g. \textit{pa} 'yet' (cf. §3.2); and/or by a system of temporal adverbs, e.g. \textit{kahal} 'still'.

This section deals with the adverbial \textit{kahal} 'still' which occurs outside the verb phrase and has a viewpoint aspectual function.\textsuperscript{99} Although viewpoint aspect may be studied in the verb system

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\textsuperscript{97}Although current relevance is a rather vague notion, I do not attempt to clarify it here since a detailed account of the perfect is outside the scope of this work.

\textsuperscript{98}The aspectual meanings most commonly associated with the perfect are: current relevance, completion, and result, whereas nonaspectual meanings include: indefinite past, embedded past, and extended now. Perhaps the perfect should be considered a grammatical category distinct from both aspect and tense (cf. Brinton 1988:7).

\textsuperscript{99}Cf. §5 of Boutin (1991a) for a discussion of temporal adverbs in Bonggi. The specific iterative marker \textit{malik} 'again' occurs outside the verb phrase, but it is not included here as it was discussed in §3.1.3.
and in adverbials,\textsuperscript{100} the function of this section is not to examine the complete adverbal system in terms of its contribution to aspect. Even though such a study would be very interesting, especially when enclitic particles with an adverbal function are considered (e.g. ga and ba in (132)), it is beyond the scope of this work.\textsuperscript{101}

\begin{verbatim}
(132) M-ori (ng-bori) a ga ba tei\textsuperscript{1}
APL-give 2sNOM CONTRAST EMPH -
'Go ahead and give it to them!'\textsuperscript{102}
\end{verbatim}

Four phasal auxiliaries were described in §3.2. One indicates the start of an event (mulei), and another indicates the end of an event (punga). There is no phasal auxiliary indicating the middle of an event. Stopping (berenti) and continuing (nambukng) are only points somewhere between the start and conclusion of an event. They do not pick out a unique portion of an event the way 'start' and 'finish' do. From the perspective of semantics, mulei 'started/begun' and punga 'finished' are the best examplars of phasal auxiliaries, whereas berenti 'stopped' and nambukng 'continue' are more marginal members. Since this category is morphosyntactically "squishy" (cf. §3.2), we can hardly expect otherwise. In what follows, I examine the temporal adverb kahal 'still' (e.g. (117)) which, like 'stop' and 'continue', deals with the internal temporal constituency of situations (cf. Comrie 1976:3).

\textsuperscript{100}See, for example, Vet (1990) for a discussion of the relationship between aspect and durational adverbs in French. For a discussion of the relationship between adverbs, events, and agency in English see Vendler (1984). Cf. also Richards (1982) and Heny (1982).

\textsuperscript{101}Because the perfect is marked by enclitic particles, another interesting study would involve restrictions on temporal adverbs with the perfect. In English there are well-known restrictions on temporal adverbials with the present perfect, e.g. I have talked to her today versus *I have talked to her yesterday.

\textsuperscript{102}The free translation of (132) is intended to imply a mild imperative which is used by a speaker who wants to lightly mock the addressee. The speaker knows the addressee intends to give the (unspecified) theme to the (unspecified) recipient, but the speaker actually thinks the addressee should not give it. Although both theme and recipient are unspecified in (132), they are perfectly clear from the pragmatic context. From the speaker's perspective, the implication associated with (132) is that the addressee will be sorry if he/she gives the theme to the recipient.
The temporal adverb *kahal* 'still' (e.g. (133)) indicates that a situation is continuing. It denotes continuous viewpoint aspect (cf. Boutin 1991:a:12), and focuses on the present.

Continuous viewpoint aspect presents an interior perspective on a situation ignoring both its beginning and its end (cf. Smith 1983:482). That is, this perspective makes reference to a moment or interval of a situation other than the beginning or end (cf. *beranti* 'stop' and *nambukng* 'continue'). The term continuous is used instead of progressive because this viewpoint aspect can occur with stative verbs as well as nonstative verbs.103

(133) *Kahal ou kerai dii Kudat.*
1sNOM still work in Kudat
'I am still working in Kudat.'

Continuous viewpoint aspect is marked by the adverb *kahal* 'still' which can occur in clauses with stative (e.g. (134)), activity (e.g. (135), (46), (51)), and accomplishment (e.g. (136), (137)) verbs.

(134) *Sia kahal ng-korikng (m-korikng).*
3sNOM still ST-dry
'IT is still dry.'

(135) *Sia kahal m-ohodn (-m-ohodn) babi.*
3sNOM still ACY-eat pork
'HE still eats pork.'

(136) *Sia kahal ng-orikng (ng-korikng) piasu.*
3sNOM still APL-dry coconut
'HE is still drying coconut.'

(137) *Piasu kahal kiring-in (korikng-Vdn) nya.*
coconut still dry-UPL 3sGEN
'He is still drying COCONUT.'

The continuous viewpoint adverb *kahal* 'still' can also occur in nonverbal stative clauses, e.g. the equational stative clause in (138).104 As pointed out in §3.2, if the negative *nda* 'not' occurs,


104 Cf. §2.1.1 for discussion of equational stative clauses. Locative states are another type of nonverbal clause which can occur with *kahal* 'still' (cf. §2.1.2). See (107) for the use of *punga* 'finished' in a stative clause.
it is the leftmost constituent of the verb phrase (e.g. nda' pa nambugkng kerai 'not yet continue working' in (115)). Kahal 'still' occurs outside the verb phrase to the left of the negative (e.g. (139)), and has a wider scope than viewpoint aspecual distinctions which occur inside the verb phrase.

(138) Sia kahal kenahadn.
3sNOM still bachelor
'HE is still a bachelor.'

(139) Sia kahal nda' mingin kidoor su-suad nu.
3sNOM still not want hear IT-speak 2sGEN
'SHE still does not want to hear what you say.'

When kahal 'still' and other temporal adverbs such as kali-kali 'occasionally' occur as the first constituent of a clause, they can be followed by a nominative case enclitic pronoun. For example, enclitic a '2sNOM' follows kahal in (46) and (119). Phasal auxiliaries can also occur as the first constituent of the clause, in which case they, too, can be followed by a nominative case enclitic pronouns, e.g. beranti 'stop' in (140).

(140) Beranti a na kerai?
stop 2sNOM PFT work
'Have YOU stopped working?'

Sentences (46), (119), and (140) are interrogatives with second person enclitics. Because temporal adverbs can occur either before the pivot (e.g. kali-kali 'occasionally' in (141a)) or after the pivot (e.g. kali-kali in (141b)), and because ou '1sNOM' is both the full and enclitic form (cf. Table 3.1), the pronoun following kahal in (133) in not necessarily an enclitic.

occasionally 3sNOM work in Kudat 3sNOM occasionally work in Kudat
'Occasionally HE works in Kudat.' 'HE occasionally works in Kudat.'

Although temporal adverbs such as kahal 'still' have syntactic similarities with auxiliaries (cf. (119) with (140)), they also contrast with auxiliaries in that they occur outside of the verb phrase, e.g. (142).

105 There are preferences and frequency differences among the temporal adverbs as to whether they precede or follow the pivot. For example, kahal 'still' rarely precedes a third person pivot.
(142) Uhu kahal nda' pa kerati.
2pNOM still not yet understand 'YOU still do not understand.'
CHAPTER 4
CONCLUSION

I begin this chapter with a summary of aspect in Bonggi (§4.1) which is followed by a discussion of the theoretical implications of this study for other languages and a theory of aspect (§4.2).

4.1. Summary

This dissertation is based on a fundamental distinction between situation aspect (Aktionsart) and viewpoint aspect. I began in §1.2 with a universal four-way semantic distinction in situation types: 1) states, 2) achievements, 3) activities, and 4) accomplishments. These four situation types are overtly marked in Bonggi verb morphology. A significant amount of evidence to support this claim was presented in chapter 2, where I provided a classification of verbs into the four basic situation types and various sub-types. This verb classification is semantically based, and encoded in the verb morphology. Hundreds of verbs were presented in chapter 2 to illustrate that the correlation between verbal semantics and verb morphology is not some isolated phenomenon. Each verb class was given a formal representation in terms of logical structures. These logical structures were then linked to the verb morphology by a series of rules which include: (i) the assignment of thematic relations; (ii) the assignment of semantic macroroles; (iii) the assignment of syntactic functions; (iv) the assignment of case; and finally, (v) verbal cross-referencing.

The four situation types are distinguished from each other by inherent aspectual features which are known as Aktionsart properties (cf. Table 1.1). The inherent aspectual features which are associated with each situation type are accounted for in the logical structures by predicates and a small set of operators such as BECOME and CAUSE.
The four situation types not only provide a framework for situation aspect (Aktionsart), but also are fundamental for understanding Bonggi verb morphology. In fact, the verbal system in Bonggi is built around the notion of situation type and other semantic notions such as viewpoint aspect, tense, mood, and pivot potential are secondary, being restricted by the different situation types.

Viewpoint aspect was described in chapter 3. Two types of viewpoint aspect were discussed in §3.1.2, simple viewpoint aspect and marked viewpoint aspect. The situation types described in chapter 2 can be presented from the perspective of either of these two viewpoints. Simple viewpoint aspect corresponds to the functionally unmarked perspective, whereas marked viewpoint aspect corresponds to the functionally marked perspective. That is, speakers normally present situations (states, achievements, activities, and accomplishments) from the perspective of simple viewpoint aspect. However, some situations, such as reciprocal events (cf. §3.1.2) and iterative events (cf. §3.1.3), are more complex than the four basic situation types; thus, they require speakers to use a marked perspective.

Chapter 3 also showed that there is a good correlation between the two types of viewpoint aspect and formal marking. Simple viewpoint aspect is frequently unmarked. Each of the four situation types can be described in terms of a prototype. Situations which correspond to the prototype are not overtly marked for simple viewpoint aspect in the verb morphology. That is, the verb morphology indicates situation type (e.g. -m- for activities (cf. §2.3) and ng- for actor-pivot accomplishments (cf. §2.4)), and simple viewpoint aspect is not overtly marked. Some situations which do not correspond to the prototype are overtly marked for simple viewpoint aspect in the verb morphology. Such situations include: (i) inherently iterative activities (see chapter 3, example (26)); (ii) inherently iterative accomplishments (see chapter 3, example (32)); and (iii) nonprototypical accomplishments with an unaffected undergoer which is neither a patient nor a theme that changes location (see chapter 3, example (35)).

In contrast to simple viewpoint aspect which sometimes is formally unmarked and other times is overtly marked, marked viewpoint aspect is always overtly marked. Marked viewpoint aspect is
used for situations which are not inherently iterative, but are presented as iterative. The overt marking that indicates iterativity includes reduplication (both partial and full) and the use of certain adverbs, e.g. *malik* 'again' (cf. §3.1.3).

Formal marking of viewpoint aspect is not restricted to verb morphology. Viewpoint aspect is also marked by a system of free form auxiliaries (cf. §3.2); by a system of enclitic particles (cf. §3.2); and by a system of temporal adverbs (cf. §3.3).

4.2. Implications

One of the most appealing features of Role and Reference Grammar (RRG) is that it starts with the classification of verbs into situation types: states, achievements, activities, and accomplishments. Since situation types are overtly marked in Bonggi verb morphology and are fundamental for understanding other features of Bonggi verb morphology, particularly aspect, RRG lends itself especially well to a description of aspect.

A classification which begins with situation type has important implications for pivot choice. A frequently made claim in studies of Philippine-type languages is that any noun phrase can be the pivot. A weaker claim is that any noun phrase "argument" of a verb can be the pivot (e.g. Walton 1983:1). Analyses which begin with situation type place strong restrictions on pivot possibilities; e.g. activities do not have undergoer pivots.

Within Philippine linguistics, the role of the verb morphology is usually considered as encoding the thematic role of the pivot. Obviously, verbal morphology does more than simply encode the thematic role of the pivot. If this were not so, one would expect only one affix for each thematic role. Instead, there are multiple means in some cases for expressing the same thematic role. For example, the following affixes occur with actor pivots: -m-, ng-, g-, and meg-. The affix

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1Within Philippine linguistics, the pivot has been called subject, topic, focus, and trigger. Thus, a parallel claim is any NP can be subject.
choices are not interchangeable. Choices depend on the situation type and viewpoint aspect as shown in (1).

<table>
<thead>
<tr>
<th></th>
<th>Simple viewpoint aspect</th>
<th>Marked viewpoint aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>-m-</td>
<td></td>
</tr>
<tr>
<td>Accomplishment</td>
<td>ng-</td>
<td></td>
</tr>
<tr>
<td>Activity or</td>
<td></td>
<td>meg- 'Distributive'</td>
</tr>
<tr>
<td>Accomplishment</td>
<td></td>
<td>g- 'nonDistributive'</td>
</tr>
</tbody>
</table>

Situations which involve actors (i.e. activities and accomplishments) not only have periphrastic indicators of viewpoint aspect, but they have developed morphological means for elaborating viewpoint aspect. On the other hand, states and achievements are restricted to periphrastic indicators of viewpoint aspect. The four types of situations impose viewpoint aspectual restrictions on the verb. The viewpoint aspectual possibilities are limited in terms of both form and function by the situational semantics.

Some linguists want to restrict aspect to an inflectionally marked category, excluding periphrastic means of indicating aspect such as the aspectual auxiliaries, enclitic particles, and temporal adverbs described here (cf. Anderson 1985:190; Comrie 1976:9; Dahl 1985:22). The restriction of aspect to inflectional morphology is unreasonable according to the evidence presented here.

Although aspect cannot be restricted to verb morphology, the question arises as to whether all aspectual affixes are strictly inflectional. The affixes which indicate the different situation types are derivational. This is especially clear when verbs are derived from noun or adjective roots; for

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2Dik (1981:87) claims that in languages which have different lexically governed morphological means for indicating voice, the variety of these means decreases as we go through the Semantic Function Hierarchy which he defines as (Dik 1981:70):

Agent Goal Recipient Beneficiary Instrument Locative Temporal

Thus, agents should have the greatest number of affixes in his view.
example, when accomplishment verbs such as mosi (ng-posit) 'to fish with a hook' are derived from nouns such as posi 'fish hook'. The affixes g- (§3.1.2) and meg- (§3.1.3) which indicate viewpoint aspect are also derivational. This, too, is clear when they occur with noun roots; for example when g- occurs with the noun api 'fire' resulting in the denominal verb nggapi 'to cook' (cf. example (21) in §3.1.1), or when meg- occurs with the noun lahi 'male' resulting in the denominal verb meglahi 'to chase after men' (cf. example (84) in §3.1.3). The best candidate for an inflectional aspectual marker is -in- (cf. §3.2) which is applicable to all nonstative stems.3

Another appealing feature of RRG is the treatment of aspect, modality, and tense as operators modifying different layers of the clause (cf. Figure 3.1). Such a treatment provides a framework for treating aspect independently of modality and tense, and for discussing the interrelationship of aspect with other verbal categories. This framework has both advantages and disadvantages.

One disadvantage of the model in Figure 3.1 is that it results in oversimplification of these verbal categories. I have shown here that aspect is neither morphosyntactically nor semantically a homogeneous category. Although viewpoint aspect primarily modifies the nucleus, in some cases it has a wider scope, e.g. in the case of the temporal adverb kahal 'still'. Another disadvantage of the model is that it tends to result in the treatment of aspect, tense, and modality as discrete categories when, in fact, they are interrelated.

One advantage of the model in Figure 3.1 is that it provides a principled basis for treating an important semantic distinction which has not been discussed, but has been reported to exist as an aspectual distinction in a number of Western Austronesian languages, including the two major languages, Malay/Indonesian and Tagalog. This distinction makes reference to the participants and deals with semantic notions such as volitionality. This modal operator is realized as k-Bonggi. It is treated in this model as a modal operator modifying the core, and not as a nuclear operator. That is, viewpoint aspect is a nuclear operator which means it has scope over the

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3Bybee (1985:17) claims inflection is obligatory and applicable to all stems, but this does not work without exceptions per W.J. Sullivan (personal communication).
nucleus and modifies the event or state without reference to the participants (Van Valin 1993:9). On the other hand, modality is a core operator which modifies the relation between a core argument and the event or state. Usually, the core argument involved is the actor, which is the case with agency.

The modal operator *k*- is comparable to Malay *ter*- which indicates accidental events, unintentional events, or ability (Nik Safiah 1978:112ff). Because *k*- and *ter*- make reference to the participants, they are treated as a modal operator. In his discussion of Tagalog, Dell (1983-84) refers to the forms which distinguish the situation types described in §2 as neutral forms. These neutral forms contrast with other forms specifying ability and/or involuntary action (cf. Dell 1983-84; Kroeger 1990).4

The analysis of *k*- as a modal operator assumes that agency is a nonaspectual category. Variations in agency are treated as a core operator. Agency *per se* is not an aspectual category. Features of agency or intentionality clearly intersect with aspectual features in the verb phrase, as do features of modality and causality, but these categories should be kept distinct (cf. Brinton 1988:32).

This dissertation has contributed to our understanding of a portion of the operator projection shown in the model in Figure 3.1. It has provided a test for this model, and pointed out the need for more work in RRG with respect to both the relationship between the constituent projection and the operator projection, and the interface between the different operators in the operator projection. The model is well suited for Bonggi and vice versa. That is, there is a reciprocal harmony between the model and the language.

This dissertation has laid a foundation for future work on aspect in Bonggi. Perhaps the most apparent gap is the absence of a discourse analysis of the function of aspect in Bonggi. This

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4 Cf. also Ferrell (1983) and Soenjono Dardjowidjojo (1983). Foley and Van Valin (1984:70) used the presence of the logical operator DO in the LS to account for the distinction between volitional and nonvolitional events in Tagalog. Van Valin has since revised his position. See, for example, Wilkins and Van Valin's (1993:14) comments on agency not being represented in the LS of verbs.
deficiency is not to deny the importance of discourse to a deeper understanding of aspect. I appreciate the exhortations I have received from other linguists regarding the need to work on the discourse function of verbal categories; however, the verb morphology of Bonggi and Philippine-type languages is so important at the clause level that one has a feeling that unless they understand morphosyntax at the clause level and below, there is little hope for constructing grammatical sentences, much less understanding the discourse function of inflectional morphemes such as -in-.

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5I have received exhortations from the following concerning the need for discourse analysis: Robert de Beaugrande, Chauncey C. Chu, Haig Der-Houssikian, Joseph E. Grimes, Stephen H. Levinsohn, Robert E. Longacre, Ivan Lowe, and William J. Sullivan.
REFERENCES

Agama, Jose. 1923d. Legends IV. British North Borneo Herald 41(13):126.


BIOGRAPHICAL SKETCH

Michael E. Boutin was born on July 10, 1953, in Burlington, Vermont. Just before he started first grade, his family moved to Savannah, Georgia. After graduating from high school in Savannah in 1971, he joined the U.S. Navy and was stationed on a ship in San Diego, California. He went on two cruises to Asia including the Philippines and Vietnam in Southeast Asia. After being discharged from the Navy, he returned to Savannah where he studied computer science at Armstrong State College from March 1974 until December 1975.

In January 1976, Michael moved to Santa Fe, New Mexico. After working for a year as a computer programmer and becoming a New Mexico resident, Michael decided to finish his undergraduate degree so he attended New Mexico Institute of Mining and Technology in Socorro, from January until May 1977. While there, he decided that he was no longer interested in pursuing a computer science degree and would try linguistics at the University of North Carolina at Charlotte (UNCC) that summer. While at UNCC, he concluded that, for him, linguistics was more interesting than computer science, and that since he was a resident of New Mexico, he should return there and finish his undergraduate degree at the University of New Mexico (UNM) in Albuquerque. Michael attended UNM from August 1977 until May 1978. He left UNM to attend a summer linguistics program at the University of Washington in Seattle. There he met his wife Alanna who was also interested in linguistics. They decided to move to Dallas, Texas, to pursue their study of linguistics at the University of Texas at Arlington (UTA). After studying one semester at UTA in the fall of 1978, Michael returned to Savannah to spend time with his family before marrying Alanna in Dallas in May 1979. They attended a linguistics program together at the University of Oklahoma from June until August 1978. During that time, they became members of the Summer Institute of Linguistics (SIL) and asked to be assigned to work in Malaysia. In the fall of 1979, Michael was asked to finish his M.A. in linguistics before going to Malaysia.
Michael and Alanna moved back to Dallas in January 1980, where Michael finished his M.A. at UTA in December 1980. During the summer of 1980, he attended the Summer Institute sponsored by the Linguistic Society of America (LSA) at UNM.

Michael and Alanna went to Malaysia in November 1981. They studied Malay together in Kuala Lumpur from December 1981 - April 1982. After doing some research in the state of Sabah, including a language survey of Banggi Island, they moved to Limbuak Darat, Banggi Island in November 1982. They stayed in Sabah until April 1986 at which time they returned to the U.S. where Michael attended the University of Florida (UF) from August 1986 until July 1987. At that time, the Boutins returned to Malaysia where they stayed until May 1992. Michael returned to UF in August of 1992 and in 1993 he attended the Summer Institute sponsored by the LSA at the Ohio State University. Michael and Alanna have two sons. Seth, who the Bonggi call Bonggi, was born in Malaysia in 1984, and Micah who was born in Florida in 1987. The Bonggi address and refer to Michael and Alanna as ama' Bonggi 'father of Bonggi' and indu' Bonggi 'mother of Bonggi' because, according to their custom of teknonyms, parents are called by the name of their firstborn.
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Haig Der-Houssikian, Chair
Professor of Linguistics

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Chauncey C. Chu
Professor of Linguistics

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

William J. Sullivan III
Associate Professor of Germanic and Slavic Languages and Literatures

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Donald E. Williams
Professor of Communication Processes and Disorders

This dissertation was submitted to the Graduate Faculty of the Program in Linguistics in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1994

Dean, Graduate School