

ASPECT IN BONGGI

By

MICHAEL E. BOUTIN

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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He also loaned me the money for my first linguistics course, and

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I thank all my family and the many friends in the U.S. who have encouraged and supported Alanna and I these years. My sons Seth and Micah have been very understanding and loving when I have not had as much time to play as they would have liked.

Finally, my heartfelt thanks go to my wife Alanna who is a real Proverbs 31 woman. She has been a help in every sense of the word. She has enjoyed learning Bonggi with me and living in remote villages where most westerners could not cope for a month, much less for years. Alanna has been my chief encourager and has edited all my work always with a cheerful attitude and an uncomplaining spirit.

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KEYS TO SYMBOLS AND ABBREVIATIONS

	<u>Explanation or Gloss</u>		<u>Explanation or Gloss</u>
ACC	accusative case	1	first person
ACH	achievement	2	second person
ACT	actor	3	third person
ACY	activity	@	consonant in root/stem which is separated from root/stem by an infix
APL	actor pivot accomplishment		
Arg	argument		
AS	actor subject		
CAU	causative		
d	dual		
DEF	definite		
DIR	directional verb		
DIS	distributive		
EMPH	emphatic		
exc	exclusive		
EXP	experiencer		
FPFT	future perfect		
GEN	genitive case		
IMP	imperative mood		
INSTPL	instrument pivot accomplishment		
IT	iterative		
LINK	linkage particle		
LOC	locative		
NEG	negative		
NOM	nominative case		
NP	noun phrase		
NPIV	nonpivot		
NPST	nonpast tense		
NV	nonvolitional		
O	object		
p	plural		
PFT	perfect		
PIV	pivot		
pred	predicate		
POS	positive		
PRF	perfect		
PST	past tense		
REC	reciprocal		
s	singular		
S	subject		
ST	state		
UND	undergoer		
UPL	undergoer pivot accomplishment		
US	undergoer subject		
V	verb		
VA	viewpoint aspect		

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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,

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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.

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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

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).

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the term 'Bonggi' to refer to both the language and the people, and the term 'Banggi' to refer to the island.²

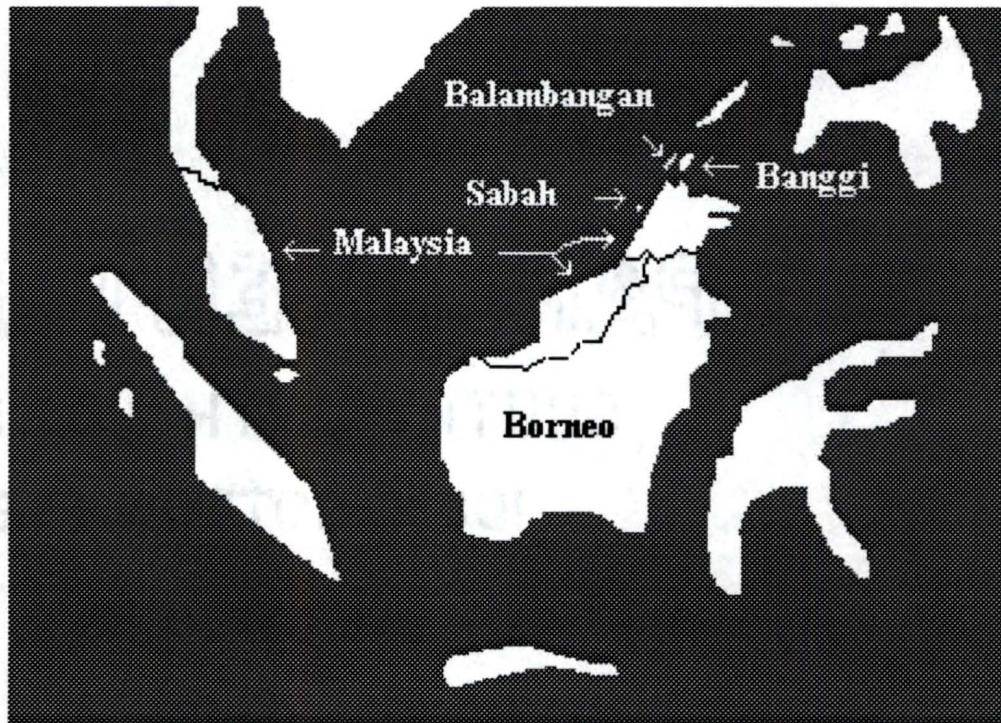


Figure 1: Location of Banggi and Balambangan in Southeast Asia

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).

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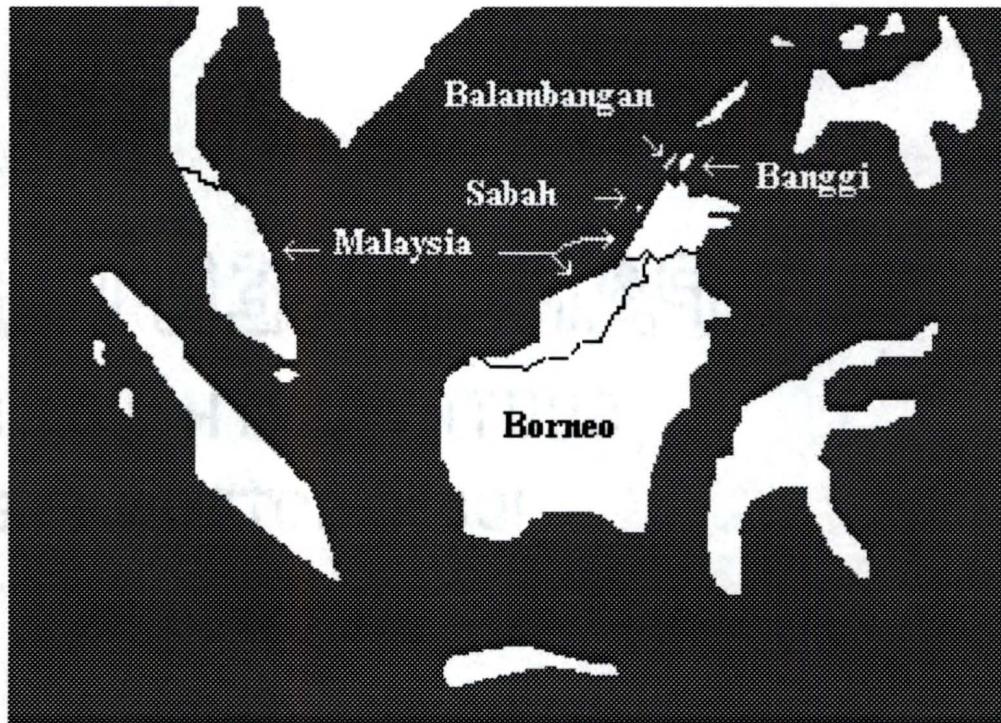


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hand, only a couple of Molbog speakers who have married Bonggi women have learned Bonggi.

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.³ 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.⁴ 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'*);⁵ 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

³However, 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).

⁴The 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).

⁵Village names are given in Malay, the national language, with Bonggi names provided in parentheses.

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Bajau who live in the two Bajau villages of Limbuak Laut (*Pega' Loud*) and Batu Layar Laut (*Liag 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

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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.⁶ 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 [eⁱ] and [oⁱ] in a small set of words.

	<u>Limbuak Darat</u>	<u>NW part of island</u>	<u>Palak Darat</u>	<u>Gloss</u>
/soid/	['so ⁱ d']	['se ⁱ d']	['so ⁱ g']	'inside'
/toin/	['to ⁱ dn]	['te ⁱ dn]	['to ⁱ dn]	'jungle'
/sin.doin/	[sɪn'do ⁱ dn]	[sɪn'de ⁱ dn]	[sɪn'do ⁱ dn]	'fingernail'
/oid/	['o ⁱ d']	['o ⁱ d']	['o ⁱ g']	'boat'

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.

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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*).⁷ 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.⁸ 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:

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 *lout* '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).

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(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.⁹ 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.

⁹Situations are comparable to **States of affairs** (e.g. Dik 1981:32-36).

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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.

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- (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 - dry¹³
 '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.¹⁴ 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.'¹⁵

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

¹⁴The 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.

¹⁵The 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.

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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) a. She ate fish.
- b. She ate the fish.
- (12) a. She walked.
- b. She walked to the store.

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' (*mpanu*), 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 *mpanu* '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*).

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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 1.1: Salient aspectual features of the four situation types¹⁷

	state	achievement	activity	accomplishment
dynamic	-	+	+	+
telic		+	-	+
causative		-	-	+

¹⁷The absence of '+' or '-' means that the feature is not relevant to the situation type.

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telic		+	-	+
causative		-	-	+

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

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- the terms **situation aspect** and *Aktionsart* synonymously to refer to the salient aspectual 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, telicity 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 aspectual 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).

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- (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, habituials.

— 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

¹⁸My 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.

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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).¹⁹

- (18) S V O
Ou ng-atad diha.
 I AS-take you
 'I take you there.'²⁰

- (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.'

¹⁹This 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.

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²⁰The subject of the sentence is capitalized in the free translation.

- (21) S V O
Sia ng-atad siidn ku dii diaadn.
 he AS-take money my to me
 'HE takes my money to me.'
- (22) S V O
Siidn etad-adn ku dii diha.
 money take-US me to you
 'MONEY is taken to you by me.'

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.

- (21) S V O
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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

	NOMINATIVE	GENITIVE	ACCUSATIVE
1singular	ou	ku	diaadn
1dual	kita	ta	dihita
1plural-inclusive	kiti	ti	dihiti
1plural-exclusive	ihi	mi	dih <i>i</i>
2singular	aha	nu	diha
2plural	uhu	nyu	dihu
3singular	sia	nya	nya ²²
3plural	sigelama	sigelama	sigelama

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)).

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²²The 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)).²³ 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.²⁴ 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, *diaadn* '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) *Etad-adn ku gulu.*
 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).²⁵

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

²⁴Some 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.

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- (24) *Etad-a' ba!*
 take-IMP.US EMPH
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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.

- (25) *Ama' nya ng-atad siidn dii indu' nya.*
 father her AS-take money to mother her
 '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.²⁶

- (26) *Si Butak ng-atad siidn dii n Tagi.*
 PIV Butak AS-take money to NPIV Tagi
 'BUTAK takes money to Tagi.'

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

²⁶The 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.

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²⁶The 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) *Si Butak ng-atad n Tagi.*
PIV Butak AS-take NPIV Tagi
'BUTAK takes Tagi there.'
- (28) *Si Butak ng-atad siidn n Tagi.*
PIV Butak AS-take money NPIV Tagi
'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) *Asu nya bas na ng-ohol asu ku.*
dog his PST PFT AS-bite dog my
'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, tekonyms, 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) *Si ama' ngatad siidn dii ny indu'.*
PIV father take money to NPIV mother
'FATHER takes money to mother.'

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) *Si Butak ng-atad n Tagi.*
PIV Butak AS-take NPIV Tagi
'BUTAK takes Tagi there.'
- (28) *Si Butak ng-atad siidn n Tagi.*
PIV Butak AS-take money NPIV Tagi
'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)).

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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

Direct core		Noncore		
Subject	Nonsubject			
	Actor	NonActor		
Nominative	Genitive	Accusative	Oblique NP	Possessive NP
Personal pronouns	<i>ou</i> 'I'	<i>ku</i> 'me'	<i>diaadn</i> 'me'	<i>dii diaadn</i> 'to me'
Personal names	<i>si Tagi</i> 'Tagi'	<i>n Tagi</i> 'Tagi'	<i>n Tagi</i> 'Tagi'	<i>dii n Tagi</i> 'to Tagi'
Common nouns	<i>asu</i> 'dog'	<i>asu</i> 'dog'	<i>asu</i> 'dog'	<i>koon asu</i> '(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.

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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'

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

- (33) *apu'-odu' nya*
 ancestors her
 'her ancestors'

- (34) *si Butak*
 PIV Butak
 'Butak'

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'* *toudn baru*
 child eldest year new
 'eldest child' 'new year'

Unlike English, which can string a series of adjectives together within a single NP, Bonggi NPs normally contain only one adjective.²⁸ 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').

²⁸In 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).

- (34) *si Butak*
 PIV Butak
 'Butak'

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- (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).

<i>toudn nti</i> 'this year'	<i>bali nti</i> 'this house'	<i>bali ina</i> 'that house'	<i>bali inoo</i> 'that house over yonder'
<i>toudn ti</i> 'this year'		<i>bali na</i> 'that house'	<i>bali noo</i> 'that house over yonder'

- (38) *Uubm nya, "Suhu ga toyuk tuni toyuk kei bagi,*
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Table 1.4: Demonstratives

Long Form	Short Form	Meaning
nti	ti	'this' (near speaker)
ina	na	'that' (near hearer)
inoo	noo	'that' (not near speaker/hearer)

Ina 'that' also has anaphoric function, as illustrated in (42) where the anaphoric reference is to what has previously been said.³⁰ 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).

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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) <i>separu lama</i> | <i>nentaadn na lama</i> | <i>tiap-tiap lama</i> |
| 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.

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- | | | | |
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every person
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| (46) | <i>dua m batakng sikiou</i>
two LINK long.thin.object cassava
'two cassava plant stems' | | |

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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.³¹

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 *miglia* 'large'. Verbs can only be derived from common nouns, not personal names.

³¹Verbs 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.

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.³¹

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

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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.

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

³³Cf. McCawley (1983) who argues that word classes can be learned from inflectional morphology regardless of any syntactic considerations.

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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.*
she not.have work
'SHE does not have work.'
- (51) *Sia kerai deirdn na ga.*
she 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).

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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.*
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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.

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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-functional 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

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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).¹ 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].

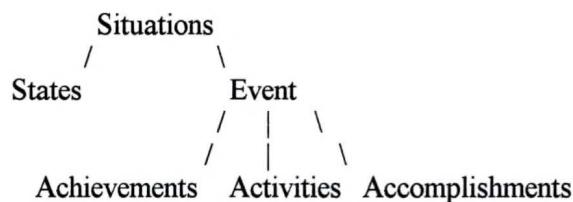


Figure 2.1: Relationship between states and events

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.² Each verb class is given a formal representation called its **Logical Structure**

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.

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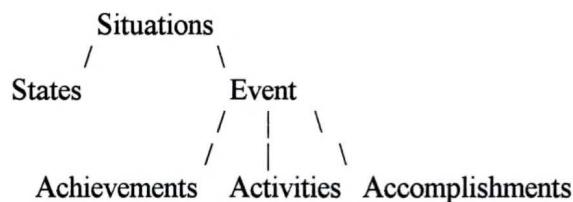


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(LS). The inherent aspectual properties associated with each verb class are accounted for in the LSs by predicates and a small set of operators (cf. Dowty 1979:71; Van Valin 1990:223).

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 2.1: Relationship between situation type and predicate type

		SITUATION				
		State		Achievement	Activity	Accomplishment
Predicate type	Nonverbal	Verb	Verb	Verb	Verb	
	nominal	locative				

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.

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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.

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.

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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 2.2: Tests for differentiating situation types

Criterion	States	Achievements		Accomplishments	Activities
		Durative	Punctual		
1. Occurs with progressive	No	Yes	No	Yes	Yes
2. Occurs with adverbs like <i>vigorously, carefully, etc.</i>	No	No	No	Yes	Yes
3. Occurs with ϕ for an hour, spend an hour ϕ ing	Yes	Yes	No	Yes	Yes
4. Occurs with ϕ in an hour, take an hour to ϕ	No	Yes	No	Yes	No

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'.⁶ 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.⁷

- (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).

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.

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'.⁶ 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.⁷

- (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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(3) LS for equational states: **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 *sia* 'he' and *kuman ku* 'my uncle' in (2)?⁹ Schwartz (1993) takes (3) to be the LS for equational/identificational clauses, and claims the θ-roles which are derived from (3) are locative and theme. She argues that in clauses such as (2), *sia* 'he' is the locative argument and *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, θ-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 θ-roles after introducing the notion of macrorole.

RRG posits two tiers of semantic roles (VV 1993:39). **Actor** and **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). Actor and undergoer correspond to 'logical subject' and 'logical object' (VV 1993:43, 46).¹⁰ Actor and 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 Ø, 1, or 2, and is largely predictable from the LS of the verb (VV 1993:46-47).

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

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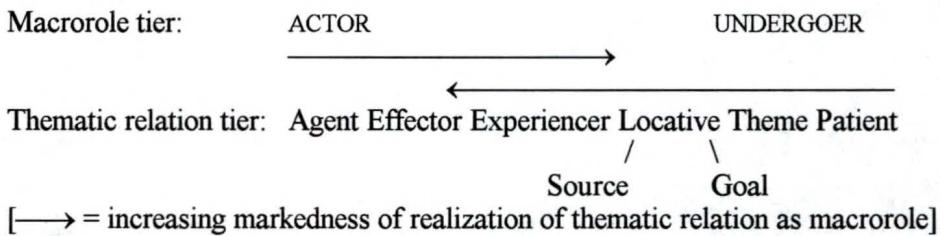
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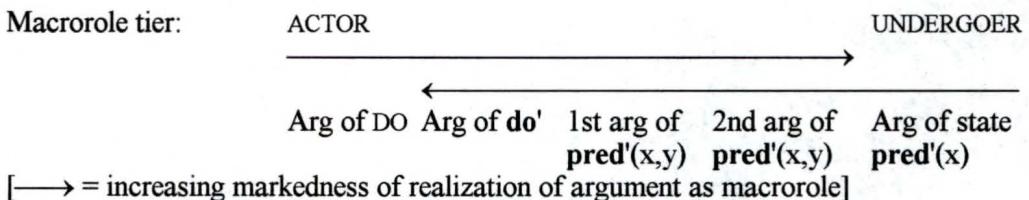
The relationship between the macrorole tier and thematic relation tier is captured in the Actor-Undergoer Hierarchy in (4) (cf. FVV 1984:59; VV 1993:44). This double hierarchy states that the thematic relation that is leftmost on the cline and either agent, effector, experiencer, or source will be the 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



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)



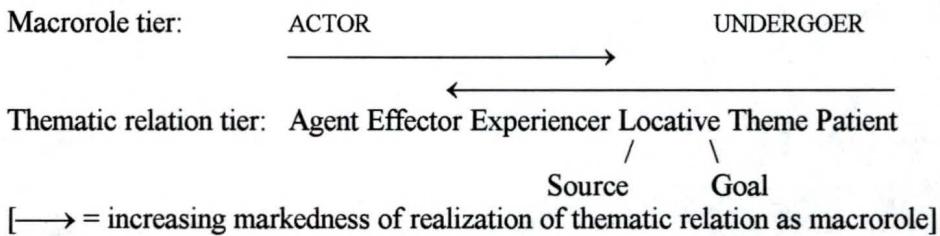
The revised Actor-Undergoer Hierarchy in (5) is based on the RRG position that θ-roles are not independently motivated. In fact, according to the view in (5), θ-roles are nothing more than mnemonics for argument positions (cf. VV 1993; Wilkins & Van Valin 1993). This alleviates the problem of θ-role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

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

¹¹The LS argument positions in (5) are described later in this chapter.

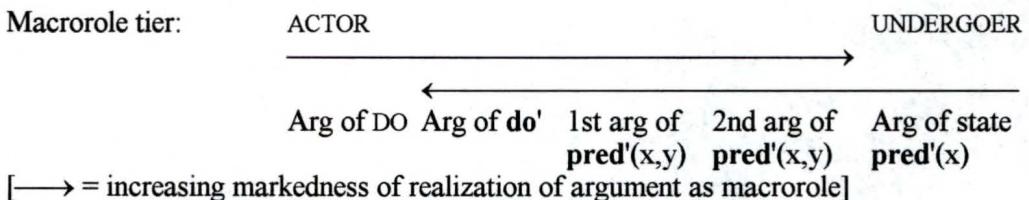
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Given: a) the revised hierarchy in (5), and b) the LS for equational clauses in (3), the question of thematic relations posed above does not even arise. The second argument of **predicate'** (x,y) is the unmarked undergoer since it is rightmost on 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) *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).¹²

(6) EQUATIONAL PREDICATE CREATION:

be' + theme → predicate

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.¹³ Because the theme argument is incorporated into the predicate by (6), it is not available as a syntactic argument. Thus, *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

¹²The 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., **be'** + the 2nd argument of **predicate'** (x,y) → predicate.

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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.¹⁴ In Bonggi equational clauses, the attribute functions as the predicate.¹⁵

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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(7) Pivot Choice Hierarchy

Actor > Undergoer > other

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,¹⁶ nonverbal predicates are not cross-referenced.

¹⁶See 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.

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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 dii 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)

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- (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 \emptyset , 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

¹⁷Activities and subclasses of activity predicates are described in §2.3. Activity predicates are defined as predicates with *do*' in their LS.

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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 \emptyset , 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

¹⁷Activities 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

Form	Meaning
diti	'here' (near speaker)
dia	'there' (near addressee)
dioo	'there' (not near speaker or addressee, but usually visible)
dii	'yonder' (not visible)

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.

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Table 2.4: Nonspecific spatial deictics

Form	Meaning
kati'	'somewhere here' (near speaker)
kana'/kono'	'somewhere there' (near addressee)
kenoo	'somewhere there' (not near speaker or addressee, but usually visible)
kuii'	'somewhere yonder' (not visible)

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 1sACC
 'HE is beside me.'

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

- (13) a. LS : **be-at' (x,y)** x=locative, y=theme
 b. Assign thematic relations: *bali nya* 'his house' ← locative²⁰
sia 'he' ← theme
 c. Assign semantic macroroles: undergoer ← theme 1 Macrorole
 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
dii soid 'inside'

(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.

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Nonverbal locative clauses (e.g. (8), (11), and (12)) have two thematic roles, but only one core syntactic argument position and one macrorole.²¹ 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 (*sia* '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.²²

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 *diaadn* 'me' in (12). A summary analysis of (12) would be the same as that provided for (11) in (13), with the exception of *diaadn* 'me' being assigned the thematic relation locative in (13b) and the assignment of accusative case to *diaadn* 'me'.

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

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.

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Table 2.5: Locative preposition combinations

Form	Meaning	Form	Meaning
dii libuat	on top of	dii sidukng	below; underneath
dii sirib	below; underneath	dii soid	inside ²³
dii ruar	outside	dii sodi	beside; in the vicinity of
dii tingguangan	in the face of	dii kimidiadn	behind; after
dii puguluadn	before; in front of	dii simbela'	on the side; on the other side
dii tenga'-tenga'	in the middle of	dii seborokng	on the other side of a body of water

Because the LS in (9) represents the class of locative statives, any of the spatial deictics 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.'

²³*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).

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- (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) x=locative, y=theme
 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).²⁵

(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

²⁴Equational 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)).

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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).

²⁷Cf. the assignment of the locative argument to the syntactic status of direct core argument in (18e), 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'.

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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 "Ø".²⁹

- (19) *Sia dii.*
 3sNOM there
 'HE is there.'

- (20) a. General LS for locative statives: *be-at' (x,y)* x=locative, y=theme
 b. Clause-specific LS for (19): *dii* 'there' (\emptyset , *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.

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

²⁸Recall that *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, *dii* functions as the predicate of a locative clause. For instances where *dii* functions as a simple preposition see §1.3.1, examples (25) and (26).

²⁹Cf. VV (1993:156; fn. 46).

³⁰A similar clause-specific LS can be provided for (14).

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³⁰A 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).*³¹
 3sNOM ST-dry
 'IT is dry.'

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

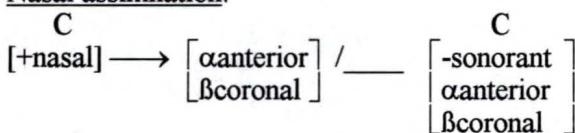
- (22) LS for condition statives: predicate' (x)

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'

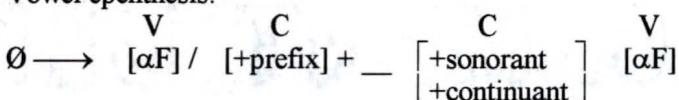
³¹Morphophonemic alternations in Bonggi verbs are complex. Roots and accompanying verbal affixes are enclosed in parentheses following the surface forms. Within roots, nasals are always homorganic with contiguous consonants. The following nasal assimilation rule makes nasal consonants homorganic with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

Nasal assimilation:



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:



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'.

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).*³¹
 3sNOM ST-dry
 'IT is dry.'

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

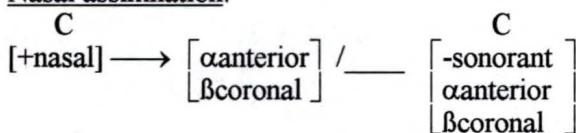
- (22) LS for condition statives: **predicate' (x)**

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')
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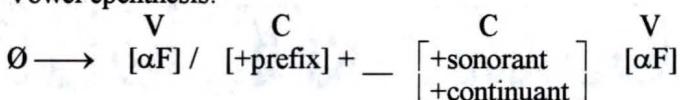
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According to (10a.2), the verb takes one macrorole since it has only one argument in its LS.

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.

(24)	/m-/	/n-/		
	m-ayad	ST-pretty	n-dalabm	ST-deep
	m-enta'	ST-unripe	n-doot	ST-bad
	m-ingi	ST-crazy	n-dupakng	ST-foolish
	m-iskidn	ST-poor	n-duruk	ST-fast
	m-omis	ST-sweet	n-sega'	ST-red
	m-udap	ST-hungry	n-tihukng	ST-crooked
	m-panas	ST-hot	n-togi'	ST-pregnant
	m-pia	ST-good	n-took	ST-ripe
	m-pagadn	ST-difficult		
	m-pala	ST-spicy hot		
	m-puti'	ST-white		
	m-basa'	ST-wet		
	m-basa	ST-generous		
	/ŋ-/	/mV-/		
	ng-garakng	ST-ferocious	me-lambat	ST-slow
	ng-gitiukng	ST-dizzy	me-langgu	ST-long
	ng-kapal	ST-thick	mi-libuat	ST-high
	ng-korikng	ST-dry	mi-liug	ST-tall
	ng-kotul	ST-hard	me-ramig	ST-cold
			mu-runggu'	ST-slow

³²Condition 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).

³³In 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).

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	m-panas	ST-hot	n-togi'	ST-pregnant
	m-pia	ST-good	n-took	ST-ripe
	m-pagadn	ST-difficult		
	m-pala	ST-spicy hot		
	m-puti'	ST-white		
	m-basa'	ST-wet		
	m-basa	ST-generous		
	/ŋ-/	/mV-/		
	ng-garakng	ST-ferocious	me-lambat	ST-slow
	ng-gitiukng	ST-dizzy	me-langgu	ST-long
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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

³⁴Perhaps 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 *kem-alus* '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.

³⁵See (22) for the general LS.

³⁶Longacre (1976:64-65) refers to nouns like *odu* 'sun' in (26) as optional instruments. Bonggi resorts to a quasi-passive in the surface syntax of condition stative clauses with optional adjuncts (cf. Longacre 1976:65).

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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: | predicate' (x) | x=patient |
| b. Clause-specific LS for (26): | from' (x, [predicate' (y)]) | x=antecedent cause,
predicate' (y)=resulting
state, |
| | | y=patient |
| c. Assign thematic relations: | <i>ga'</i> 'from' (<i>odu</i> 'sun', [<i>korikng</i> 'dry' (<i>sia</i> 'it'))] | |
| d. Assign semantic macroroles: | <i>sia</i> 'it' ← patient | |
| e. Assign syntactic functions: | <i>odu</i> 'sun' ← effector (antecedent cause) | 1 Macrorole |
| f. Assign case and prepositions: | <i>undergoer</i> ← patient | |
| | <i>pivot</i> ← <i>undergoer-sia</i> 'it' | |
| | <i>oblique adjunct</i> ← effector (antecedent cause)- <i>odu</i> | |
| | | 'sun' |
| | <i>pivot-sia</i> 'it' ← nominative case | |
| | <i>effector</i> (antecedent cause)- <i>odu</i> 'sun' ← oblique <i>ga'</i> | |
| | | 'from' |
| g. Cross-reference verb: | <i>korikng</i> 'dry' ← <i>m-</i> '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).

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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.⁴⁰ 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

⁴⁰Or, stated another way, one function of LSs is to subcategorize verbs (cf. the introduction to this chapter).

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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 1sNOM 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: $\text{be}'(x, [\text{predicate}'])$ $x = \text{experiencer}$,
predicate' = theme

b. Clause-specific LS for (28): $\text{be}'(\text{ou}'T, [\text{ramig}'\text{'cold}'])$

c. Assign thematic relations: $\text{ou}'T \leftarrow \text{experiencer}$

d. Create experiencer predicate by (30): $\text{be}' + [\text{ramig}'\text{'cold}'] \longrightarrow \text{predicate}$

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

f. Assign syntactic functions: $\text{pivot} \leftarrow \text{undergoer-ou}'T$

g. Assign case and prepositions: $\text{pivot-ou}'T \leftarrow \text{nominative case}$

h. Cross-reference verb: $\text{ramig}'\text{'cold'} \leftarrow -an'\text{EXP}'$

(30) EQUATIONAL/ EXPERIENCER PREDICATE CREATION: (cf. Van Valin 1990:234)

be' + theme → predicate

⁴¹Whereas 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).

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.

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- (28) *Rimig-adn* (*ramig-an*) *ou* *na.*
 cold-EXP 1sNOM 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: $\text{be}'(x, [\text{predicate}'])$ $x = \text{experiencer}$,
predicate' = theme

b. Clause-specific LS for (28): $\text{be}'(\text{ou}'T, [\text{ramig}'\text{'cold}'])$

c. Assign thematic relations: $\text{ou}'T \leftarrow \text{experiencer}$

d. Create experiencer predicate by (30): $\text{be}' + [\text{ramig}'\text{'cold}'] \longrightarrow \text{predicate}$

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

f. Assign syntactic functions: $\text{pivot} \leftarrow \text{undergoer-ou}'T$

g. Assign case and prepositions: $\text{pivot-ou}'T \leftarrow \text{nominative case}$

h. Cross-reference verb: $\text{ramig}'\text{'cold'} \leftarrow -an'\text{EXP}'$

(30) EQUATIONAL/ EXPERIENCER PREDICATE CREATION: (cf. Van Valin 1990:234)

be' + theme → predicate

⁴¹Whereas 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).⁴² 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)).⁴³ Experiencers are not only

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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

⁴³The morphophonemic processes involved here are quite complex (cf. Table 2.6 for other examples). They include vowel harmony, nasal harmony, and nasal preposition. 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 preplotted following oral vowels. Final /m/ becomes [bm], final /n/ becomes [dn], and final /ŋ/ becomes [kj]. For example, the final nasal of the underlying form /m-korij/ 'ST-dry' in (28) is preplotted, resulting in the phonetic form [ŋ'korikŋ] because the preceding vowel is oral. On the other hand, the final nasal of /mien/ ['mīɛn] 'aunt' is not preplotted since the preceding vowel is nasal. See Boutin and Howery (1991) for further discussion of nasal preposition in Bonggi.

⁴⁴The 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.

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Table 2.6: Experiencer stative verbs

	ROOT	CONDITION STATIC	EXPERIENCER STATIC
Adjective	ramig 'cold'	me-ramig 'ST-cold'	rimig-adn 'cold-EXP'
	panas 'hot'	m-panas 'ST-hot'	penas-adn 'hot-EXP'
	lupug 'tired'		lupug-udn 'tired-EXP'
Noun	umus 'sweat'		umus-adn 'sweat-EXP'
	puri 'skin rash'		puri-adn 'skin.rash-EXP'

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

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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 (*rimigadnou* 'I am cold').

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

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the experiencer stative verb in (31) being cross-referenced by the suffix *-an* (cf. (32h)). (32f) assigns the undergoer (*ou* 'T') 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)).⁴⁵ 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.')
- (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.⁴⁶ 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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⁴⁶Cf. the analysis in (35) to that provided in (23).

- (35) a. General LS for condition statives: **predicate' (x)** x=patient
 b. Clause-specific LS for (33): **doot 'bad' (guakng nya 'his spirit')**
 c. Assign thematic relations: **guakng nya 'his spirit' ← patient**
 d. Assign semantic macroroles: **undergoer ← patient** 1 Macrorole
 e. Assign syntactic functions: **pivot ← undergoer-guakng nya 'his spirit'**
 f. Assign case and prepositions: **pivot-guakng nya 'his spirit' ← nominative case (Ø)**
 g. Cross-reference verb: **doot 'bad' ← m- 'ST'**

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

Sentence (34) contains a locative adjunct, whereas (33) does not. (34) describes a state (*sia ndoot* '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

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 e. Assign syntactic functions: **sia 'he' ← patient**
 f. Assign case and prepositions: **guakng 'spirit' ← locative**
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 j. Assign case and prepositions: **pivot-sia 'he' ← nominative case**
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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.

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

⁴⁹Since 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.

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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 me-lou (m-lou).*
 3sNOM ST-embarrassed
 'HE is embarrassed.'

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

- (38) a. General LS for condition statives: predicate' (x)
 b. Clause-specific LS for (37): *lou* 'embarrassed' (*sia* 'he')
 c. Assign thematic relations: *sia* 'he' ← patient
 d. Assign semantic macroroles: undergoer ← patient 1 Macrorole
 e. Assign syntactic functions: pivot ← undergoer-*sia* 'he'
 f. Assign case and prepositions: pivot-*ou* 'T' ← nominative case
 g. Cross-reference verb: *lou* 'embarrassed' ← *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 me-lou (m-lou) ga' ku.*
 3sNOM ST-embarrassed from 1sGEN
 'HE is embarrassed because of me.'

- (40) a. General LS for condition statives: predicate' (x) x=patient
 b. Clause-specific LS for (39): from' (x, [predicate' (y)]) x=antecedent cause,
 predicate' (y)=resulting state,
 y=patient
ga' 'from' (*ku* 'me', [*lou* 'embarrassed' (*sia* 'he')])
sia 'he' ← patient
ku 'me' ← effector (antecedent cause) 1 Macrorole
 undergoer ← patient
 pivot ← undergoer-*sia* 'he'
 oblique adjunct ← effector (antecedent cause)-*ku* 'me'
 pivot-*sia* 'he' ← nominative case
 effector (antecedent cause)-*ku* 'me' ← genitive case
 oblique *ga'* 'from'
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- (37) *Sia me-lou (m-lou).*
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A summary analysis of (37) is provided in (38) (cf. (23), (35)).

- (38) a. General LS for condition statives: predicate' (x)
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 predicate' (y)=resulting state,
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ga' 'from' (*ku* 'me', [*lou* 'embarrassed' (*sia* 'he')])
sia 'he' ← patient
ku 'me' ← effector (antecedent cause) 1 Macrorole
 undergoer ← patient
 pivot ← undergoer-*sia* 'he'
 oblique adjunct ← effector (antecedent cause)-*ku* 'me'
 pivot-*sia* 'he' ← nominative case
 effector (antecedent cause)-*ku* 'me' ← genitive case
 oblique *ga'* 'from'
lou 'embarrassed' ← *m-* 'ST'

Sentence (39) contains an antecedent cause (*ga' ku* 'because of me') and a resulting/consequent state which consists of a condition stative verb (*melou* '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 *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.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. *ga' ku* 'because of me' in (39)), a nonpivot core syntactic argument such as *diaadn* 'me' cannot also occur in the same clause.

- (41) *Sia me-lou (m-lou) diaadn.*
 3sNOM ST-embarrassed 1sACC
 '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

⁵⁰Although 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.

Sentence (39) contains an antecedent cause (*ga' ku* 'because of me') and a resulting/consequent state which consists of a condition stative verb (*melou* '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 *ga'* 'from' (cf. (40f)).

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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.⁵¹

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)).⁵²

- (42) *diaadn nd-ou me-lou (m-lou)*.⁵³
 1sACC not-1sNOM ST-embarrassed
 'As for me, I'm not embarrassed.'

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)).

- (43) *Sia me-lou (m-lou) mpanu.*
 3sNOM ST-embarrassed walk
 'HE is embarrassed to go.'

⁵¹Direct causality, like indirect causality, also has contrastive syntactic forms representing different semantic functions (cf. §2.4).

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- (44) *Sia mu-runggu' (m-runggu')* *mpanu.*
 3sNOM ST-sluggish walk
 'HE is sluggish walking.'

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.⁵⁴ Condition stative verbs that are derived from manner adjectives used to describe humans are an exception with respect to negative imperatives. Thus, from (24), *n-doot* 'ST-bad', *n-duruk* 'ST-fast', *me-lambat* 'ST-slow', and *mu-runggu'* 'ST-sluggish' can be negated (e.g. (46)).

- (45) *Dei ke-lou (k-lou)!*
 do.not embarrassed
 'Don't be embarrassed!'

- (46) *Dei ku-runggu' (k-runggu')!*
 do.not sluggish
 'Don't be sluggish!'

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

⁵³Negated 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, *nd-* is an affix and not a simple clitic (§3.2). The negation of pronouns is somewhat comparable to the English contracted negative *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.).

⁵⁴Cf. §2.3 for a discussion of activity verbs.

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Diaadn, ndou molok. '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=possessor, y=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.

Diaadn, ndou molok. '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)).

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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).⁵⁵ 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).⁵⁶

- (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
- d. Assign semantic macroroles: *oig* 'boat' ← possessed
- e. Assign syntactic functions: *undergoer* ← possessor 1 Macrorole
- f. Assign case and prepositions: *pivot* ← undergoer-*sia* 'he'
- g. Cross-reference verb: *direct core syntactic argument* ← possessed-*oig* 'boat'
- f. Assign case and prepositions: *pivot-sia* 'he' ← nominative case
- g. Cross-reference verb: *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

⁵⁵The 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)'.

⁵⁶Possession 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.

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- (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
- d. Assign semantic macroroles: *oig* 'boat' ← possessed
- e. Assign syntactic functions: *undergoer* ← possessor 1 Macrorole
- f. Assign case and prepositions: *pivot* ← undergoer-*sia* 'he'
- g. Cross-reference verb: *direct core syntactic argument* ← possessed-*oig* 'boat'
- f. Assign case and prepositions: *pivot-sia* 'he' ← nominative case
- g. Cross-reference verb: *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

⁵⁵The 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)'.

⁵⁶Possession 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

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.

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other hand, as with inversion in Georgian, possessive statives in Bonggi are intransitive; i.e. they have a single macrorole argument.⁵⁹

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).⁶⁰

(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'.

⁵⁹Recall 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).

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⁶⁰Van 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).⁶¹

- (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.

- (55) *Oig na ki-ara saat.*
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- (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-*sia* 'he'
 direct core syntactic argument ← theme-*diaadn* 'me'
 f. Assign case and prepositions: pivot-*sia* 'he' ← nominative case
 core argument-*diaadn* 'me' ← accusative case
 g. Cross-reference verb: *pisiaa* 'believe' ← (Ø)

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

- (61) *Sia pandi uubm Sama.*
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 b. Clause-specific LS for (60): *pisiaa* 'believe' (*sia* 'he', *diaadn* 'me')
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in terms of class size. All stative verbs are uninflected for tense, and cannot occur in imperative mood.⁶²

Table 2.7: Summary of states

	Equational	Locative	Condition	Experiencer	Possession	Cognition
LS	be' (x,y)	be-at' (x,y)	predicate' (x)	be' (x, [predicate'])	have' (x,y)	believe' (x,y)
θ-role	x=locative y=theme	x=locative y=theme	x=patient	x=experiencer predicate'= theme	x=locative y=theme	x=experiencer y=theme
macroroles	undergoer =locative	undergoer =theme	undergoer =patient	undergoer= experiencer	undergoer =locative	undergoer= experiencer
pivot	undergoer	undergoer	undergoer	undergoer	undergoer	undergoer
syntactic category of predicate	nominal	verb, deictic adverb, locative preposition	verb	verb	verb	verb
verbal cross-referencing		m- (for verbal predicates only)	m-	-an	ki-, nd-	

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.⁶³ This is quite contrary to what is described here, where each stative subclass

⁶²The cognition stative verb *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 *-um-pisiaa > mpisiaa* (cf. §2.3). The root *pandi* 'know', however, cannot be used as an imperative; thus, there is no corresponding activity form.

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macroroles	undergoer =locative	undergoer =theme	undergoer =patient	undergoer= experiencer	undergoer =locative	undergoer= experiencer
pivot	undergoer	undergoer	undergoer	undergoer	undergoer	undergoer
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⁶³Usually 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)	\leftarrow	1st arg of <i>predicate'</i> (x,y)	2nd arg of <i>predicate'</i> (x,y)	Arg of state <i>predicate'</i> (x)	\rightarrow
Equational state:		locative	theme		(cf. §2.1.1)
Locative state:		locative	theme		(cf. §2.1.2)
Condition state:				patient	(cf. §2.1.3)
Experiencer state:		experiencer	theme		(cf. §2.1.3)
Possession state:		locative	theme		(cf. §2.1.4)
Cognition state:		experiencer	theme		(cf. §2.1.5)
Existential state:		locative	theme		(cf. below)
Emotional state		experiencer	theme		(cf. below)

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'*]), (ii) a cognition state LS configuration *believe'*(x,y), or (iii) an emotional state LS configuration *love'*(x,y).

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Equational state:		locative	theme		(cf. §2.1.1)
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Condition state:				patient	(cf. §2.1.3)
Experiencer state:		experiencer	theme		(cf. §2.1.3)
Possession state:		locative	theme		(cf. §2.1.4)
Cognition state:		experiencer	theme		(cf. §2.1.5)
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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?⁶⁴ 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

⁶⁴The 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.

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?⁶⁴ 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).

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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**¹ (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 θ-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 *musulaadn* 'hate' in (68). A summary analysis of (68) is provided in (69).

(67) /m-/	/mV-/
m-ingisiadn	ST-have.pity.on
mi-siatadn	ST-like
mu-sulaadn	ST-hate
me-datadn	ST-detest

- (68) *Sia mu-sulaadn (m-sulaan) diaadn.*
 3sNOM ST-hate 1sACC
 'HE hates me.'

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- (69) a. LS for emotional states:
 b. Clause-specific LS for (68):
 c. Assign thematic relations:
 d. Assign semantic macroroles:
 e. Assign syntactic functions:
 f. Assign case:
 g. Cross-reference verb:
- hate' (x,y)** x=experiencer, y=theme
sulaadn 'hate' (*sia* 'he', *diaadn* 'me')
sia 'he' ← experiencer
diaadn 'me' ← theme
 undergoer ← experiencer 1 Macrorole
 pivot ← undergoer-*sia* 'he'
 direct core syntactic argument ← theme-*diaadn* 'me'
 pivot-*sia* 'he' ← nominative case
diaadn 'me' ← accusative case
sulaadn 'hate' ← *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).

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However, although a corresponding markedness in morphology is expected, instead, unmarked *m-* occurs and all the verbs end in [adn], 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 θ-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).

⁶⁵Perhaps 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-siataadn* '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 *datadn*. 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.).

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- (70) LS for achievements with underlying condition stative verb: BECOME predicate' (x)

Achievements are derived from states by the addition of the logical operator 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 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) It is dry. **dry' (it)**

(72) It is getting dry. 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 *m-* occurs with condition states and *km-* (realized here as an infix /-m-/) occurs with achievements.

- (73) *Sia* *ng-korikng* (*m-koring*).
 3sNOM ST-dry
 'IT is dry.'

(74) *Sia* *k-em-orikng* (*km-korin*)
 3sNOM @-ACH-dry⁶⁶
 'IT is getting dry.'

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

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(75) a. General LS for achievements

with underlying condition state:	BECOME predicate' (x)	x=patient
b. Clause-specific LS for (74):	BECOME <i>korikng</i> 'dry' (<i>sia</i> 'it')	
c. Assign thematic relations:	<i>sia</i> 'it' ← patient	
d. Assign semantic macroroles:	undergoer ← patient	1 Macrorole
e. Assign syntactic functions:	pivot ← undergoer- <i>sia</i> 'it'	
f. Assign case and prepositions:	pivot- <i>sia</i> 'it' ← nominative case	
g. Cross-reference verb:	<i>korikng</i> 'dry' ← <i>km-</i> 'ACH'	

A comparison of (75) with (23) is instructive.⁶⁷ 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).⁶⁸

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.

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(76)	/km-/	/-m-/	
kem-aal	ACH-expensive	d-em-alabm	ACH-deep
kem-enta'	ACH-unripe	d-em-oot	ACH-bad
kem-onsobm	ACH-sour	d-em-ama'	ACH-dirty
kim-ingi	ACH-crazy	d-um-uruk	ACH-fast
kim-iskidn	ACH-poor	g-em-angan	ACH-tired
kem-odobm	ACH-black	g-im-ia	ACH-big
kem-odu'	ACH-far	k-em-abul	ACH-lazy
kem-omis	ACH-sweet	k-em-apal	ACH-thick
kum-udap	ACH-hungry	k-em-aya	ACH-rich
kum-utakng	ACH-spoiled	k-em-aya'	ACH-lazy
kem-alus	ACH-fine	k-em-otul	ACH-hard
kem-arabm	ACH-forbidden	l-em-ompukng	ACH-fat
kem-panggar	ACH-stiff	l-em-anggu	ACH-long
kem-pesa'	ACH-broken	l-im-iug	ACH-tall
kum-puti'	ACH-white	l-um-uag	ACH-baggy
kem-pagadn	ACH-hard	r-em-omuk	ACH-rotten
kem-panas	ACH-hot	s-em-ega'	ACH-red
kim-bisa	ACH-strong	t-em-ogi'	ACH-pregnant
kum-buha'	ACH-open	t-em-ogobm	ACH-diligent
kem-baru	ACH-new	t-em-ook	ACH-ripe
kim-biru	ACH-blue	t-em-oyuk	ACH-little
kem-basa'	ACH-wet	t-im-ihukng	ACH-crooked
kim-bilug	ACH-round	t-um-ua'	ACH-old (people)

/k-/
ku-mula'
ku-mulak

ACH-old (things)

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.

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kem-odu'	ACH-far	k-em-abul	ACH-lazy
kem-omis	ACH-sweet	k-em-apal	ACH-thick
kum-udap	ACH-hungry	k-em-aya	ACH-rich
kum-utakng	ACH-spoiled	k-em-aya'	ACH-lazy
kem-alus	ACH-fine	k-em-otul	ACH-hard
kem-arabm	ACH-forbidden	l-em-ompukng	ACH-fat
kem-panggar	ACH-stiff	l-em-anggu	ACH-long
kem-pesa'	ACH-broken	l-im-iug	ACH-tall
kum-puti'	ACH-white	l-um-uag	ACH-baggy
kem-pagadn	ACH-hard	r-em-omuk	ACH-rotten
kem-panas	ACH-hot	s-em-ega'	ACH-red
kim-bisa	ACH-strong	t-em-ogi'	ACH-pregnant
kum-buha'	ACH-open	t-em-ogobm	ACH-diligent
kem-baru	ACH-new	t-em-ook	ACH-ripe
kim-biru	ACH-blue	t-em-oyuk	ACH-little
kem-basa'	ACH-wet	t-im-ihukng	ACH-crooked
kim-bilug	ACH-round	t-um-ua'	ACH-old (people)

/k-/
ku-mula'
ku-mulak

ACH-old (things)

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 [BECOME predicate' (y)].

- (77) *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: BECOME predicate' (x) x=patient

- b. Clause-specific LS for (77): [from' (x, [BECOME predicate' (y)])]

x=antecedent cause,
 predicate'(y)=resulting state,
 y=patient

[*ga* 'from' (*odu* 'sun', [BECOME *korikng* 'dry' (*sia* 'it'))])

sia 'it' ← patient

odu 'sun' ← effector (antecedent cause)

undergoer ← patient 1 Macrorole

pivot ← undergoer-*sia* 'it'

oblique adjunct ← effector (antecedent cause)-*odu* 'sun'

pivot-*sia* 'it' ← nominative case

effector-*odu* 'sun' ← oblique *ga* 'from'

korikng 'dry' ← *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)).⁶⁹

- (79) *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.

⁶⁹The 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).

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x=antecedent cause,
 predicate'(y)=resulting state,
 y=patient

[*ga* 'from' (*odu* 'sun', [BECOME *korikng* 'dry' (*sia* 'it'))])

sia 'it' ← patient

odu 'sun' ← effector (antecedent cause)

undergoer ← patient 1 Macrorole

pivot ← undergoer-*sia* 'it'

oblique adjunct ← effector (antecedent cause)-*odu* 'sun'

pivot-*sia* 'it' ← nominative case

effector-*odu* 'sun' ← oblique *ga* 'from'

korikng 'dry' ← *km-* 'ACH'

- c. Assign thematic relations:

- d. Assign semantic macroroles:

- e. Assign syntactic functions:

- f. Assign case and prepositions:

- g. Cross-reference verb:

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 ST-difficult PFT ACH-know language Bonggi
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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.

⁶⁹The 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 *know*: **know' (x,y)** x=experiencer, y=theme
 b. Clause-specific LS for (79): BECOME **pandi 'know' (Ø, uubm Bonggi 'Bonggi language')**
- c. Assign thematic relations: Ø ← experiencer
uubm Bonggi 'Bonggi language' ← theme
 undergoer ← experiencer 1 Macrorole
 pivot ← undergoer-Ø
 direct core syntactic argument ← theme-*uubm Bonggi 'Bonggi language'*
- d. Assign semantic macroroles: core argument-*uubm Bonggi* ← accusative case (Ø)
 e. Assign syntactic functions: **pandi 'know'** ← *km-* 'ACH'
- f. Assign case and prepositions: 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 *ki-* and *nd-* mark verbs of possession. *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). *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

- (81) *Sia ki-a-ardn (ki-ara-an) na saa.*
 3sNOM POS-exist-ACH PFT spouse
 'HE just got married.'
- (82) *Sia nd-a-ardn (nd-ara-an) na saa.*
 3sNOM NEG-exist-ACH PFT spouse
 'HE is no longer married.'⁷¹

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)

⁷⁰Achievement verbs with an underlying possession stative are derived from the existential root *ara*, never from noun roots (cf. §2.1.4).

⁷¹It 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'.

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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:

- b. Clause-specific LS for (81):

- c. Assign thematic relations:

- d. Assign semantic macroroles:

- e. Assign syntactic functions:

- f. Assign case and prepositions:

- g. Cross-reference verb:

BECOME have' (x,y)	x=possessor, y=possessed
BECOME ara 'existential' (<i>sia</i> 'he', <i>saa</i> 'spouse')	
<i>sia</i> 'he' ← possessor	
<i>saa</i> 'spouse' ← possessed	
undergoer ← possessor	1 Macrorole
pivot ← undergoer- <i>sia</i> 'he'	
direct core syntactic argument ← possessed- <i>saa</i> 'spouse'	
pivot- <i>sia</i> 'he' ← nominative case	
core argument- <i>saa</i> 'spouse' ← accusative case (Ø)	
<i>ara</i> 'existential' ← <i>ki-</i> 'POS', <i>-an</i> 'ACH' ⁷²	

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*.⁷³

§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.*
 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 BECOME indicates a change in existential circumstance. The prefixes *ki-* and *nd-* indicate the presence or absence of existence in existential clauses. Affixation in achievement

⁷²*ki-* derives possessive states; *-an* derives achievement verbs from possessive states.

⁷³The morphophonemic processes involved include nasal harmony, nasal prelosion, metathesis, and vowel deletion. The vowel deletion rule which deletes a vowel before an identical long vowel is required to derive [ki'aardn] 'have-GOAL'. The derivation is: underlying form - #*kiara* + *an*#; stress rule - #*kia'raan*#; nasal prelosion - #*kia'raadn*#; metathesis - #*kia'aardn*#; vowel deletion - [ki'aardn].

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 b. Clause-specific LS for (81):
 c. Assign thematic relations:
 d. Assign semantic macroroles:
 e. Assign syntactic functions:
 f. Assign case and prepositions:
 g. Cross-reference verb:

BECOME **have'** (x,y) x=possessor, y=possessed
 BECOME ***ara*** 'existential' (*sia* 'he', *saa* 'spouse')
sia 'he' ← possessor
saa 'spouse' ← possessed
undergoer ← possessor
pivot ← *undergoer-sia* 'he'
 direct core syntactic argument ← possessed-*saa*
 'spouse'
pivot-sia 'he' ← nominative case
 core argument-*saa* 'spouse' ← accusative case (Ø)
ara 'existential' ← *ki-* 'POS', *-an* 'ACH'⁷²

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existential clauses is identical to that found in achievement possessive clauses. Sentences (85) and (86) illustrate achievement existential clauses (cf. (64), (65)).⁷⁴

- (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).⁷⁵ 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.'

⁷⁴The 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.

⁷⁵Cf. Table 2.7; cf. also Jolly (1993:277).

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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): <i>dii</i> 'there' (Ø, <i>sia</i> 'she') | Cross-referencing: |
| b. LS for (88): <i>ingad</i> 'near' (Ø, <i>sia</i> 'she') | Cross-referencing: <i>m-</i> |
| c. LS for (89): BECOME <i>dii</i> 'there' (Ø, <i>sia</i> 'she') | Cross-referencing: <i>km-</i> |
| d. LS for (90): BECOME <i>ingad</i> 'near' (Ø, <i>sia</i> 'she') | Cross-referencing: <i>km-</i> |

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) *Sia kin-dii (km-dii) bali nya.*
 3sNOM ACH-at house 3sGEN
 'HE is going to his house.'
- (93) *Sia kim-ingad (km-ingad) diaadn.*
 3sNOM ACH-near 1sACC
 'SHE is coming close to me.'

⁷⁶The cross-referencing of achievements by *km-* is realized in different ways depending on both the lexical category and the phonological shape of the root. *km-* is realized the same for both achievement verbs derived from locative adjectives (e.g. *kim-ingad* 'ACH-near' in (90)) and achievement verbs derived from other adjectives (e.g. *kem-aal* 'ACH-expensive' in (76)). The phonological processes involved are described in footnote 68 and exemplified in (76). For many adjective roots, *km-* is realized as an infix /-m-/ (e.g. *d-em-alabm* 'ACH-deep' in (76)) (cf. other examples in (76)). However, *km-* is always realized as a prefix, never as an infix, for achievement verbs derived from spatial deictics (e.g. *kin-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 *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.

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(94) a. General LS for locative state:	be-at' (x,y)	x=locative, y=theme
b. General LS for achievements with underlying locative state:	BECOME be-at' (x,y)	x=locative, y=theme
c. Clause-specific LS for (93):	BECOME ingad 'near' (<i>diaadn</i> 'me', <i>sia</i> 'she')	
d. Assign thematic relations:	<i>diaadn</i> 'me' ← locative <i>sia</i> 'she' ← theme	
e. Assign semantic macroroles:	undergoer ← theme	1 Macrorole
f. Assign syntactic functions:	pivot ← undergoer- <i>sia</i> 'she'	
g. Assign case and prepositions:	direct core syntactic argument ← locative- <i>diaadn</i> 'me'	
h. Cross-reference verb:	pivot- <i>sia</i> 'she' ← nominative case core argument- <i>diaadn</i> 'me' ← accusative case <i>ingad</i> 'near' ← <i>km-</i> '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)).⁷⁷ In both situations the pivot is an undergoer, and the locative is a direct core syntactic argument (cf. (18e), (94f)).⁷⁸ In the stative situation the verb is cross-referenced by *m-* (cf. (18g)), whereas in the achievement situation it is cross-referenced by *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 *dii*

⁷⁷According 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).

⁷⁸In (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.

(94) a. General LS for locative state:	be-at' (x,y)	x=locative, y=theme
b. General LS for achievements with underlying locative state:	BECOME be-at' (x,y)	x=locative, y=theme
c. Clause-specific LS for (93):	BECOME ingad 'near' (<i>diaadn</i> 'me', <i>sia</i> 'she')	
d. Assign thematic relations:	<i>diaadn</i> 'me' ← locative	
e. Assign semantic macroroles:	<i>sia</i> 'she' ← theme	
f. Assign syntactic functions:	undergoer ← theme	1 Macrorole
g. Assign case and prepositions:	pivot ← undergoer- <i>sia</i> 'she'	
h. Cross-reference verb:	direct core syntactic argument ← locative- <i>diaadn</i> 'me'	
	pivot- <i>sia</i> 'she' ← nominative case	
	core argument- <i>diaadn</i> 'me' ← accusative case	
	<i>ingad</i> 'near' ← <i>km-</i> '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)).⁷⁷ In both situations the pivot is an undergoer, and the locative is a direct core syntactic argument (cf. (18e), (94f)).⁷⁸ In the stative situation the verb is cross-referenced by *m-* (cf. (18g)), whereas in the achievement situation it is cross-referenced by *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 *dii*

⁷⁷According 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).

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'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:
 c. Clause-specific LS for (97):
 d. Assign thematic relations:
 e. Assign semantic macroroles:
 f. Assign syntactic functions:
 g. Assign case and prepositions:
 h. Cross-reference verb:

BECOME NOT **be-at'** (x,y) x=locative, y=theme
 BECOME NOT **kuii'** 'somewhere yonder' (\emptyset , *sia* 'she')
sia 'she' \leftarrow theme
 undergoer \leftarrow theme 1 Macrorole
 pivot \leftarrow undergoer-*sia* 'she'
 pivot-*sia* 'she' \leftarrow nominative case
kuii' 'somewhere yonder' \leftarrow *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

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).

'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:
 c. Clause-specific LS for (97):
 d. Assign thematic relations:
 e. Assign semantic macroroles:
 f. Assign syntactic functions:
 g. Assign case and prepositions:
 h. Cross-reference verb:

BECOME NOT **be-at'** (x,y) x=locative, y=theme
 BECOME NOT *kuii'* 'somewhere yonder' (\emptyset , *sia* 'she'
sia 'she' \leftarrow theme
 undergoer \leftarrow theme 1 Macrorole
 pivot \leftarrow undergoer-*sia* 'she'
 pivot-*sia* 'she' \leftarrow nominative case
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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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in the LS of source-oriented directionals (e.g. (98b) (98c)); and (ii) goal-oriented directional verbs are cross-referenced by *km-* (e.g. (94h)), whereas source-oriented directional verbs are cross-referenced by *tm-* (e.g. (98h)).

Perhaps, instead of these two prefixes, there are three: *k-*, *t-*, and *m-* with *k-* indicating goal-orientation; *t-* indicating source-orientation; and *-m-* 'ACH' deriving a directional verb from a spatial deictic. Note, however, that /m/ does not occur with source-oriented specific spatial deictics such as *ti-dii* 'FROM-there' in (96). This is due to the fact that *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) *Sia muhad ti-dii (tm-dii).*
 3sNOM leaves FROM-there
 'SHE leaves from there.'

- (100) *Sia muhad 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 *tm-* is derivative from the spatial/locative meaning of *dii* 'there' which is primary.⁸⁰ Source-oriented spatial deictics which are derived from the specific spatial deictics in Table 2.3 are shown in Table 2.8.⁸¹ The derived spatial deictics are used to indicate a location away from the deictic center which is established by the base form.

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

⁸¹Although source-oriented **directional verbs** (e.g. *tung-kuii* 'FROM.ACH-somewhere yonder' in (97)) can be derived from the nonspecific spatial deictics in Table 2.4, source-oriented **spatial deictics** cannot be derived from the nonspecific spatial deictics in Table 2.4.

in the LS of source-oriented directionals (e.g. (98b) (98c)); and (ii) goal-oriented directional verbs are cross-referenced by *km-* (e.g. (94h)), whereas source-oriented directional verbs are cross-referenced by *tm-* (e.g. (98h)).

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Table 2.8: Derived specific spatial deictics

Form	Meaning
ti-diti	'from-here' (near speaker)
ti-dia	'from-there' (near addressee)
ti-dioo	'from-there' (not near speaker or addressee, but usually visible)
ti-dii	'from-yonder' (not visible)

The source marking function of *t-* motivates the use of *tidii* as the source in the standard of comparision 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 diaadn.*
 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!* *Ipaa' dioo!* *Ipaa' dii!*
 put.it here put.it there put.it yonder
 'Put it here!' 'Put it there!' '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

⁸²Cf. Lichtenberk (1991:487) for a similar situation in Fijian.

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adverbs (e.g. (89), (97)), locative prepositions (e.g. (92)), or locative adjectives (e.g. (90), (93)).

Although achievements are normally verbal, achievements such (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')*.⁸³
 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' (\emptyset , <i>nya</i> 'it') | |
| d. Assign thematic relations: | <i>nya</i> 'it' \leftarrow theme | |
| e. Assign semantic macroroles: | undergoer \leftarrow theme | 1 Macrorole |
| f. Assign syntactic functions: | pivot \leftarrow undergoer- <i>nya</i> 'it' | |
| g. Assign case and prepositions: | pivot- <i>nya</i> 'it' \leftarrow genitive case | |
| h. Cross-reference verb: | <i>dabu'</i> 'arrive' \leftarrow <i>mV-</i> 'ACH' ⁸⁴ | |

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

⁸³The 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.

adverbs (e.g. (89), (97)), locative prepositions (e.g. (92)), or locative adjectives (e.g. (90), (93)).

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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').*⁸³
 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' (\emptyset , nya 'it')
 d. Assign thematic relations: nya 'it' \leftarrow theme
 e. Assign semantic macroroles: undergoer \leftarrow theme 1 Macrorole
 f. Assign syntactic functions: pivot \leftarrow undergoer-nya 'it'
 g. Assign case and prepositions: pivot-nya 'it' \leftarrow genitive case
 h. Cross-reference verb: **dabu'** 'arrive' \leftarrow mV- 'ACH'⁸⁴

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

⁸³The 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 ' \emptyset ' 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 mij'a'*.
 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'⁸⁵, 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-**

⁸⁵Whereas 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.

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 ' \emptyset ' 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 mij'a'*.
 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'⁸⁵, 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-**

⁸⁵Whereas 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-tabukng* '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

⁸⁶In 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).

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Table 2.9: Relationship between locative states and achievements

		LS	Specific Spatial Deictic	Nonspecific Spatial Deictic	Locative Adjective	Verb
locative state	static	be-at' (x,y)	<i>dii</i> 'there' (e.g. (87))	<i>kuii'</i> 'yonder' (e.g. (95))	<i>m-ingad</i> 'ST-near' (e.g. (88))	
achievement	goal-oriented	BECOME be-at' (x,y)	<i>kin-dii</i> 'TO-there' (e.g. (89))		<i>kim-ingad</i> 'ACH-near' (e.g. (90))	<i>me-rari</i> 'ACH-flee'
	source-oriented	BECOME NOT be-at' (x,y)	<i>ti-dii</i> 'FROM-there' (e.g. (96))	<i>tung-kuii'</i> 'FROM-yonder' (e.g. (97))		<i>me-tabukng</i> 'ACH-sink'

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	kim-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 1sGEN not ACH-fat
 'MY CHILD is not getting fat.'

- (110) *Dindikng ku k-um-ulua (km-kuluak) ga' dolok.*
 wall 1sGEN @-ACH-bark from rain
 'MY WALL is peeling off from the rain.'

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achievement	goal-oriented	BECOME be-at' (x,y)	<i>kin-dii</i> 'TO-there' (e.g. (89))		<i>kim-ingad</i> 'ACH-near' (e.g. (90))	<i>me-rari</i> 'ACH-flee'
	source-oriented	BECOME NOT be-at' (x,y)	<i>ti-dii</i> 'FROM-there' (e.g. (96))	<i>tung-kuii'</i> 'FROM-yonder' (e.g. (97))		<i>me-tabukng</i> 'ACH-sink'

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	ropukng	mold	r-em-opukng	become-moldy
	todob	fever	t-em-odob	become-feverish
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- (109) *Anak ku nda' kim-inak (km-inak).*
 child 1sGEN not ACH-fat
 'MY CHILD is not getting fat.'

- (110) *Dindikng ku k-um-ulua (km-kuluak) ga' dolok.*
 wall 1sGEN @-ACH-bark from rain
 'MY WALL is peeling off from the rain.'

- (111) a. General LS for achievements
with underlying locative:
b. Clause-specific LS for (110):

BECOME NOT **be-at'** (x,y) x=locative, y=theme
[from' (x, [BECOME NOT **be-at' (y,z)])]**
x=antecedent cause,
be-at' (y,z)=resulting state,
[ga' 'from' (dolok 'rain', [BECOME
NOT **be-at'** (*dindikng* 'wall', *kuluak* 'bark'))]
dindikng 'wall' ← locative
kuluak 'bark' ← theme
dolok 'rain' ← effector (antecedent cause)
undergoer ← locative 1 Macrorole
pivot ← undergoer-*dindikng* 'wall'
oblique adjunct ← effector (antecedent cause)-
dolok 'rain'
pivot-*dindikng* 'wall' ← nominative case (Ø)
effector-*dolok* 'rain' ← oblique *ga'* 'from'
kuluak 'bark' ← *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 1sNOM egg DEF ACH-crack
'I am scared THE EGG might crack.'

- (113) a. General LS for achievements with
underlying condition stative:
b. Clause-specific LS for (112):
c. Assign thematic relations:
d. Assign semantic macroroles:
e. Assign syntactic functions:
f. Assign case and prepositions:
g. Cross-reference verb:

BECOME **predicate'** (x) x=patient
BECOME **pesa'** 'crack' (*tilug* 'egg')
tilug 'egg' ← patient
undergoer ← patient 1 Macrorole
pivot ← undergoer-*tilug* 'egg'
pivot-*tilug* 'egg' ← nominative case (Ø)
pesa' 'crack' ← *mV-* 'ACH'

- (111) a. General LS for achievements
with underlying locative:
b. Clause-specific LS for (110):

BECOME NOT **be-at'** (x,y) x=locative, y=theme
[from' (x, [BECOME NOT **be-at' (y,z)])]**
 x=antecedent cause,
be-at' (y,z)=resulting state,
[ga' 'from' (dolok 'rain', [BECOME
 NOT **be-at'** (*dindikng* 'wall', *kuluak* 'bark'))]
dindikng 'wall' ← locative
kuluak 'bark' ← theme
dolok 'rain' ← effector (antecedent cause)
 undergoer ← locative 1 Macrorole
 pivot ← undergoer-*dindikng* 'wall'
 oblique adjunct ← effector (antecedent cause)-
dolok 'rain'
 pivot-*dindikng* 'wall' ← nominative case (Ø)
 effector-*dolok* 'rain' ← oblique *ga'* 'from'
kuluak 'bark' ← *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.

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- (112) *M-olok ou tilug na m-pesa'* (*km-pesa'*).
 ST-scared 1sNOM egg DEF ACH-crack
 'I am scared THE EGG might crack.'

- (113) a. General LS for achievements with
underlying condition stative:
b. Clause-specific LS for (112):
c. Assign thematic relations:
d. Assign semantic macroroles:
e. Assign syntactic functions:
f. Assign case and prepositions:
g. Cross-reference verb:

BECOME **predicate'** (x) x=patient
 BECOME **pesa'** 'crack' (*tilug* 'egg')
tilug 'egg' ← patient
 undergoer ← patient 1 Macrorole
 pivot ← undergoer-*tilug* 'egg'
 pivot-*tilug* 'egg' ← nominative case (Ø)
pesa' 'crack' ← *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).⁸⁷

(114)	<u>m-</u>	<u>mV-</u>
m-abis	ACH-finish	me-dabu'
m-ahit	ACH-infect	ACH-fall
m-ala	ACH-lose	me-dadi
m-ansur	ACH-dissolve	ACH-become
m-eilu	ACH-drunk	me-dak
		ACH-drop
		me-dasadn
		ACH-caught
		mu-guab
		ACH-split
		me-kahas
		ACH-unroof
m-bela'	ACH-shatter	mi-kisad
m-bereit	ACH-tear	ACH-slip.off
m-binasa	ACH-break	me-kotop
m-bubus	ACH-spill	mu-kusut
m-buha'	ACH-open	me-lagadn
m-palis	ACH-blown.away	me-lomos
m-pali'	ACH-burn	me-loput
m-pesa'	ACH-break	me-reba'
m-puda'	ACH-extinguish	mu-rumbak
m-pupu'	ACH-fall.off.branch	ACH-collapse
		ACH-collapse.from.underneath
		mu-rupus
		ACH-break.loose
		mi-sipit
		ACH-pinch
		mu-suat
		ACH-enter
		mu-sulukng
		ACH-pierce
		mu-suma
		ACH-fed.up
		me-tabukng
		ACH-sink
		me-tandadn
		ACH-stuck
		me-tedak
		ACH-ooze
		me-teirdn
		ACH-lost
		me-tebadn
		ACH-puncture
		me-togob
		ACH-capsize
		me-tomu
		ACH-come.across
		mu-tuguudn
		ACH-penetrate
		mu-tumang
		ACH-left.behind
		mu-tukng
		ACH-burnt

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

⁸⁷The 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.

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).⁸⁷

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		ACH-drop
		me-dasadn
		ACH-caught
		mu-guab
		ACH-split
		me-kahas
		ACH-unroof
m-bela'	ACH-shatter	mi-kisad
m-bereit	ACH-tear	ACH-slip.off
m-binasa	ACH-break	me-kotop
m-bubus	ACH-spill	mu-kusut
m-buha'	ACH-open	me-lagadn
m-palis	ACH-blown.away	me-lomos
m-pali'	ACH-burn	me-loput
m-pesa'	ACH-break	me-reba'
m-puda'	ACH-extinguish	mu-rumbak
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		ACH-break.loose
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		mu-suat
		ACH-enter
		mu-sulukng
		ACH-pierce
		mu-suma
		ACH-fed.up
		me-tabukng
		ACH-sink
		me-tandadn
		ACH-stuck
		me-tedak
		ACH-ooze
		me-teirdn
		ACH-lost
		me-tebadn
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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).

⁸⁸See the discussion following (63).

⁸⁹Equational states are not included because they are nonverbal. Note that achievement verbs cannot be derived from equational states because they are nonverbal.

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.

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⁸⁸See the discussion following (63).

⁸⁹Equational 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 1sNOM 2sACC
 'I see him.'

- (116) a. LS for perception achievements: BECOME **predicate'** (x,y) x=experiencer, y=theme
 b. Clause-specific LS for (115): BECOME *liid* 'see' (*ou* T, *nya* 'him')
 c. Assign thematic relations: *ou* T ← experiencer
nya 'him' ← theme
 d. Assign semantic macroroles: undergoer ← experiencer 1 Macrorole
 e. Assign syntactic functions: pivot ← undergoer-*ou* T
 f. Assign case and prepositions: pivot-*ou* T ← nominative case
 core argument-*nya* 'him' ← accusative case
 g. Cross-reference verb: *liid* 'see' ← *k-* 'ACH'

As seen in (116d), the first argument in the LS configuration **predicate'** (x,y) (i.e., x=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) <i>k-</i>		<i>kV-</i>	
<i>k-adak</i>	ACH-smell	<i>ke-door</i>	ACH-hear
<i>k-aap</i>	ACH-able	<i>ki-lipat</i>	ACH-forget
<i>k-intabm</i>	ACH-remember	<i>ki-pisiaa</i>	ACH-believe
<i>k-ubu</i>	ACH-laugh	<i>ke-rati</i>	ACH-understand
		<i>ke-rasa</i>	ACH-taste
		<i>ke-tondu'</i>	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.

- (115) *Ki-liid ou nya.*
 ACH-see 1sNOM 2sACC
 'I see him.'

- (116) a. LS for perception achievements: BECOME **predicate'** (x,y) x=experiencer, y=theme
 b. Clause-specific LS for (115): BECOME *liid* 'see' (*ou* T, *nya* 'him')
 c. Assign thematic relations: *ou* T ← experiencer
nya 'him' ← theme
 d. Assign semantic macroroles: undergoer ← experiencer 1 Macrorole
 e. Assign syntactic functions: pivot ← undergoer-*ou* T
 f. Assign case and prepositions: pivot-*ou* T ← nominative case
 core argument-*nya* 'him' ← accusative case
 g. Cross-reference verb: *liid* 'see' ← *k-* 'ACH'

As seen in (116d), the first argument in the LS configuration **predicate'** (x,y) (i.e., x=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) <i>k-</i>		<i>kV-</i>	
<i>k-adak</i>	ACH-smell	<i>ke-door</i>	ACH-hear
<i>k-aap</i>	ACH-able	<i>ki-lipat</i>	ACH-forget
<i>k-intabm</i>	ACH-remember	<i>ki-pisiaa</i>	ACH-believe
<i>k-ubu</i>	ACH-laugh	<i>ke-rati</i>	ACH-understand
		<i>ke-rasa</i>	ACH-taste
		<i>ke-tondu'</i>	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.

In (118) **do'** refers to a generalized unspecified activity predicate. **do'** has two argument positions. The first argument position in (118a) is occupied by '*x*', the second by another LS, i.e. [**predicate'** (*x*)]. Most activity verbs have a single argument which is an effector. An **effector** is defined as the first argument of **do'**. This definition is in accord with the RRG position that θ-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 **do'** and the only argument of **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 **do'**. Thus, by either (4) or (5) *he* in (118b) is an actor. According to (4), effector is linked to actor; according to (5), the first argument of **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 §2.3.1, the latter in §2.3.2.

2.3.1. Motion Activity Verbs

The activity verb *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).

- (119) *Sia l-em-ongi (-m-longi).*
 3sNOM @-ACY-swim
 'HE swims.'

⁹⁰In the RRG literature, the two parts of activity verb LSs are sometimes conflated in which case the LS for *swim* is *swim'* (he).

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2.3.1. Motion Activity Verbs

The activity verb *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).

- (119) *Sia l-em-ongi (-m-longi).*
 3sNOM @-ACY-swim
 'HE swims.'

⁹⁰In the RRG literature, the two parts of activity verb LSs are sometimes conflated in which case the LS for *swim* is *swim'* (he).

- (120) a. LS for motion activity verbs:
 b. Clause-specific LS for (119):
 c. Assign thematic relations:
 d. Assign semantic macroroles:
 e. Assign syntactic functions:
 f. Assign case and prepositions:
 g. Cross-reference verb:
- do' (x, [predicate' (x)]) x=effector (& theme)
do'(sia 'he', [longi 'swim' (sia 'he')])
sia 'he' ← effector (& theme)
 actor ← effector (& theme) 1 Macrorole
 pivot ← actor-*sia 'he'*
 pivot-*sia 'he'* ← nominative case
longi 'swim' ← -m- 'ACY'

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)).⁹¹ 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.⁹² 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)).⁹³

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

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

⁹²The number of 'arguments' refers to arguments of the predicate which are not coreferential.

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 c. Assign thematic relations:
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- do' (x, [predicate' (x)]) x=effector (& theme)
do'(sia 'he', [longi 'swim' (sia 'he')])
sia 'he' ← effector (& theme)
 actor ← effector (& theme) 1 Macrorole
 pivot ← actor-*sia 'he'*
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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.

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

⁹³-*m-* is realized as a prefix before vowel-initial roots and roots whose initial consonant is a bilabial obstruent; otherwise, it is infixated after the initial consonant of the stem (cf. (131), (132), and (138) for examples).

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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 (Ø)
 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

⁹⁴Of 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.

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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 by' 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 ϕ is an activity predicate, ψ is an achievement predicate, and the logical operator CAUSE indicates an accomplishment. Since ψ refers to an achievement predicate, it contains the logical operator BECOME and some stative predicate (cf. §2.2). In the case of motion accomplishment verbs, ψ contains both the logical operator BECOME and an underlying locative predicate. Or stated in another way, the achievement portion of motion

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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.⁹⁶ 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) (FVV 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)).

- (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.'

A summary analysis of the complement clause in (125) is provided in (126).

⁹⁶Up 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.

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- (126) a. LS for motion activities: $\text{do}'(x, [\text{predicate}'(x)])$ x=effector-theme
 b. LS for accomplishments: $\emptyset \text{ CAUSE } \psi$
 c. LS for goal-oriented motion accomplishments:⁹⁷ [do'(x)] CAUSE [BECOME **be-at'** (y,x)]
 x=effector-theme, y=locative-goal
 d. Clause-specific LS for (125): [*apit* 'stop by' (*lama* 'person')] CAUSE [BECOME *dii* 'at'
 (*bali n Dupuk* 'Dupuk's house', *lama* 'person')]
 e. Assign thematic relations: *lama* 'person' \leftarrow effector-theme
bali n Dupuk 'Dupuk's house' \leftarrow locative-goal
 f. Assign semantic macroroles: actor \leftarrow effector-theme 1 Macrorole
 g. Assign syntactic functions: pivot \leftarrow actor-*lama* 'person'
 oblique core argument \leftarrow locative-goal-*bali n Dupuk*
 'Dupuk's house'
 h. Assign case and prepositions: pivot-*lama* 'person' \leftarrow nominative case (\emptyset)
 locative-goal-*bali n Dupuk* 'Dupuk's house' \leftarrow oblique
 case *dii* 'to'
 i. Cross-reference verb: *apit* 'stop by' \leftarrow -m- 'ACY'

The general LS for accomplishments is shown in (126b). The first portion (\emptyset) is an activity verb whose general LS is shown in (126a). The logical operator CAUSE indicates an accomplishment situation. The final portion (ψ) of (126b) is a goal-oriented achievement which is indicated in (126c) by BECOME **be-at'** (y,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). *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, *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

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

⁹⁸According to Van Valin (1993:156; footnote 45), undergoers are always direct core arguments.

- (126) a. LS for motion activities: $\text{do}'(x, [\text{predicate}'(x)])$ x=effector-theme
 b. LS for accomplishments: $\emptyset \text{ CAUSE } \psi$
 c. LS for goal-oriented motion accomplishments:⁹⁷ [do'(x)] CAUSE [BECOME **be-at'** (y,x)]
 x=effector-theme, y=locative-goal
 d. Clause-specific LS for (125): [*apit* 'stop by' (*lama* 'person')] CAUSE [BECOME *dii* 'at'
 (*bali n Dupuk* 'Dupuk's house', *lama* 'person')]
 e. Assign thematic relations: *lama* 'person' \leftarrow effector-theme
bali n Dupuk 'Dupuk's house' \leftarrow locative-goal
 f. Assign semantic macroroles: actor \leftarrow effector-theme 1 Macrorole
 g. Assign syntactic functions: pivot \leftarrow actor-*lama* 'person'
 oblique core argument \leftarrow locative-goal-*bali n Dupuk*
 'Dupuk's house'
 h. Assign case and prepositions: pivot-*lama* 'person' \leftarrow nominative case (\emptyset)
 locative-goal-*bali n Dupuk* 'Dupuk's house' \leftarrow oblique
 case *dii* 'to'
 i. Cross-reference verb: *apit* 'stop by' \leftarrow -m- 'ACY'

The general LS for accomplishments is shown in (126b). The first portion (\emptyset) is an activity verb whose general LS is shown in (126a). The logical operator CAUSE indicates an accomplishment situation. The final portion (ψ) of (126b) is a goal-oriented achievement which is indicated in (126c) by BECOME **be-at'** (y,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). *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, *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

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

⁹⁸According 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 1sACC
 'NOBODY stops by to see me.'

- (128) a. LS for motion activities: $\text{do}'(x, [\text{predicate}'(x)])$ x=effector-theme
 b. LS for accomplishments: $\emptyset \text{ CAUSE } \psi$
 c. LS for goal-oriented motion accomplishments: $[\text{do}'(x)] \text{ CAUSE } [\text{BECOME } \text{be-at}'(y, x)]$
 d. Clause-specific LS for (127): $[\text{apit} \text{ 'stop by'} (\text{lama} \text{ 'person'})] \text{ CAUSE } [\text{BECOME } \text{be-at}'(\text{diaadn} \text{ 'me'}, \text{lama} \text{ 'person'})]$
 e. Assign thematic relations: $\text{lama} \text{ 'person'} \leftarrow \text{effector-theme}$
 $\text{diaadn} \text{ 'me'} \leftarrow \text{locative-goal}$
 f. Assign semantic macroroles: actor \leftarrow effector-theme 1 Macrorole
 g. Assign syntactic functions: pivot \leftarrow actor-*lama* 'person'
 direct core argument \leftarrow locative-goal-*diaadn* 'me'
 pivot-*lama* 'person' \leftarrow nominative case (\emptyset)
 direct core argument-*diaadn* 'me' \leftarrow accusative case
 i. Cross-reference verb: $\text{apit} \text{ 'stop by'} \leftarrow -m-$ '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 *do'* (x, [*apit*' 'stop by' (x)]) regardless of whether it occurs in an activity

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

¹⁰⁰Givón (1984:98) refers to these as verbs with a locative direct object.

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 1sACC
 'NOBODY stops by to see me.'

- (128) a. LS for motion activities: $\text{do}'(x, [\text{predicate}'(x)])$ x=effector-theme
 b. LS for accomplishments: $\emptyset \text{ CAUSE } \psi$
 c. LS for goal-oriented motion accomplishments: $[\text{do}'(x)] \text{ CAUSE } [\text{BECOME } \text{be-at}'(y, x)]$
 d. Clause-specific LS for (127): $[\text{apit}' \text{stop by'} (\text{lama}' \text{person}')] \text{ CAUSE } [\text{BECOME } \text{be-at}'(\text{diaadn}' \text{me}', \text{lama}' \text{person}')] \text{ lama}' \text{person}' \leftarrow \text{effector-theme}$
 e. Assign thematic relations: $\text{diaadn}' \text{me}' \leftarrow \text{locative-goal}$
 f. Assign semantic macroroles: actor \leftarrow effector-theme 1 Macrorole
 g. Assign syntactic functions: pivot \leftarrow actor-lama' person'
 h. Assign case and prepositions: direct core argument \leftarrow locative-goal-diaadn' me'
 i. Cross-reference verb: pivot-lama' person' \leftarrow nominative case (\emptyset)
 j. Direct core argument-diaadn' me' \leftarrow accusative case apit' stop by' \leftarrow -m- 'ACY'

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

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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).¹⁰¹

- (129) *Nd-ara lama m-apit (-m-apit) dit*i.
 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).

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.

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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).¹⁰¹

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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.

- (130) *L-em-obot (-m-lobot)* *ihi* *Sungi* *Mudik.*¹⁰²
 @-ACY-go.across 1pexcNOM River Mudik
 'WE cross the Mudik River.'

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.¹⁰³ Motion activity verbs which take a volitional argument and are derived from verb roots are shown in (131).¹⁰⁴ Motion activities which do not take a volitional argument are shown in (132).

(131)	/-m-/		/m-/
d-em-apa'	ACY-land (a plane, etc.)	m-udukng	ACY-get up
d-um-ua'	ACY-descend stairs	m-uhad	ACY-leave
l-em-ongi	ACY-swim	m-uli'	ACY-return home
l-em-oub	ACY-turn over face down	m-ilakng	ACY-lie down
l-em-alu	ACY-pass by	m-upug	ACY-sit down
l-em-anjakng	ACY-step on	m-usag	ACY-stand up
l-em-anggat	ACY-rise up		
l-im-iag	ACY-sail		
l-im-inggad	ACY-turn on side		
l-em-ompud	ACY-run		
l-um-uas	ACY-exit	m-panu	ACY-walk; go
l-um-ungga'	ACY-jump over		
r-em-ahad	ACY-go inland		
r-im-iru	ACY-swarm		
s-em-anggad	ACY-land on branch (a bird)		
s-em-as'a'	ACY-pass through a field		
s-em-elehei	ACY-go up steps	lempad ¹⁰⁵	ACY-fly
s-um-uak	ACY-enter	lumpat	ACY-jump up
t-em-erana	ACY-stop and rest	tumpa	ACY-jump down

¹⁰²When 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).

¹⁰³All the clauses presented in this section are simple declarative clauses. Compare the discussion of operators in Chapter 3.

¹⁰⁴I 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.

- (130) *L-em-obot (-m-lobot)* *ihi* Sungi Mudik.¹⁰²
 @-ACY-go.across 1pexcNOM River Mudik
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l-em-oub	ACY-turn over face down	m-ilakng	ACY-lie down
l-em-alu	ACY-pass by	m-upug	ACY-sit down
l-em-anjakng	ACY-step on	m-usag	ACY-stand up
l-em-anggat	ACY-rise up		
l-im-iag	ACY-sail		
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l-um-uas	ACY-exit	m-panu	ACY-walk; go
l-um-ungga'	ACY-jump over		
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t-em-odik	ACY-climb hill
t-em-olop	ACY-dive
t-em-onti	ACY-cross bridge
t-im-iligud	ACY-turn around
t-im-indiakng	ACY-turn at intersection
t-um-ulak	ACY-depart
t-um-undakng	ACY-take for walk (child)

(132)	/-m-/	/m-/	
d-em-abu'	ACY-fall	m-abag	ACY-flare up
l-em-oput	ACY-burst		

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).¹⁰⁶ 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 dii bali i Menoon!*¹⁰⁷
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

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

¹⁰⁷As 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 /ñ/ 'ny' before terms of reference which begin with a vowel (e.g. §1.3.1, /ñ indu?/ 'mother' in footnote 27); and as /i/ elsewhere (e.g. (134)).

t-em-odik	ACY-climb hill
t-em-olop	ACY-dive
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(132) /-m-/	/m-/		
d-em-abu'	ACY-fall	m-abag	ACY-flare up
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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.

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accomplishment clauses cannot be the pivot. For example, although the locative-goal (i.e. [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 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 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. *Tidi* '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).

We have seen in this section that the ψ portion of the LS for motion accomplishment verbs consists of an achievement with an underlying locative predicate. All of the motion

accomplishment clauses cannot be the pivot. For example, although the locative-goal (i.e. [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)).

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We have seen in this section that the ψ 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.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 ψ 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) *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 *kuii* 'somewhere yonder', (137) illustrates a motion accomplishment (cf. (95)). A summary analysis of (136) is provided in (138).

- (137) *Sia mu-ng-kuii' (-m--m-kuii').*
 3sNOM ACY-DIR-there
 'SHE is going somewhere there.'

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

¹⁰⁸See, for example, *apit* 'stop by' in (125), (127), (129); *lobot* 'go across' in (130); and the roots listed in (131) and (132) which can all be used to form motion accomplishment verbs.

accomplishment verbs which have been discussed thus far are derived from verb roots.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 ψ 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) *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 *kuii* 'somewhere yonder', (137) illustrates a motion accomplishment (cf. (95)). A summary analysis of (136) is provided in (138).

- (137) *Sia mu-ng-kuii' (-m--m-kuii').*
 3sNOM ACY-DIR-there
 'SHE is going somewhere there.'

- | | | |
|---|---|-----------------------------------|
| (138) a. LS for locative stative: | be-at' (x,y) | x=locative, y=theme |
| b. LS for motion activities: | do' (x, [predicate' (x)]) | x=effector-theme |
| c. LS for accomplishments: | \emptyset CAUSE ψ | |
| d. LS for goal-oriented motion accomplishments: | [do'(x)] CAUSE [BECOME be-at' (y,x)] | x=effector-theme, y=locative-goal |
| e. Clause-specific LS for (136): | [do'(sia 'she')] CAUSE
[BECOME <i>dii</i> 'at' (<i>bali nya</i> 'her house', <i>sia 'she'</i>)] | |
| f. Assign thematic relations: | <i>sia 'she'</i> \leftarrow effector-theme | |
| g. Assign semantic macroroles: | <i>bali nya</i> 'her house' \leftarrow locative-goal | |
| h. Assign syntactic function: | actor \leftarrow effector-theme | 1 Macrorole |
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¹⁰⁸See, for example, *apit* 'stop by' in (125), (127), (129); *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-dii* '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.

(139) ROOT	GLOSS	ACTIVITY	GLOSS
buig	hill	ngim-buig	climb a hill
daidn	trail	ngin-daidn	follow a trail
diaa	inland	ngin-diaa	go inland
sua'	mouth of river	ngin-sua'	go out to mouth of river
tana'	land	ngin-tana'	walk

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.'

¹⁰⁹Other 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).

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- (141) a. LS for nonmotion activity verbs: **do'** (x, [predicate' (x)]) x=effector
 b. Clause-specific LS for (140): **do'(sia 'she', [teis 'cry' (sia 'she')])**
 c. Assign thematic relations: *sia 'she'* ← effector
 d. Assign semantic macroroles: actor ← effector 1 Macrorole
 e. Assign syntactic functions: pivot ← actor-*sia 'she'*
 f. Assign case and prepositions: pivot-*sia 'he'* ← nominative case
 g. Cross-reference verb: *teis 'cry'* ← -m- 'ACY'

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).

(142)	/-m-/		/m-/
d-em-oos	ACY-spend night at girlfriend's house	m-abat	ACY-answer
l-em-obok	ACY-pound something	m-inggat	ACY-chew betel nut
l-im-idik	ACY-slash brush	m-ogot	ACY-hold
l-em-ongis	ACY-cry out	m-ohodn	ACY-eat
s-em-apakng	ACY-deliver a baby		
s-um-ulakng	ACY-take over discarded item		
t-em-abakng	ACY-help someone with work		
t-em-alakng	ACY-stop work to rest	m-piit	ACY-send
t-em-ampu	ACY-aid in a struggle		
t-em-ata'	ACY-lap up liquid (animal)		
t-em-erana	ACY-stop on journey to rest		

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)).

- (143) *Sia kahal d-um-udu' (-m-dudu')*.
 3sNOM still @-ACY-breast
 'HE still nurses.'

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)).

- (141) a. LS for nonmotion activity verbs: **do'** (x, [predicate' (x)]) x=effector
 b. Clause-specific LS for (140): **do'(sia 'she', [teis 'cry' (sia 'she')])**
 c. Assign thematic relations: *sia 'she'* ← effector
 d. Assign semantic macroroles: actor ← effector 1 Macrorole
 e. Assign syntactic functions: pivot ← actor-*sia 'she'*
 f. Assign case and prepositions: pivot-*sia 'he'* ← nominative case
 g. Cross-reference verb: *teis 'cry'* ← -m- 'ACY'

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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)).¹¹⁰ 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

¹¹⁰*Tina* 'earlier' is a temporal adjunct in (146), and not an argument.

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

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

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.

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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')* diaadn.
 3sNOM still @-ACY-breast 1sACC
 'HE still nurses from me.'

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

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.

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	<i>ogot</i> 'hold'	<i>m-ogot</i>	<i>in-ogot</i>
	<i>suha</i> 'vomit'	<i>s-um-uha</i>	<i>s-i-uha</i>
	<i>sulakng</i> 'take over discarded item'	<i>s-um-ulakng</i>	<i>s-i-ulakng</i>
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- (152) a. *Sia m-apit.* (cf. (123))
 he ACY-stop.by me
 'HE stops by to see me.'
 LS: **do'** (x, [predicate' (x)])
 x=effector-theme
- b. *Sia m-apit diaadn.* (cf. (127))
 he ACY-stop.by me
 'HE stops by to see me.'
 LS: [**do'** (x)] CAUSE [BECOME **be-at'** (y,x)]
 x=effector-theme, y=locative-goal
- c. *Sia m-ohodn.* (cf. (146))
 he ACY-eat
 'HE will eat.'
 LS: **do'** (x, [predicate' (x)])
 x=effector
- d. *Sia m-ohodn egas.* (cf. (147))
 he ACY-eat rice
 'HE eats rice.'
 LS: **do'** (x, [predicate' (x)]) CAUSE [BECOME NOT **exist'**(y)]
 x=effector, y=theme

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).¹¹¹ 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 dii 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

¹¹¹The locative can also be a source. The LS in (152b) is for locative-goals (cf. (135)).

- (152) a. *Sia m-apit.* (cf. (123))
 he ACY-stop.by me
 'HE stops by to see me.'
 LS: **do'** (x, [predicate' (x)])
 x=effector-theme
- b. *Sia m-apit diaadn.* (cf. (127))
 he ACY-stop.by me
 'HE stops by to see me.'
 LS: [**do'** (x)] CAUSE [BECOME **be-at'** (y,x)]
 x=effector-theme, y=locative-goal
- c. *Sia m-ohodn.* (cf. (146))
 he ACY-eat
 'HE will eat.'
 LS: **do'** (x, [predicate' (x)])
 x=effector
- d. *Sia m-ohodn egas.* (cf. (147))
 he ACY-eat rice
 'HE eats rice.'
 LS: **do'** (x, [predicate' (x)]) CAUSE [BECOME NOT **exist'**(y)]
 x=effector, y=theme

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).¹¹¹ 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 dii 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.

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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 NPIV little.boy
 'MUNSANG is nursing her little boy.'

(154) a. LS for one-place,
 nonmotion activities:
 b. LS for accomplishments:
 c. LS for accomplishments whose
 ψ contains an experiencer:
 d. Clause-specific LS for (153):
 e. Assign thematic relations:
 f. Create experiencer predicate by (30):
 g. Assign semantic macroroles:
 h. Assign syntactic functions:
 i. Assign case and prepositions:
 j. Cross-reference verb:

x=effector

$\text{do}'(x, [\text{predicate}'(x)])$

$\emptyset \text{ CAUSE } \psi$

[$\text{do}'(x)$] CAUSE [BECOME $\text{be}'(y, [\text{predicate}'])$]
 x=effector, y=experiencer, **predicate'**=theme

[$\text{do}'(eili' \text{ 'little boy'})$] CAUSE
 [BECOME $\text{be}'(\text{Munsang}, [\text{dudu}' \text{ 'breast'}])$]

$eili' \text{ 'little boy'} \leftarrow \text{effector}$

$\text{Munsang} \leftarrow \text{experiencer}$

$\text{be}' + [\text{dudu}' \text{ 'breast'}] \longrightarrow \text{predicate}$

actor \leftarrow effector 2 Macroroles

undergoer \leftarrow experiencer

pivot \leftarrow undergoer-*Munsang*

direct core argument \leftarrow actor-*eili'* 'little boy'

pivot-*Munsang* \leftarrow nominative case *si* 'PIV'

direct core argument \leftarrow accusative case

ny NPIV'

dudu' 'breast' \leftarrow *-an* 'EXP'

¹¹²Van 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.

¹¹³In §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).

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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 ψ 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 $\text{be}'(x, [\text{predicate}'])$, where x =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).

¹¹⁴Achievements 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.

¹¹⁵The example in (153) is not an isolated example. I have collected at least twenty similar examples.

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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

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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 *-m-* group views the internal structure of an event as a single event, whereas the *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 *apit* 'to stop by' belongs to the *-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 *ahut* 'to shuttle' belongs to the *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 *apit* occurs as *m-apit*, the verb *ahut* occurs as *ngg-ahut*. In imperative clauses, the verb *apit* occurs as *apit*, the verb *ahut* occurs as *peg-ahut*. Verbs in the *-m-* group take the bare root in imperative clauses, whereas those in the *peg-* group take the prefix *peg-* from which the class gets its name. The *peg-* group is described in detail in §3.1, where I also show how *-m-* group verbs (e.g. *apit*) can be reduplicated (e.g. *ngg-apit-apit*), 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.¹¹⁶

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The logical structure for accomplishments is ϕ CAUSE ψ , where ϕ is normally an activity verb and ψ 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 ϕ and ψ to form accomplishments. The answer to this question is the basis for the exposition that follows.

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

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.

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The general LS for accomplishments is shown in (156a). The ϕ portion of the LS in (156b) is a one-place activity predicate. A comparison of the ϕ portion of (156b) with the LS in (118a) shows that the two parts of the activity LS in (118a) are conflated in (156b).¹¹⁸ **do'** refers to a generalized unspecified activity predicate performed by the effector (*ou* 'T') which brings about the resulting change of state (ψ). 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).¹¹⁹

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

¹¹⁸See footnote 90.

¹¹⁹The relevant phonological processes are: vowel epenthesis, vowel harmony, vowel weakening, and consonant coalescence. The consonant coalescence rule replaces /ŋ-/ 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 /ŋ-/, with the exception of a few borrowed words.

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koring 'dry'. Other accomplishment verbs which are derived from adjective roots are shown (157) (cf. (76)).¹²⁰

(157)	ROOT	GLOSS	ACCOMPLISHMENT	GLOSS
			<u>ng-</u>	
aal	expensive	ng-aal	make expensive	
enta'	unripe	ng-enta'	half cook	
ingad	near	ng-ingad	make near	
ingi	crazy	ng-ingi	make crazy	
iskidn	poor	ng-iskidn	make poor	
odobm	black	ng-odobm	blacken	
odu'	far	ng-odu'	make far	
omis	sweet	ng-omis	sweeten	
udap	hungry	ng-udap	make hungry	
utakng	spoiled	ng-utakng	spoil	
kapal	thick	ng-apal	thicken	
kotul	hard	ng-otul	harden	
			<u>m-</u>	
panas	hot	m-anas	heat	
panggar	stiff	m-anggar	stiffen	
pesa'	broken	m-esa'	break	
puti'	white	m-uti'	whiten	
basa'	wet	m-asa'	wash	
bilug	round	m-ilug	make round	
buha'	open	m-uh'a'	open something	
			<u>ngV-</u>	
biru	blue	ngi-biru	make blue ¹²¹	
bisa	strong	ngi-bisa	make strong	
dalabm	deep	nge-dalabm	deepen	
doot	bad	nge-doot	make bad	
dupakng	foolish	ngu-dupakng	make foolish	
duruk	fast	ngu-duruk	make fast	
gangan	tired	nge-gangan	tire out	
gia	big	ngi-gia	make big	
langgu	long	nge-langgu	lengthen	
lompukng	fat	nge-lompukng	fatten	
liug	tall	ngi-liug	make tall	
luag	baggy	ngu-luag	make baggy	
romuk	rotten	nge-romuk	make rotten	

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

¹²¹The roots *biru* 'blue' and *bisa* 'strong' are borrowed from Malay. *ng-* is realized as /ŋV/ with these two bilabial-initial roots (cf. footnote 119).

koring 'dry'. Other accomplishment verbs which are derived from adjective roots are shown (157) (cf. (76)).¹²⁰

(157)	ROOT	GLOSS	ACCOMPLISHMENT	GLOSS
			<u>ng-</u>	
aal	expensive	ng-aal	make expensive	
enta'	unripe	ng-enta'	half cook	
ingad	near	ng-ingad	make near	
ingi	crazy	ng-ingi	make crazy	
iskidn	poor	ng-iskidn	make poor	
odobm	black	ng-odobm	blacken	
odu'	far	ng-odu'	make far	
omis	sweet	ng-omis	sweeten	
udap	hungry	ng-udap	make hungry	
utakng	spoiled	ng-utakng	spoil	
kapal	thick	ng-apal	thicken	
kotul	hard	ng-otul	harden	
			<u>m-</u>	
panas	hot	m-anas	heat	
panggar	stiff	m-anggar	stiffen	
pesa'	broken	m-esa'	break	
puti'	white	m-uti'	whiten	
basa'	wet	m-asa'	wash	
bilug	round	m-ilug	make round	
buha'	open	m-uh'a'	open something	
			<u>ngV-</u>	
biru	blue	ngi-biru	make blue ¹²¹	
bisa	strong	ngi-bisa	make strong	
dalabm	deep	nge-dalabm	deepen	
doot	bad	nge-doot	make bad	
dupakng	foolish	ngu-dupakng	make foolish	
duruk	fast	ngu-duruk	make fast	
gangan	tired	nge-gangan	tire out	
gia	big	ngi-gia	make big	
langgu	long	nge-langgu	lengthen	
lompukng	fat	nge-lompukng	fatten	
liug	tall	ngi-liug	make tall	
luag	baggy	ngu-luag	make baggy	
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¹²⁰Only actor-pivot forms are given here. There are corresponding patient-pivot forms.

¹²¹The roots *biru* 'blue' and *bisa* 'strong' are borrowed from Malay. *ng-* is realized as /ŋV/ with these two bilabial-initial roots (cf. footnote 119).

		<u>n-</u>	
sega'	red	n-ega'	redden
tihukng	crooked	n-ihukng	bend
togi'	pregnant	n-ogi'	impregnate
toyuk	small	n-oyuk	make small

The LS for all the accomplishment verbs in (157) is [do' (x)] CAUSE [BECOME predicate' (y)].

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.

¹²²All true morphological causative constructions are accomplishment verbs.

¹²³An epenthetic vowel /V/ is inserted between the prefix *p-* and consonant-initial roots to avoid impermissible syllable structures.

		<u>n-</u>	
sega'	red	n-ega'	redden
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toyuk	small	n-oyuk	make small

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¹²²All true morphological causative constructions are accomplishment verbs.

¹²³An epenthetic vowel /V/ is inserted between the prefix *p-* and consonant-initial roots to avoid impermissible syllable structures.

(158)	ROOT	GLOSS	CAUSATIVE	GLOSS
	kabul	lazy	pe-kabul	make lazy
	kaya	rich	pe-kaya	make rich
	kaya'	lazy	pe-kaya'	make lazy
	togobm	diligent	pe-togobm	make diligent
	took	ripe	pe-took	ripen
	tua'	old (people)	pu-tua'	make old (people)
	mula'	old (things)	pu-mula'	make old
	mulak	young	pu-mulak	make young

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 1sNOM coconut
 'I dry coconut.' (Implied: Dry them in the sun.)

- (160) a. LS for accomplishments: \emptyset CAUSE ψ
 b. LS when ψ = achievement
 derived from condition stative: [do' (x)] CAUSE [BECOME predicate' (y)]
 x=effector, y=patient
- c. LS for causative when
 ψ = achievement derived from
 condition stative: [do' (x)] CAUSE [[do' (y)] CAUSE
 [BECOME predicate' (z)]]
 x=causer-effector, y=causee-effector, z=patient
- d. Clause-specific LS for (159): [do' (ou T')] CAUSE [[do' (Ø)] CAUSE
 [BECOME *korikng* 'dry' (*piasu* 'coconut')]]
ou T' \leftarrow causer-effector
piasu 'coconut' \leftarrow patient
 actor \leftarrow causer-effector 2 Macroroles
 undergoer \leftarrow patient
 pivot \leftarrow actor-*ou* T'
 director core argument \leftarrow undergoer-*piasu* 'coconut'
 pivot-*ou* T' \leftarrow nominative case
piasu 'coconut' \leftarrow accusative case (Ø)
korikng 'dry' \leftarrow p- 'CAU'
- e. Assign thematic relations:
 f. Assign semantic macroroles:
 g. Assign syntactic functions:
 h. Assign case and prepositions:
 i. Cross-reference verb:

The general LS for all accomplishments is shown in (160a). (160b) is the LS for accomplishments whose ψ portion contains a condition stative. (160c) is the LS for morphologically derived accomplishments whose ψ 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

(158)	ROOT	GLOSS	CAUSATIVE	GLOSS
kabul	lazy	pe-kabul	make lazy	
kaya	rich	pe-kaya	make rich	
kaya'	lazy	pe-kaya'	make lazy	
togobm	diligent	pe-togobm	make diligent	
took	ripe	pe-took	ripen	
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- (159) *Pe-korikng (p-koring) ou piasu.*
 CAU-dry 1sNOM coconut
 'I dry coconut.' (Implied: Dry them in the sun.)

- (160) a. LS for accomplishments: \emptyset CAUSE ψ
 b. LS when ψ = achievement
 derived from condition stative: [do' (x)] CAUSE [BECOME predicate' (y)]
 x=effector, y=patient
- c. LS for causative when
 ψ = achievement derived from
 condition stative: [do' (x)] CAUSE [[do' (y)] CAUSE
 [BECOME predicate' (z)]]
 x=causer-effector, y=causee-effector, z=patient
- d. Clause-specific LS for (159): [do' (ou 'T')] CAUSE [[do' (\emptyset)] CAUSE
 [BECOME *korikng* 'dry' (*piasu* 'coconut')]]
ou 'T' \leftarrow causer-effector
piasu 'coconut' \leftarrow patient
 actor \leftarrow causer-effector 2 Macroroles
 undergoer \leftarrow patient
 pivot \leftarrow actor-*ou* 'T'
 director core argument \leftarrow undergoer-*piasu* 'coconut'
 pivot-*ou* 'T' \leftarrow nominative case
piasu 'coconut' \leftarrow accusative case (\emptyset)
korikng 'dry' \leftarrow p- 'CAU'
- e. Assign thematic relations:
 f. Assign semantic macroroles:
 g. Assign syntactic functions:
 h. Assign case and prepositions:
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'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 ' \emptyset '. 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 ' \emptyset ', 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

'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 ' \emptyset '. 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 ' \emptyset ', i.e. unspecified (cf. VV 1993:74).

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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-ulua_k (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' (\emptyset)] 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

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-ulua_k (ng-kuluak) kiou na.*
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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-dii 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).¹²⁴ 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: Φ CAUSE ψ
 b. LS for motion accomplishments: [do'(x)] CAUSE [BECOME NOT be-at' (y,x)]
 x=effector-theme, y=locative-source
 c. LS for regular accomplishments: [do'(x)] CAUSE [BECOME NOT be-at' (y,z)]
 x=effector, y=locative-source, z=theme
 d. LS for causative accomplishments: [do'(w)] CAUSE [[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,

¹²⁴The LSs in (167) are source-oriented because *uhad* 'leave' is source-oriented (cf. discussion in §2.2).

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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.¹²⁵

All three types of accomplishment verb are morphologically derived; *-m-* for motion accomplishments, *ng-* for regular accomplishments, and *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, *ng-* is used indicating a regular accomplishment as in (165). When the causer has indirect control over the entity being moved, *p-* is used indicating a causative accomplishment as in (166). When the effector and the entity being moved are coreferential, *-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 *ng-* accomplishment verbs. For example, the root *longi* 'swim' cannot be used to form a regular *ng-* accomplishment verb since the effector does not control another entity while swimming. However, a causative accomplishment verb can be derived from the root *longi* 'swim' since a causer can make someone else swim, although he cannot directly control their swimming, e.g. (168).

- (168) *Sia pe-longi (p-longi) anak nya.*
 3sNOM CAU-swim child 3sGEN
 'SHE makes her child swim.'

At the end of §2.3.2 a distinction was made between two groups of activity verbs, the *-m-* group which was described in §2.3 and the *peg-* group which is described in §3.1. §2.3.2 showed how some activity verbs in the *-m-* group are derived from noun roots (e.g. (143), (144), (150)). Likewise, there are activity verbs in the *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

¹²⁵A summary analysis of (100)/(164) was provided in (135). Summary analyses for (165) and (166) are not given since the differences are contrasted here.

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.¹²⁵

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 'SHE makes her child swim.'

At the end of §2.3.2 a distinction was made between two groups of activity verbs, the *-m-* group which was described in §2.3 and the *peg-* group which is described in §3.1. §2.3.2 showed how some activity verbs in the *-m-* group are derived from noun roots (e.g. (143), (144), (150)). Likewise, there are activity verbs in the *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

¹²⁵A 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.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' dii 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!').

- (169) *Sia pu-du' (p-dudu')* anak nya.¹²⁷
 3sNOM CAU-breast child 3sGEN
 'SHE makes her child nurse.'

- (170) *Sia pe-baju' (p-baju')* anak nya.
 3sNOM CAU-shirt child 3sGEN
 'SHE puts a shirt on her child.'

- (171) *Sia n-ondukng (ng-tondukng)* anak nya.
 3sNOM APL-head.covering child 3sGEN
 'SHE covers her child's head.'

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

¹²⁶Causative accomplishment verbs are more likely to occur than regular *ng-* accomplishment verbs.

regular *ng-* accomplishment verb, a causative accomplishment verb, or both.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' dii 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!').

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¹²⁶Causative 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-ip'a' (ng-ip'a') 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).¹²⁸

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

¹²⁷The stem *pudu* ''cause to breast feed' has undergone haplology.

¹²⁸Once again only actor-pivot forms are given here, but there are corresponding undergoer-pivot forms.

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 'SHE cuts the weeds around her house.'

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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.

- | | |
|---|--|
| <p>(176) a. <i>Nggien i Mual?</i>
 where NPIV Mual
 'Where is Mual?'</p> <p>(177) <i>Ngi-dindikng (ng-dinding) ou.</i>
 APL-wall 1sNOM
 'I put up walls.'¹²⁹</p> <p>(178) <i>Ngi-dindikng (ng-dinding) ou bali nya.</i>
 APL-wall 1sNOM house 3sGEN
 'I put up walls on his house.'</p> <p>(179) <i>Si Tagi m-ori (ng-bori) n Tereib siidn.</i>
 PIV Tagi APL-give NPIV Tereib money
 'TAGI gives Tereib money.'</p> | <p>b. <i>N-obokng (ng-tobong) na.</i>
 APL-cut.down.trees now
 'HE is cutting down trees.'</p> |
|---|--|

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

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(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

¹³⁰This 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'.

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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.

¹³¹Here, 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.

¹³²The 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).

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In §2.3.1, I showed how the abstract locative predicate **be-at'** (x,y) combines with the logical operators BECOME and BECOME NOT to account for the locative prepositions *dii* 'to' and *tidii* 'from'.

Thus, *to* = BECOME **be-at'** (x,y), and *from* = BECOME NOT **be-at'** (x,y), where *to* marks locative-goal arguments of stative predicates embedded under BECOME in LS and *from* marks locative-source arguments of statives embedded under 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, *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, *kiou* 'wood' is marked by *ma* 'with' in (180) because as seen in (181b): (i) *kiou* 'wood' is both effector and theme; (ii) *kiou* 'wood' is not an actor by (4) or (5); and (iii) *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) *M-urus (ng-burus) ou kuhut ku.*
 APL-brush 1sNOM teeth 1sGEN
 'I brush my teeth.'

- (183) 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 (182): [[**do'** (*ou* T)] CAUSE [**do'** (*burus* 'brush')]] CAUSE
 [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).

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 x=effector, y=effector-theme, z=locative-goal
 b. LS for (182): [[**do'** (*ou* T)] CAUSE [**do'** (*burus* 'brush')]] CAUSE
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(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 spray ¹³³
	posi	fishhook	m-osi	to fish with hook
	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
	toos	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.*
 PIV 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).

(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 spray ¹³³
	posi	fishhook	m-osi	to fish with hook
	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
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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'.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.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.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

¹³⁵The verb *give* is discussed in many places including: Longacre 1976:33; FVV 1984:87, 201; VV 1993:44, 48; Jolly 1993:292.

¹³⁶See also the discussion of the differences between existential and possessive statives following (64) and (65).

¹³⁷Cf. Van Valin (1993:45) for dative-shift constructions in English. For a different view see Dryer's (1986) antidative analysis.

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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).¹³⁸

Table 2.10: Syntactic function possibilities for transfer verbs

	IF	AND	THEN	AND	EXAMPLE
i)	pivot=ACT	UND=theme	UND-theme→ direct core	recipient→ oblique	(185)
ii)	pivot=ACT	UND=recipient	UND-recipient→ direct core	theme→ direct core	(179)
iii)	pivot= UND-theme		ACT→ direct core	recipient→ oblique	(187)
iv)	pivot= UND- recipient		ACT→ direct core	theme→ direct core	(188)

- (187) *Siidn biri-idn (bori-Vn) n Tagi dii n Tereib.*¹³⁹
 money give-[+mk]UPL NPIV Tagi to NPIV Tereib
 'MONEY is given by Tagi to Tereib.'

- (188) *Si Tereib biri-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 *dii* 'to' (e.g. (185)).

¹³⁸This assumes the arguments in the LS are realized in syntax and not elided.

¹³⁹The suffix vowel 'V' is subject to rules of vowel harmony. It harmonizes with the preceding vowel in the stem (cf. Kroeger 1992b).

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iii)	pivot= UND-theme		ACT→ direct core	recipient→ oblique	(187)
iv)	pivot= UND- recipient		ACT→ direct core	theme→ direct core	(188)

- (187) *Siidn biri-idn (bori-Vn) n Tagi dii n Tereib.*¹³⁹
 money give-[+mk]UPL NPIV Tagi to NPIV Tereib
 'MONEY is given by Tagi to Tereib.'

- (188) *Si Tereib biri-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 *dii* 'to' (e.g. (185)).

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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).¹⁴⁰ **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-recipients 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

¹⁴⁰Other verbs in this class include *ng-abis* 'APL-finish' and *ng-ai* 'APL-take' (cf. VV 1993:78).

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*.

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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) *Siidn tuhu-udn (tahu-Vn) nya tidii n Tereib.*
 money steal-UPL 3sGEN from NPIV Tereib
 'MONEY is stolen by him from Tereib.'
- (192) *Si 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)).¹⁴¹

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.);¹⁴² verbs with unmarked undergoer pivots are suffixed with *-Vn* (e.g. (187), (191));¹⁴³ 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)).¹⁴⁴

- (193) *Kiou penge-labad (pVng-labad) nya diaadn.*
 wood INSTPL-hit 3sGEN 1sACC
 'A STICK is what he hits me with.'

¹⁴¹Cf. the use of *tidii* 'from' for marking source-oriented motion accomplishments as described in (135).

¹⁴²As 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)).

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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 \emptyset CAUSE ψ , where \emptyset is normally an activity verb and ψ 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 m-uhā' (ng-buha')* *pintu'*.
 wind APL-open door
 'THE WIND opens the door.'

- (195) **Api m-ali' (ng-pali')* *diaadn*.
 fire APL-burn 1sACC
 'THE FIRE burns me.'

I have provided a survey of some of the variation that exists in the \emptyset and ψ 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 \emptyset portion, [*inum* 'drink' (x,y)] CAUSE [BECOME NOT **exist**'(y)]; and (ii) verbs which either

¹⁴⁵Note 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.).

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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) *Sia n-uart (ng-suart) suart.*
 3sNOM APL-letter letter
 'HE writes a letter.'

	<u>ROOT</u>	<u>GLOSS</u>	<u>ACCOMPLISHMENT</u>	<u>GLOSS</u>
	gogu'	hole	nge-gogu'	make a hole
	padi	rice field	m-adi	harvest rice
	sindoidn	fingernail	n-indoidn	clip nails
	ponsu'	bathe	m-onsu'	bathe

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 Valin 1990:226).

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 the actor is a nonpivot direct core argument. This difference in pivot assignment results in differences in case assignment and verbal cross-referencing. In (198) the undergoer (*piasu*

¹⁴⁶The morphophonemic alternations associated with *-Vn* are very complex. See (200) for examples. The relevant phonological processes are: vowel shortening, /l/ deletion, glottal deletion, suffix vowel harmony, root vowel harmony, vowel weakening, nasal prestopping, and metathesis.

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) *Sia n-uart (ng-suart) suart.*
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	<u>ROOT</u>	<u>GLOSS</u>	<u>ACCOMPLISHMENT</u>	<u>GLOSS</u>
	gogu'	hole	nge-gogu'	make a hole
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	ponsu'	bathe	m-onsu'	bathe

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 Valin 1990:226).

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 the actor is a nonpivot direct core argument. This difference in pivot assignment results in differences in case assignment and verbal cross-referencing. In (198) the undergoer (*piasu*

¹⁴⁶The morphophonemic alternations associated with *-Vn* are very complex. See (200) for examples. The relevant phonological processes are: vowel shortening, /l/ 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.*¹⁴⁷
 coconut dry-UPL 1sGEN
 'COCONUT is dried by me.'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.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):¹⁵⁰

	ROOT	GLOSS	ACCOMPLISHMENT	GLOSS
(200)	atad	send	etad-adn	
	gambar	picture	gemb-a-ardn	take a picture
	api	fire	ipi-idn	
	bagi	divide	bigi-idn	cook
	bahus	overpower	buhus-udn	
	ansur	dissolve	unsu-urdn	
	balas	reciprocate	belas-adn	
	reda'	step on	reda-adn	

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.

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.

¹⁴⁹ In Kimaragang and Tombonuwo, theme and locative are distinct from patient in terms of verbal affixation (Kroeger 1988a:231f.; personal communication, Julie King).

¹⁵⁰ The roots in (200) are organized to highlight vowel harmony and /l/ deletion, not lexical categories or thematic roles.

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iap tibas	count strike with machete	iap-adn tibas-adn	
biid biin	turn over message	bid-idn bin-in	send message
giuk	worm	giuh-udn	worm infested
boli poting	buy tie	bili-idn piting-in	
konop sohom	increase soak	kenop-odn sehom-on	
ponsu' loput	bathe snap	punsu-udn luput-udn	
guab buat	split make	guab-adn buat-adn	
tuug buurt	dry cut hair	tug-udn burt-udn	
tombol kohol	patch bite	tembo-idn keho-idn	to patch

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].

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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.

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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

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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-timbak) 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.'

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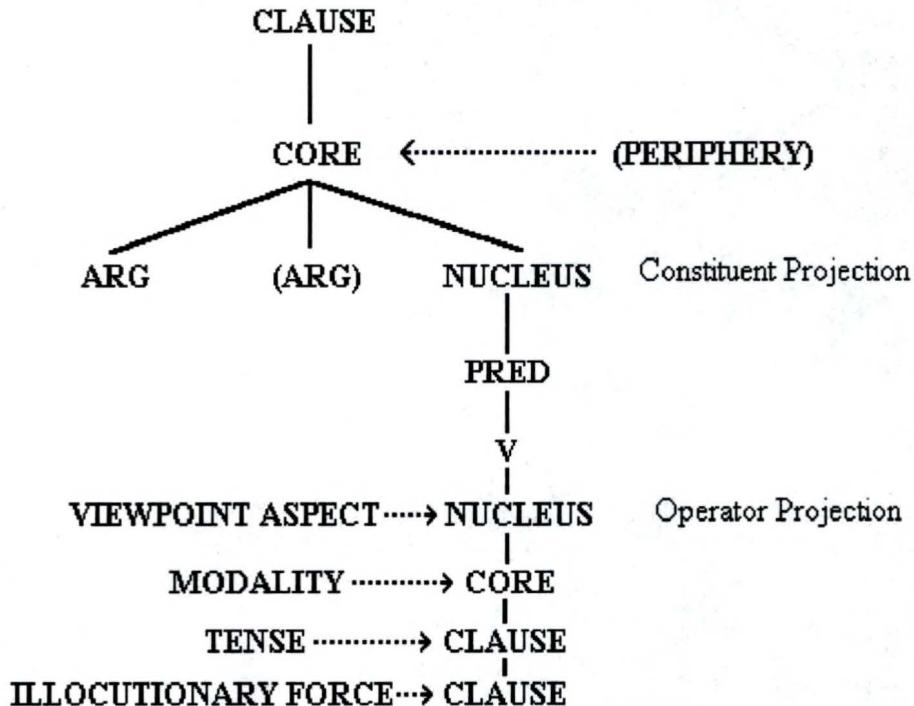


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The approach to aspect which is described here is comparable to the Case Grammar model of Fillmore (1968). Fillmore's grammar contained the rule: $S \rightarrow \text{Modality} + \text{Proposition}$. The proposition portion of Fillmore's rule is reflected 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,

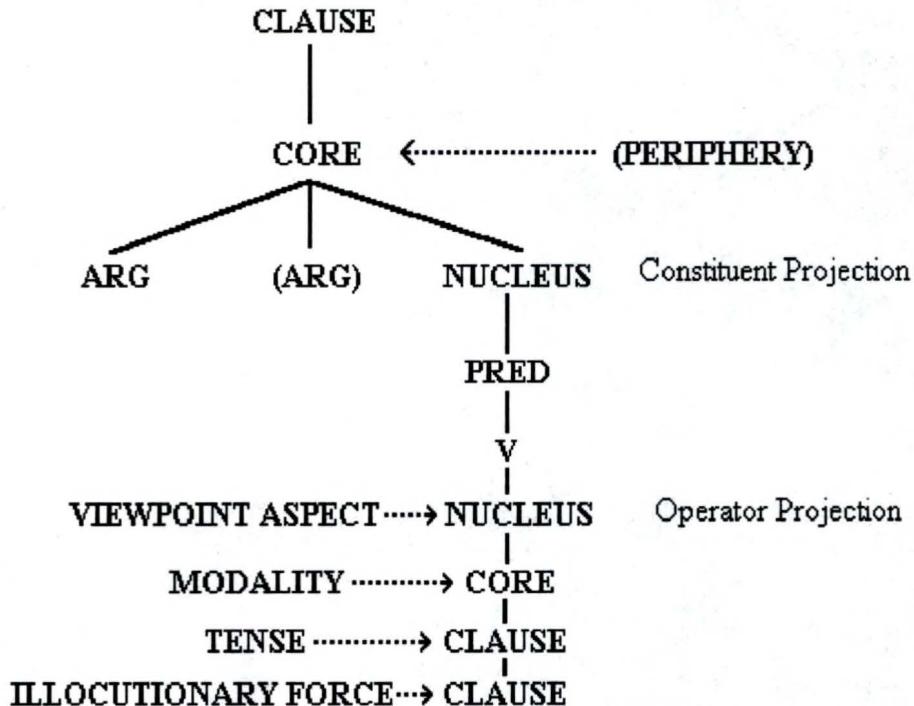


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viewpoint aspect is primarily discussed in terms of verb morphology and auxiliary verbs. That is, one begins with the grammatical forms (morphology and free morphemes), and shows which semantic functions are realized by these forms. A second approach 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

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accomplishments; however, there is nothing in the LS [do' (x)] CAUSE [BECOME predicate' (y)] (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 *peg-* group of verbs mentioned in §2.3.2.

3.1.1. Morphophonemic Contrasts within the *Peg-* Group

Two groups of verbs were mentioned in §2.3 where they were referred to as the *-m-* group and the *peg-* group. In a word, the *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 *peg-* group derives its name from the imperative form. Verbs in the *peg-* group form imperatives by prefixing *peg-* to the root, whether the root is a verb as in (3) (where *peg-* is prefixed to *limut* 'to slander') or a noun as in (4) (where *peg-* is prefixed to *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 *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) *Dei peg-limut diaadn!*²
do.not IMP-slander 1sACC
'Don't slander me!'

- (4) *Dei peg-uru nya!*
do.not IMP-medicine 3sACC
'Don't medicate him!'

²For the time being, I gloss the imperative form *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.

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- (5) *Dei apit!*
do.not stop.by
'Don't stop by!'
- (6) *Dei na ngi-liput!*
do.not PRF APL-circle
'Don't circle it!'

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).³ Various morphophonemic changes conform the final surface forms to the phonological patterns of the language. Specifically, the full form is /ŋ-/ + /g-/ + 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 /r/, there is well-motivated vowel epenthesis between the stem-forming prefix /g-/ 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 /g-/ 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/.

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- (ii) if the root begins with a liquid /l/ or /r/, there is well-motivated vowel epenthesis between the stem-forming prefix /g-/ 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 /g-/ 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/.

- (9) *Sia m-bali (ng-g-bali).*
 3sNOM NPST.VA-play
 'HE is playing.'
- (10) *Sia ng-gouk (ng-g-gouk) beig nu.*
 3sNOM NPST.VA-bother water 2sGEN
 'HE is bothering your water.'

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)).

- (11) *Sia g-imbakng (g-imbakng) anak na.*
 3sNOM VA-forbid child DEF
 'SHE is forbidding her child.'
- (12) *Sia gi-limut (g-limut) diaadn.*
 3sNOM VA-slander 1sACC
 'SHE is slandering me.'
- (13) *Sia ig-bali (g-bali).*
 3sNOM VA-play
 'HE is playing.'

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

- (14) *Sia i-gouk (in-g-gouk) beig nu.*
 3sNOM PST.VA-bother water 2sGEN
 'HE bothered your water.'
- (15) *Sia i-gi-limut (in-g-limut) diaadn.*
 3sNOM PST-VA-slander 1sACC
 'SHE slandered me.'

⁴The underlying form for past tense is *in-*.

- (9) *Sia m-bali (ng-g-bali).*
 3sNOM NPST.VA-play
 'HE is playing.'
- (10) *Sia ng-gouk (ng-g-gouk) beig nu.*
 3sNOM NPST.VA-bother water 2sGEN
 'HE is bothering your water.'

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;
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 3sNOM VA-play
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 'SHE slandered me.'

⁴The underlying form for past tense is *in-*.

- (16) *Sia n-ig-bali (in-g-bali).*
 3sNOM PST-VA-play
 'HE played.'

To arrive at the imperative forms of verbs in the *peg-* group:

prefix /pə-/ to the root if the root begins with /g/, e.g. (17) (cf. (10) and (14));

prefix /pəg-/ to the root if the root does **not** begin with /g/, e.g. (3) (cf. (7) and (12)).

- (17) *Dei pe-gouk (peg-gouk) diaadn!*
 do.not IMP-bother 1sACC
 'Don't bother me!'

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.

(18) ROOT	GLOSS	FULL FORM	REDUCED FORM	PAST TENSE	IMPERATIVE
		ng- + g- + Root	g- + Root	in- + g- + Root	peg- + Root
adak	smell	ng-g-adak	g-adak	i-g-adak	peg-adak
ahal	trick/cheat	ng-g-ahal	g-ahal	i-g-ahal	peg-ahal
ahut	shuttle	ng-g-ahut	g-ahut	i-g-ahut	peg-ahut
ait	wait	ng-g-ait	g-ait	i-g-ait	peg-ait
isik	shake	ng-g-isik	g-isik	i-g-isik	peg-isik
it	bring	ng-g-it	g-it	i-g-it	peg-it
imbakng	deny permission	ng-g-imbakng	g-imbakng	i-g-imbakng	peg-imbakng
ubu	laugh	ng-g-ubu	g-ubu	i-g-ubu	peg-ubu
lebas	strip	ng-ge-lebas	ge-lebas	i-ge-lebas	peg-lebas
libag	make fun of	ng-gi-libag	gi-libag	i-gi-libag	peg-libag
lingas	play around	ng-gi-lingas	gi-lingas	i-g-lingas	peg-lingas
liput	circle	ng-gi-liput	gi-liput	i-gi-liput	peg-liput
rampus	angry	ng-ge-rampus	ge-rampus	i-ge-rampus	peg-rampus
ramu	have intercourse	ng-ge-ramu	ge-ramu	i-ge-ramu	peg-ramu
seidn	change clothes	n-seidn	ig-seidn	n-ig-seidn	peg-seidn
siliu	exchange things	n-siliu	ig-siliu	n-ig-siliu	peg-siliu
suruadn	arrange marriage	n-suruadn	ig-suruadn	n-ig-suradn	peg-suruadn
tatakng	look after	n-tatakng	ig-tatakng	n-ig-tatakng	peg-tatakng
timung	gather together	n-timung	ig-timung	n-ig-timung	peg-timung
bagi	divide	m-bagi	ig-bagi	n-ig-bagi	peg-bagi
bali	play	m-bali	ig-bali	n-ig-bali	peg-bali
buat	make	m-buat	ig-buat	n-ig-buat	peg-buat
bunu'	fight	m-bunu'	ig-bunu'	n-ig-bunu'	peg-bunu'
pihir	think	m-pihir	ig-pihir	n-ig-pihir	peg-pihir
kogis	scrape teeth	ng-kogis	ig-kogis	n-ig-kogis	peg-kogis
ganad	study	ng-ganad		i-ganad	pe-ganad
giras	wail	ng-giras		i-giras	pe-giras
gouk	pester	ng-gouk		i-gouk	pe-gouk

- (16) *Sia n-ig-bali (in-g-bali).*
 3sNOM PST-VA-play
 'HE played.'

To arrive at the imperative forms of verbs in the *peg-* group:

prefix /pə-/ to the root if the root begins with /g/, e.g. (17) (cf. (10) and (14));

prefix /pəg-/ to the root if the root does **not** begin with /g/, e.g. (3) (cf. (7) and (12)).

- (17) *Dei pe-gouk (peg-gouk) diaadn!*
 do.not IMP-bother 1sACC
 'Don't bother me!'

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.

(18) ROOT	GLOSS	FULL FORM	REDUCED FORM	PAST TENSE	IMPERATIVE
		ng- + g- + Root	g- + Root	in- + g- + Root	peg- + Root
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ahal	trick/cheat	ng-g-ahal	g-ahal	i-g-ahal	peg-ahal
ahut	shuttle	ng-g-ahut	g-ahut	i-g-ahut	peg-ahut
ait	wait	ng-g-ait	g-ait	i-g-ait	peg-ait
isik	shake	ng-g-isik	g-isik	i-g-isik	peg-isik
it	bring	ng-g-it	g-it	i-g-it	peg-it
imbakng	deny permission	ng-g-imbakng	g-imbakng	i-g-imbakng	peg-imbakng
ubu	laugh	ng-g-ubu	g-ubu	i-g-ubu	peg-ubu
lebas	strip	ng-ge-lebas	ge-lebas	i-ge-lebas	peg-lebas
libag	make fun of	ng-gi-libag	gi-libag	i-gi-libag	peg-libag
lingas	play around	ng-gi-lingas	gi-lingas	i-g-lingas	peg-lingas
liput	circle	ng-gi-liput	gi-liput	i-gi-liput	peg-liput
rampus	angry	ng-ge-rampus	ge-rampus	i-ge-rampus	peg-rampus
ramu	have intercourse	ng-ge-ramu	ge-ramu	i-ge-ramu	peg-ramu
seidn	change clothes	n-seidn	ig-seidn	n-ig-seidn	peg-seidn
siliu	exchange things	n-siliu	ig-siliu	n-ig-siliu	peg-siliu
suruadn	arrange marriage	n-suruadn	ig-suruadn	n-ig-suradn	peg-suruadn
tatakng	look after	n-tatakng	ig-tatakng	n-ig-tatakng	peg-tatakng
timung	gather together	n-timung	ig-timung	n-ig-timung	peg-timung
bagi	divide	m-bagi	ig-bagi	n-ig-bagi	peg-bagi
bali	play	m-bali	ig-bali	n-ig-bali	peg-bali
buat	make	m-buat	ig-buat	n-ig-buat	peg-buat
bunu'	fight	m-bunu'	ig-bunu'	n-ig-bunu'	peg-bunu'
pihir	think	m-pihir	ig-pihir	n-ig-pihir	peg-pihir
kogis	scrape teeth	ng-kogis	ig-kogis	n-ig-kogis	peg-kogis
ganad	study	ng-ganad		i-ganad	pe-ganad
giras	wail	ng-giras		i-giras	pe-giras
gouk	pester	ng-gouk		i-gouk	pe-gouk

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 1sACC
 '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)).

(23) ROOT	GLOSS	FULL FORM	GLOSS	REDUCED FORM	PAST TENSE	IMPERATIVE
anak	child	ng-g-anak	give birth	g-anak	i-g-anak	peg-anak
ama'	father	ng-g-ama'	call father	g-ama'	i-g-ama'	peg-ama'
api	fire	ng-g-api	cook	g-api	i-g-api	peg-api
apu'	grandfather	ng-g-apu'	call	g-apu'	i-g-apu'	peg-apu'
indu'	mother	ng-g-indu'	call	g-indu'	i-g-indu'	peg-indu'
odu'	grandmother	ng-g-odu'	call	g-odu'	i-g-odu'	peg-odu'
langu'	sibling-in-law	ng-ge-langu'	call	ge-langu'	i-ge-langu'	peg-langu'
lobokng	grave	ng-ge-lobokng	bury	ge-lobokng	i-ge-lobokng	peg-lobokng
sigup	tobacco	n-sigup	smoke	ig-sigup	n-ig-sigup	peg-sigup
silipar	slippers	n-silipar	put on	ig-silipar	n-ig-silipar	peg-silipar
suruar	pants	n-suruar	put on	ig-suruar	n-ig-suruar	peg-suruar

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ama'	father	ng-g-ama'	call father	g-ama'	i-g-ama'	peg-ama'
api	fire	ng-g-api	cook	g-api	i-g-api	peg-api
apu'	grandfather	ng-g-apu'	call	g-apu'	i-g-apu'	peg-apu'
indu'	mother	ng-g-indu'	call	g-indu'	i-g-indu'	peg-indu'
odu'	grandmother	ng-g-odu'	call	g-odu'	i-g-odu'	peg-odu'
langu'	sibling-in-law	ng-ge-langu'	call	ge-langu'	i-ge-langu'	peg-langu'
lobokng	grave	ng-ge-lobokng	bury	ge-lobokng	i-ge-lobokng	peg-lobokng
sigup	tobacco	n-sigup	smoke	ig-sigup	n-ig-sigup	peg-sigup
silipar	slippers	n-silipar	put on	ig-silipar	n-ig-silipar	peg-silipar
suruar	pants	n-suruar	put on	ig-suruar	n-ig-suruar	peg-suruar

tondukng	head covering	n-tondukng	put on head covering	ig-tondukng	n-ig-tondukng	peg-tondukng
jaabm	watch	n-jaabm	spend time with	ig-jaabm	n-ig-jaabm	peg-jaabm
baju'	shirt	m-baju'	put on shirt	ig-baju'	n-ig-baju'	peg-baju'
biras	co-sibling- in-law	m-biras	call co- sibling- in-law	ig-biras	n-ig-biras	peg-biras
boros	noise	m-boros	make noise	ig-boros	n-ig-boros	peg-boros
bua'	fruit	m-bua'	bear fruit	ig-bua'	n-ig-bua'	
pangan	friend	m-pangan	befriend	ig-pangan	n-ig-pangan	peg-pangan
pusud	sibling	m-pusud	call sibling	ig-pusud	n-ig-pusud	peg-pusud
kapak	song	ng-kapak	sing	ig-kapak	n-ig-kapak	peg-kapak
kasut	shoes	ng-kasut	put on shoes	ig-kasut	n-ig-kasut	peg-kasut
kerai	work	ng-kerai	to work	ig-kerai	n-ig-kerai	peg-kerai
kuman	uncle	ng-kuman	call uncle	ig-kuman	n-ig-kuman	peg-kuman
ganggu'	jew's harp	ng-ganggu'	play jew's harp		i-ganggu'	pe-ganggu'
ganti	replacement	ng-ganti	replace		i-ganti	pe-ganti
geisikng	sarung	ng-geisikng	put on sarung		i-geisikng	pe-geisikng
guai	lover	ng-guai	call lover		i-guai	pe-guai

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

tondukng	head covering	n-tondukng	put on head covering	ig-tondukng	n-ig-tondukng	peg-tondukng
jaabm	watch	n-jaabm	spend time with	ig-jaabm	n-ig-jaabm	peg-jaabm
baju'	shirt	m-baju'	put on shirt	ig-baju'	n-ig-baju'	peg-baju'
biras	co-sibling- in-law	m-biras	call co- sibling- in-law	ig-biras	n-ig-biras	peg-biras
boros	noise	m-boros	make noise	ig-boros	n-ig-boros	peg-boros
bua'	fruit	m-bua'	bear fruit	ig-bua'	n-ig-bua'	
pangan	friend	m-pangan	befriend	ig-pangan	n-ig-pangan	peg-pangan
pusud	sibling	m-pusud	call sibling	ig-pusud	n-ig-pusud	peg-pusud
kapak	song	ng-kapak	sing	ig-kapak	n-ig-kapak	peg-kapak
kasut	shoes	ng-kasut	put on shoes	ig-kasut	n-ig-kasut	peg-kasut
kerai	work	ng-kerai	to work	ig-kerai	n-ig-kerai	peg-kerai
kuman	uncle	ng-kuman	call uncle	ig-kuman	n-ig-kuman	peg-kuman
ganggu'	jew's harp	ng-ganggu'	play jew's harp		i-ganggu'	pe-ganggu'
ganti	replacement	ng-ganti	replace		i-ganti	pe-ganti
geisikng	sarung	ng-geisikng	put on sarung		i-geisikng	pe-geisikng
guai	lover	ng-guai	call lover		i-guai	pe-guai

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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.⁵ 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.⁶ 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.'

⁵Cf. Lakoff (1987) and Taylor (1989) for a discussion of the notions of family resemblance and prototypes within linguistics.

⁶In some instances, the locative argument in accomplishment clauses occurs as a noncore oblique argument.

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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.⁵ 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.⁶ 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.'

⁵Cf. Lakoff (1987) and Taylor (1989) for a discussion of the notions of family resemblance and prototypes within linguistics.

⁶In some instances, the locative argument in accomplishment clauses occurs as a noncore oblique argument.

- (25) a. LS for motion activities:
 b. Clause-specific LS for (24):
 c. Assign thematic relations:
 d. Assign semantic macroroles:
 e. Assign syntactic functions:
 f. Assign case and prepositions:
 g. Cross-reference verb:

do' (x, [predicate' (x)])	x=effector-theme
do' (sia 'he', [apit 'stop by' (sia 'he')])	
sia 'he' ← effector-theme	
actor ← effector-theme	1 Macrorole
pivot ← actor-sia 'he'	
pivot-sia 'he' ← nominative case	
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

⁷Cf. §2.3.1 for further details.

⁸As 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.

⁹Although *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.'

- (25) a. LS for motion activities:
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-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 1pexcGEN
'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 1pexcGEN
'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-*).

¹⁰An epenthetic vowel is inserted between the prefix and the verb root to avoid impermissible syllable structures.

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'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 1pexcGEN
'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)]
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b. LS for (27): [apit 'stop by' (sia 'he')] CAUSE
[BECOME dii 'at' (bali mi 'our house', sia 'he')]
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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).¹¹ 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'** (\emptyset , *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.¹² The verb *ng-g-ahut* 'NPST-IT-shuttle' (e.g. (32)) involves motion and belongs to the *g-/peg-* group.

¹¹There 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.

¹²Boutin (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.

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- (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 ψ portion contains an abstract locative predicate (cf. (31a), (33a)).

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 b. LS for (32): [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

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stages along a trajectory. Although *nggit* 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).¹³ 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).

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.

¹³Kissing in Bonggi means touching with the nose, not the lips, which accounts for the two senses of the root *adak*.

¹⁴The 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.

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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.¹⁵

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.¹⁶

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.

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.

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(37)	ng-gi-libag	NPST-VA-make fun of	ng-gi-limut	NPST-VA-slander
	ng-g-ait	NPST-VA-wait for	ng-ge-rampus	NPST-VA-angry at
	ng-g-intabm	NPST-VA-recall something	ng-g-olibm	NPST-VA-denry having
	ng-g-adab	NPST-VA-respect someone	ng-geinggi	NPST.VA-promise something
	ng-gesab	NPST.VA-ridicule	ng-ganad	NPST.VA-study something
	m-pihir	NPST.VA-think about	m-persab	NPST.VA-amuse
	n-simbuat	NPST.VA-curse	n-jaabm	NPST.VA-spend time with
	n-tatakng	NPST.VA-look after		

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-/Ø* 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.*
 1pexcNOM 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-

¹⁷*g-* 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.

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(37)	ng-gi-libag	NPST-VA-make fun of	ng-gi-limut	NPST-VA-slander
	ng-g-ait	NPST-VA-wait for	ng-ge-rampus	NPST-VA-angry at
	ng-g-intabm	NPST-VA-recall something	ng-g-olibm	NPST-VA-denry having
	ng-g-adab	NPST-VA-respect someone	ng-geinggi	NPST.VA-promise something
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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)?*²¹
 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

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-ugug* '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.

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- (41) *Nggien nu ng-g-upug-upug?*
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 'Where do you keep sitting down?'

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- (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).

(45)	Root	Gloss	Getting-into-a-posture		Being-in-a-posture	
			Indicative	Imperative	Indicative	Imperative
	usag	stand up	m-usag	usag	g-usag	peg-usag
	upug	sit down	m-upug	upug	g-upug	peg-upug
	ilakng	lie down	m-ilakng	ilakng	g-ilakng	peg-ilakng
	ogot	hold	m-ogot	ogot	g-ogot	peg-ogot

- (46) *Kahal a g-ogot ny eili?*
still 2sNOM VA-hold NPIV boy
'Are YOU still holding the boy?'

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Although the term 'being-in-a-posture' suggests that the *g-* marked verbs in (45) are stative, they are activities and not states.²² I take the presence of imperative forms occurring with 'being-in-a-posture' verbs as evidence for their being activities and not states.²³ 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 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 1sGEN 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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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 nyu kahal g-abag.*
 see 1sNOM 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

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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)).²⁵

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

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).

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- (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

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*.

²⁶Reduplicated 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.

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Reduced reduplicated forms are obtained by simply prefixing /g-/ to the reduplicated root, then:

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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*.

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To arrive at the imperative reduplicated forms:

prefix /pə-/ to the root if the root begins with /g/, e.g. (53);

prefix /pəg-/ to the root if the root does **not** begin with /g/, e.g. (44).

- (53) *Dei pe-ganti-ganti nya!*
 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

ROOT	GLOSS	NONREDUPLICATED	REDUPLICATED	REDUPLICATED	REDUPLICATED
		PLICATED	FULL-FORM	REDUCED-FORM	PAST TENSE
abat	answer	m-abat	ng-g-abat-abat	g-abat-abat	i-g-abat-abat
apat	to land	m-apat	ng-g-apat-apat	g-apat-apat	i-g-apat-apat
apit	stop by	m-apit	ng-g-apit-apit	g-apit-apit	i-g-apit-apit
ilakng	lie down	m-ilakng	ng-g-ilakng-ilakng	g-ilakng-ilakng	i-g-ilakng-ilakng
inggat	chew betul	m-inggat	ng-g-inggat-inggat	g-inggat-inggat	i-g-inggat-inggat
odop	sleep	m-odop	ng-g-odop-odop	g-odop-odop	i-g-odop-odop
ohodn	eat	m-ohodn	ng-g-ohodn-ohodn	g-ohodn-ohodn	i-g-ohodn-ohodn
usag	stand up	m-usag	ng-g-usag-usag	g-usag-usag	i-g-usag-usag
lidik	slash brush	l-im-idik	ig-lidik-lidik	ig-lidik-lidik	n-ig-lidik-lidik

²⁷Glosses 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'.

To arrive at the imperative reduplicated forms:

prefix /pə-/ to the root if the root begins with /g/, e.g. (53);

prefix /pəg-/ to the root if the root does **not** begin with /g/, e.g. (44).

- (53) *Dei pe-ganti-ganti nya!*
 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

ROOT	GLOSS	NONREDUPLICATED	REDUPLICATED	REDUPLICATED	REDUPLICATED
		PLICATED	FULL-FORM	REDUCED-FORM	PAST TENSE
abat	answer	m-abat	ng-g-abat-abat	g-abat-abat	i-g-abat-abat
apat	to land	m-apat	ng-g-apat-apat	g-apat-apat	i-g-apat-apat
apit	stop by	m-apit	ng-g-apit-apit	g-apit-apit	i-g-apit-apit
ilakng	lie down	m-ilakng	ng-g-ilakng-ilakng	g-ilakng-ilakng	i-g-ilakng-ilakng
inggat	chew betul	m-inggat	ng-g-inggat-inggat	g-inggat-inggat	i-g-inggat-inggat
odop	sleep	m-odop	ng-g-odop-odop	g-odop-odop	i-g-odop-odop
ohodn	eat	m-ohodn	ng-g-ohodn-ohodn	g-ohodn-ohodn	i-g-ohodn-ohodn
usag	stand up	m-usag	ng-g-usag-usag	g-usag-usag	i-g-usag-usag
lidik	slash brush	l-im-idik	ig-lidik-lidik	ig-lidik-lidik	n-ig-lidik-lidik

²⁷Glosses 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'.

lobot	cross over	l-em-obot	ig-lobot-lobot	ig-lobot-lobot	n-ig-lobot-lobot
longi	swim	l-em-ongi	ig-longi-longi	ig-longi-longi	n-ig-longi-longi
panu	walk	m-panu	ig-panu-panu	ig-panu-panu	n-ig-panu-panu
selehei	ascend stairs	s-em-elehei	ig-selehei-selehei	ig-selehei-selehei	n-ig-selehei-selehei
todik	climb hill	t-em-odik	ig-todik-todik	ig-todik-todik	n-ig-todik-todik

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	NONREDUPLICATED	REDUPLI-	REDUPLI-	REDUPLICATED
			CATED	FULL-FORM	PAST TENSE
dolok	rain	d-em-olok	to rain	ig-dolok-dolok	ig-dolok-dolok
dudug	thunder	d-um-udug	to thunder	ig-dudug-dudug	ig-dudug-dudug
dudu'	breast	d-um-udu'	to nurse	ig-dudu'-dudu'	ig-dudu'-dudu'
sidiu	urine	s-im-idu	urinate	ig-sidiu-sidiu	ig-sidiu-sidiu
suha	vomit	s-um-uga	to vomit	ig-suha-suha	ig-suha-suha
tilug	egg	t-im-ilug	lay an egg	ig-tilug-tilug	ig-tilug-tilug
toi	feces	t-em-oi	defecate	ig-toi-toi	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	NONREDUPLICATED	REDUPLICATED	REDUPLICATED	REDUPLI-
			FULL-FORM	REDUCED-FORM	CATED
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
ganti	replace	ng-ganti	ng-ganti-ganti		i-ganti-ganti
kogis	scrape teeth	ng-kogis	ig-kogis-kogis	ig-kogis-kogis	n-ig-kogis-kogis
labu	drop anchor	ng-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-ge-rampus	ig-rampus-rampus	ig-rampus-rampus	n-ig-rampus-rampus
ramu	copulate	ng-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

lobot	cross over	l-em-obot	ig-lobot-lobot	ig-lobot-lobot	n-ig-lobot-lobot
longi	swim	l-em-ongi	ig-longi-longi	ig-longi-longi	n-ig-longi-longi
panu	walk	m-panu	ig-panu-panu	ig-panu-panu	n-ig-panu-panu
selehei	ascend stairs	s-em-elehei	ig-selehei-selehei	ig-selehei-selehei	n-ig-selehei-selehei
todik	climb hill	t-em-odik	ig-todik-todik	ig-todik-todik	n-ig-todik-todik

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	NONREDUPLICATED	REDUPLI-	REDUPLI-	REDUPLICATED
			CATED	FULL-FORM	PAST TENSE
dolok	rain	d-em-olok	to rain	ig-dolok-dolok	ig-dolok-dolok
dudug	thunder	d-um-udug	to thunder	ig-dudug-dudug	ig-dudug-dudug
dudu'	breast	d-um-udu'	to nurse	ig-dudu'-dudu'	ig-dudu'-dudu'
sidu	urine	s-im-idu	urinate	ig-sidu-sidu	ig-sidu-sidu
suha	vomit	s-um-uga	to vomit	ig-suha-suha	ig-suha-suha
tilug	egg	t-im-ilug	lay an egg	ig-tilug-tilug	ig-tilug-tilug
toi	feces	t-em-oi	defecate	ig-toi-toi	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	NONREDUPLICATED	REDUPLICATED	REDUPLICATED	REDUPLI-
			FULL-FORM	REDUCED-FORM	CATED
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
ganti	replace	ng-ganti	ng-ganti-ganti		i-ganti-ganti
kogis	scrape teeth	ng-kogis	ig-kogis-kogis	ig-kogis-kogis	n-ig-kogis-kogis
labu	drop anchor	ng-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-ge-rampus	ig-rampus-rampus	ig-rampus-rampus	n-ig-rampus-rampus
ramu	copulate	ng-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	NONREDUPLICATED	REDUPERPLICATED FULL-FORM	REDUPERPLICATED REDUCED-FORM	REDUPERPLICATED PAST TENSE
adab	respect	ng-g-adab	ng-g-adab-adab	g-adab-adab	i-g-adab-adab
amut	perfume	ng-g-amut	ng-g-amut-amut	g-amut-amut	i-g-amut-amut
ibal	companion	ng-g-ibal	ng-g-ibal-ibal	g-ibal-ibal	i-g-ibal-ibal
oig	boat	ng-g-oig	ng-g-oig-oig	g-oig-oig	i-g-oig-oig
ladu	illness	ng-ge-ladu 'injure'	ig-ladu-ladu	ig-ladu-ladu	n-ig-ladu-ladu
lobokng	grave	ng-ge-lobokng 'bury'	ig-lobokng-lobokng	ig-lobokng-lobokng	n-ig-lobokng-lobokng
saa	spouse	ng-ge-saa 'marry'	ig-saa-saa	ig-saa-saa	n-ig-saa-saa
nana'	pus	ig-nana' 'oozing pus'	ig-nana'-nana'	ig-nana'-nana'	n-ig-nana'-nana'
piukng	umbrella	m-piukng	ig-piukng-piukng	ig-piukng-piukng	n-ig-piukng-piukng
jaabm	watch	n-jaabm 'spend time talking'	ig-jaabm-jaabm	ig-jaabm-jaabm	n-ig-jaabm-jaabm
tiaa'	dear	n-tiaa'	ig-tiaa'-tiaa'	ig-tiaa'-tiaa'	n-ig-tiaa'-tiaa'

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).

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.

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adab	respect	ng-g-adab	ng-g-adab-adab	g-adab-adab	i-g-adab-adab
amut	perfume	ng-g-amut	ng-g-amut-amut	g-amut-amut	i-g-amut-amut
ibal	companion	ng-g-ibal	ng-g-ibal-ibal	g-ibal-ibal	i-g-ibal-ibal
oig	boat	ng-g-oig	ng-g-oig-oig	g-oig-oig	i-g-oig-oig
ladu	illness	ng-ge-ladu 'injure'	ig-ladu-ladu	ig-ladu-ladu	n-ig-ladu-ladu
lobokng	grave	ng-ge-lobokng 'bury'	ig-lobokng-lobokng	ig-lobokng-lobokng	n-ig-lobokng-lobokng
saa	spouse	ng-ge-saa 'marry'	ig-saa-saa	ig-saa-saa	n-ig-saa-saa
nana'	pus	ig-nana' 'oozing pus'	ig-nana'-nana'	ig-nana'-nana'	n-ig-nana'-nana'
piukng	umbrella	m-piukng	ig-piukng-piukng	ig-piukng-piukng	n-ig-piukng-piukng
jaabm	watch	n-jaabm 'spend time talking'	ig-jaabm-jaabm	ig-jaabm-jaabm	n-ig-jaabm-jaabm
tiaa'	dear	n-tiaa'	ig-tiaa'-tiaa'	ig-tiaa'-tiaa'	n-ig-tiaa'-tiaa'

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.

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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.

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 *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. *ng-g-isik* 'NPST-IT-shake' in (26)); (ii) inherently iterative accomplishments (e.g. *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. *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. *gupug* 'sitting' in (40)) and verbs which are reduplicated (e.g. *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 *nggisik* 'to shake' and *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 *g-* forms as opposed to *-m-* or *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 *g-/peg-* group or the *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 *peg-* group based on the morpheme used to form the imperative. The morphophonemic description in §3.1.1 shows that in

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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).

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- (60) *Sigelama na ig-tibas (ig-tibas) kina.*
 3pNOM DEF REC-strike.with.machete earlier
 'THEY struck each other with machetes earlier.'
- (61) *Sia n-ig-tibas (in-ig-tibas) ma' Ubiadn.*
 3sNOM PST-REC-strike.with.machete with Ubian
 'HE and an Ubian struck each other with machetes.'
- (62) *N-ibas (ng-tibas) ou kiou kina.*
 APL-strike.with.machete 1sNOM wood earlier
 'I struck the wood with a machete earlier.'

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).²⁹ This dual relationship between

²⁹Reflexive 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) *Sia n-usa (ng-susa) deirdn na.*
 3sNOM APL-difficult self DEF
 'SHE makes things difficult for herself.'
- (ii) *Sigelama na ig-limut (ig-limut) deirdn nda.*
 3pNOM DEF REC-slander self plural
 'THEY slandered each other.'

- (60) *Sigelama na ig-tibas (ig-tibas) kina.*
 3pNOM DEF REC-strike.with.machete earlier
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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 (e.g. (60), (61), (62)). When the effector-theme is implied, it is unspecified (\emptyset) 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: [[**do'** (x)] CAUSE [**do'** (y)]] CAUSE [BECOME **be-at'** (z,y)]
 x=effector, y=effector-theme, z=locative-goal
b. LS for (62): [[**do'** (*ou* 'T')] CAUSE [**do'** (\emptyset)]]] CAUSE
 [BECOME **be-at'** (*kiou* 'wood', \emptyset)]

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

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simple combination of two nonreciprocal events.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.³¹

(64) a. LS for reciprocal

tibas:

[[**do'** (x)] CAUSE [**do'** (y₁)]] CAUSE [BECOME **be-at'** (z,y₁)] &
[[**do'** (z)] CAUSE [**do'** (y₂)]] CAUSE [BECOME **be-at'** (x,y₂)]

b. LS for (61):

[[**do'** (*sia* 'he')] CAUSE [**do'** (Ø)]]] CAUSE
[BECOME **be-at'** (*Ubiadn* 'Ubian', Ø)] &
[[**do'** (*Ubiadn* 'Ubian')]] CAUSE [**do'** (Ø)]]] CAUSE
[BECOME **be-at'** (*sia* 'he', Ø)]

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* 'I' and *kiou* 'wood'.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

³⁰If in (63a) 'x' and 'z' were coreferential, the result would be a reflexive reading.

³¹This 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.

³²The 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.

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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.³³ 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.³⁴ 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.³⁵ 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

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*).

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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.³⁴ 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.³⁵ 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

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.³⁶ 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 ~~syntactic go~~ (65) configuration can a (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 1sACC
 '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. *bumu* 'argue') are normally treated as lexical reciprocals in that they involve two

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participants who act upon one another.³⁷ 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)).³⁸ 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.'

³⁷Lexically reciprocal verbs in English (depending on context) include: *kiss*, *meet*, and *shake hands*.

³⁸As 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.

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'HE is arguing with his sibling.'
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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)	<u>ROOT</u>	<u>GLOSS</u>	<u>ACTIVITY</u>	<u>ACCOMPLISHMENT</u>	<u>RECIPROCAL</u>
	goul	mix together		nge-goul	ig-goul
	lujubm	trick		ngu-lujubm	ig-lujubm
	ranggar	ram		nge-ranggar	ig-ranggar
	salabm	greet		n-alabm	ig-salabm
	suntuk	punch; fist fight		n-unuk	ig-suntuk
	tumbuk	punch; fist fight		n-umbuk	ig-tumbuk
	tolu'	pursue; chase		n-olu'	ig-tolu'
	mati	die		m-mati 'kill'	ig-pati ³⁹
	loon	oppose	l-em-oon	nge-loon	ig-loon
	tomu	meet	t-em-omu		ig-tomu
	tampidn	blame		petampidn	ig-petampidn ⁴⁰

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)).⁴¹ 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)	<u>AFFIXES</u>	<u>FUNCTION</u>	<u>ROOT</u>	<u>GLOSS</u>	<u>SURFACE FORM</u>	<u>REFERENCE</u>
	m-	'ST'	puti'	'white'	mputi'	§2.1.3
	-m-	'ACY'	panu	'walk'	mpanu	§2.3
	ng-g-	'NPST-VA'	bali	'play'	mbali	(9)
	ng-g-	'NPST-VA'	bunu'	'argue'	mbunu'	(69)

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

³⁹The 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.

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	suntuk	punch; fist fight		n-unuk	ig-suntuk
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	tolu'	pursue; chase		n-olu'	ig-tolu'
	mati	die		m-mati 'kill'	ig-pati ³⁹
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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.'⁴²
- (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-

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⁴²Banggi Island was occupied by the Japanese during World War II.

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form (cf. (18), (37)). The events in (74) involve a complex change of state instead of a single change of state.

(74)	<i>ng-g-api</i>	NPST-VA-cook	<i>m-buat</i>	NPST.VA-make
	<i>ng-gi-liput</i>	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.

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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.'⁴³

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	ACCOMPLISH-MENT	RECIPROCAL & PARTIAL-REDUPLICATION
	puun	take leave of	m-uun	ig-pu-puun 'keep taking leave of each other'
	lapas	hit with switch	nge-lapas	ig-le-lapas 'keep hitting each other with switch'
	suad	speak		ig-su-suad 'keep speaking with each other'
	bali	play		ig-be-bali 'keep playing with each other'

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.

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 'WE kept hiding the root from each other.'⁴³

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	ACCOMPLISH-MENT	RECIPROCAL & PARTIAL-REDUPLICATION
	puun	take leave of	m-uun	ig-pu-puun 'keep taking leave of each other'
	lapas	hit with switch	nge-lapas	ig-le-lapas 'keep hitting each other with switch'
	suad	speak		ig-su-suad 'keep speaking with each other'
	bali	play		ig-be-bali 'keep playing with each other'

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 *igbunu* '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 peripherastically via the aspectual word *malik* 'again', e.g. (78) and (79).

- (78) *Ou m-ohodn (-m-ohon) malik.*
1sNOM 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.

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- (80) a) *ari lima malik* b) *toudn malik* c) *minggu malik*
 day five next year next week next
 'next Friday' 'next year' '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 peripherastically: (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 infixated (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)).

⁴⁵Since *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.

- (80) a) *ari lima malik* b) *toudn malik* c) *minggu malik*
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⁴⁵Since *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.'⁴⁶

- (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-*).⁴⁷

- (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

⁴⁶The pivot is unspecified in the Bonggi, but clear from the previous context. This text is part of an explanation of what went on during a litigation. Mual was the village chief at the time presiding over the case.

⁴⁷Darah binti Kudasan from the village of Kuda-Kuda in the Limbuak Darat cluster often uses *beg-*, while Ninah binti Latip from the village of Palak Darat would use *meg-*. Both of these women lived with us for at least three years, and we noticed this difference but never did any frequency counts. My wife Alanna thinks the distinction might be dialectical, but it could also be an idiosyncratic feature of Darah's speech since Darah's home village consists of only two households. See §3.1.1 for a discussion of full-forms versus reduced-forms. Cf. Kroeger (1988b:243-44) for a discussion of reduced forms in Kimaragang.

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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 meg-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) <i>meg-balik-balik / beg-balik-balik</i> | 'keep going back to a place' |
| <i>meg-biid-biid</i> | 'keep turning over' |
| <i>meg-bolos-bolos</i> | 'keep borrowing' |
| <i>meg-ganti-ganti</i> | '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*.

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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).

(89) ROOT	GLOSS	DERIVED FORM	GLOSS
suruar	'long pants'	meg-suruar	'always wears long pants'
baju'	'shirt'	meg-baju'	'always wears a shirt'
meikap	'make-up'	meg-meikap	'always wears makeup'
piukng	'umbrella'	meg-piukng	'always uses an umbrella'
sigup	'tobacco'	meg-sigup	'always chew tobacco'
siidn	'money'	meg-siidn	'always has money'
libudn	'women'	meg-libudn	'always chasing after women'
perakng	'war'	meg-perakng	'always be at war'
kungguru'	'pillow'	meg-kungguru'	'always be using a pillow'
miting	'meeting'	meg-miting	'always be having meetings'
kedai	'store'	meg-kedai	'operate/run a store'
rumun	'nest'	meg-rumun	'live in a nest'
kuman	'uncle'	meg-kuman	'call someone uncle'

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.

⁵¹This 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.

⁵³Pittman (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-*).

meg-lobot-lobot	'keep crossing over'
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(90)

VERBALIZED KINSHIP TERMS

<u>ng- + g- + ROOT</u>	<u>meg- + ROOT</u>
	meg-mentamang 'call someone parent-in-law' ⁵⁴
	meg-minyien 'call someone son/daughter-in-law'
	meg-menahadn 'call someone niece/nephew'
	meg-sihu 'call someone great-great-grandparent/grandchild' ⁵⁵
	meg-madu' 'call someone a cowife' ⁵⁶
	meg-mien 'call someone aunt'
ng-kuman	'call someone uncle'
m-pusud	'call someone sibling'
m-biras	'call someone <i>biras</i> which refers to the relationship between two people who are married to siblings/cousins' ⁵⁷
ng-g-ama'	'call someone father'
ng-g-indu'	'call someone mother'
ng-g-apu'	'call someone grandfather/grandchild'
ng-g-otud	'call someone great-grandparent/grandchild' ⁵⁸
ng-g-odu'	'call someone grandmother'
ng-ge-langu'	'call someone brother/sister-in-law'
ng-g-ipag	'call brother/sister-in-law <i>ipag</i> after connecting relative is deceased' ⁵⁹
ng-g-ompu'	'call aunt/uncle <i>ompu</i> ' after connecting parent is deceased'

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 *megsihu*. 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).

(90)

VERBALIZED KINSHIP TERMS

<u>ng- + g- + ROOT</u>	<u>meg- + ROOT</u>
	meg-mentamang 'call someone parent-in-law' ⁵⁴
	meg-minyien 'call someone son/daughter-in-law'
	meg-menahadn 'call someone niece/nephew'
	meg-sihu 'call someone great-great-grandparent/grandchild' ⁵⁵
	meg-madu' 'call someone a cowife' ⁵⁶
	meg-mien 'call someone aunt'
ng-kuman	'call someone uncle'
m-pusud	'call someone sibling'
m-biras	'call someone <i>biras</i> which refers to the relationship between two people who are married to siblings/cousins' ⁵⁷
ng-g-ama'	'call someone father'
ng-g-indu'	'call someone mother'
ng-g-apu'	'call someone grandfather/grandchild'
ng-g-otud	'call someone great-grandparent/grandchild' ⁵⁸
ng-g-odu'	'call someone grandmother'
ng-ge-langu'	'call someone brother/sister-in-law'
ng-g-ipag	'call brother/sister-in-law <i>ipag</i> after connecting relative is deceased' ⁵⁹
ng-g-ompu'	'call aunt/uncle <i>ompu</i> ' after connecting parent is deceased'

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 *megsihu*. 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*.

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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-* (/məg/) 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

⁶⁰I 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 nonnative speaker 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'.

⁶¹Cf. Timugon: *mag-* 'nonpast' and *nag-* 'past' (Brewis & Levinsohn 1991:31); Labuk Kadazan: *mog-* 'noncompletive' and *nog-* 'completive' (Hurlbut 1988:52-53); Ilokano: *ʔag-* '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).

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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.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.).

- (91) *Sia nda' bas i-g-ama' (in-g-ama') ama' nya.*
 3sNOM not PST PST-VA-father father 3sGEN
 'HE has never called his father father.'⁶³

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.

⁶²Past 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.

⁶³Social 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.

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Walton (1983:54-55) provides the following examples of *mag-* in Sama, a language of the southern Philippines. According to him, (92a) is a condition state and (92b) an agentive state.

- | | |
|---|-------------------------------------|
| (92) a. <i>Dupang anak ta iyu.</i>
foolish child 1dGEN that
'THAT CHILD OF OURS is foolish.' | Sama Pangutaran
(Walton 1983:54) |
| b. <i>Mag-dupang anak ta iyu.</i>
affix-foolish child 1dGEN that
'THAT CHILD OF OURS is being foolish.' | Sama Pangutaran
(Walton 1983:55) |

Bonggi clauses corresponding to Walton's examples are provided in (93a) and (93b). Both (92a) and (93a) are condition states whose LS is **predicate'(x)**.

- | | |
|--|--|
| (93) a. <i>Anak ta n-dupakng (m-dupang) guakng.</i>
child 1dGEN ST-foolish spirit
'OUR CHILD is foolish.' | |
| b. <i>Anak ta meg-dupakng (m-g-dupang) guakng.</i>
child 1dGEN DIS-foolish spirit
'OUR CHILD is always foolish.' | |

The LS for (92b) and (93b) is **do' (x, [predicate'(x)])** which is the LS for activity verbs (cf. §2.3). Walton (1983:83) claims that in Sama, *mag-* indicates 'agentive aspect' and changes the LS from **predicate'(x)** to a LS which includes DO as an operator. Sama *mag-* and Bonggi *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)).⁶⁴

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.

⁶⁴Bonggi *meg-* also occurs with verb roots such as *taru'* 'hide' (cf. (87)).

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|--|--|
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The LS for (92b) and (93b) is **do' (x, [predicate'(x)])** which is the LS for activity verbs (cf. §2.3). Walton (1983:83) claims that in Sama, *mag-* indicates 'agentive aspect' and changes the LS from **predicate'(x)** to a LS which includes DO as an operator. Sama *mag-* and Bonggi *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)).⁶⁴

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⁶⁴Bonggi *meg-* also occurs with verb roots such as *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-IT-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

⁶⁵Chung 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.

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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, ϕ CAUSE ψ , the focus of the imperative is on the achievement portion ψ , and the ϕ 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 tei!*
 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-gagi (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.'

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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*

⁶⁷The pivot occurs in the genitive case and not the nominative case in relative clauses (cf. footnote 21).

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*

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')?⁶⁸ 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.⁶⁹ They are shown in (98) along with a schematized situation.

(98)	-----
↑	
<i>mulei</i>	<i>beranti</i>
'started'	'stopped'
↑	
<i>nambukng</i>	
'continued'	
↑	
<i>punga</i>	
'finished'	

When a situation is viewed from the perspective of its inception or beginning, it is marked by *mulei* 'started/begun'.⁷⁰ 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 *mulei* appears to be a main verb as in (100), some event is always implied being understood from the previous discourse context. Thus, *mulei* is an aspectual auxiliary in (100) and the main verb is implied.

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 *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 mulai 'to begin'.

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⁷⁰Some speakers use /mulai/ 'started/begun' instead of /mulei/, which is probably the result of influence from Malay mulai 'to begin'.

- (99) *Ihi hina mulei m-bu-buat (ng-CV-buat) bali nya.*
 1pexcNOM earlier started NPST-IT-make house 3sGEN
 'Earlier today WE started building his house.'

- (100) *Ihi nda' pa mulei .*
 1pexcNOM not yet started
 'WE have not started yet.'

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.

- (101) *Nehaa' na, mulei ou su-suad (CV-suad) adat Bonggi mati.*
 now - started 1sNOM IT-speak custom Bonggi die
 'Now I am starting to speak about Bonggi death customs.'

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).

- (102) *Ihi nda' pa mulei kerai.*
 1pexcNOM not yet started work
 'WE have not started working yet.'

(103)	ADVERB	PIVOT	VERB PHRASE			
			1st Position	2nd Position	Auxiliary	Verb
	<i>ihi</i> 'we'	<i>nda'</i> 'not'	<i>pa</i> 'yet'	<i>mulei</i> 'started'		<i>kerai</i> 'work'

⁷¹Nominative case clitic pronouns are phonologically reduced forms except *ou* '1sNOM' which has the same form whether it is a clitic or nonclitic. This is because *ou* is monosyllabic [o^u], whereas the other nominative case pronouns are at least disyllabic (cf. Table 1.2 in §1.3).

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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.⁷² For example, in (104) the temporal phrase *mulei tidii nehaa'* 'na starting from now' has a temporal adjunct function.

- (104) *Mulei tidii nehaa'* 'na, sia nda' na kerai 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'.⁷³ 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

⁷²Cf. the discussion below regarding various syntactic functions of *punga* '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 Limbuak Darat. 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).

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'starting from now') is separated from 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* 'T') 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).

⁷⁴Domon is the major hero in Bonggi folktales (cf. Boutin, in press). For a discussion of Bonggi incest taboos see Boutin (1990:104).

⁷⁵Special 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.

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- (106) *Sia nda' pa punga kerai.*
 3sNOM not yet finished work
 'SHE has not yet finished working.'
- (107) *Punga na.*
 finished PFT
 'I am finished.'⁷⁶
- (108) *Punga ina, ng-inum kupi!*. *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.'⁷⁷

Although *punga* '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, *punga* 'finished' is a main verb in (107). This verb is stative and has the LS predicate'(x).⁷⁸ On the other hand, when *punga* '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, *pag-* 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.

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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, *pag-* 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.⁷⁹ As a verb, *punga* 'finished' can occur as a state (e.g. (107)), an achievement (e.g. (111)), or an accomplishment (e.g. (112)).

- (111) *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) *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, *beranti* 'stopped' (cf. Malay berhenti) indicates that the event is terminated but not yet finished. *Beranti* 'stopped' can occur as an aspectual auxiliary (e.g. (113)) or as a main verb (e.g. (114)).

- (113) *Sia nda' pa beranti kerai.*
 3sNOM not yet stopped work
 'SHE has not yet stopped working.'

- (114) *Gipad puhul sebelas beranti.*⁸⁰
 near o'clock eleven stop
 'About 11:00 o'clock they stopped.'

The other phase of an event found in (98) is *nambukng* 'continue'. Unlike the other phases in (98), *nambukng* 'continue' is not a bare root. The root is *sambukng* 'continue' (cf. Malay sambung) which occurs here with actor pivot accomplishment morphology (*ng-*), e.g. (115). The syntactic position of *nambukng* 'continue' in (115) is the same as that of *mulei* 'started/begun' in (100), *punga* 'finished' in (106), and *beranti* 'stopped' in (113). Yet, the morphology of *n-ambukng*

⁷⁸As a stative verb, *punga* 'finished' is unaffixed. Cf. §2.1.3 and §2.1.5 for other stative verbs which are unaffixed.

⁷⁹Similarly, the viewpoint aspectual auxiliary *mulei* 'started/begun' is incompatible with states, because the inception of a state is not part of the state.

⁸⁰References to the time of day use borrowed Malay numbers, e.g. sebelas 'eleven'.

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'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.⁸¹ 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

⁸¹For a discussion of phasal predicates see Longacre (1976:238) and Noonan (1985:129).

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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).⁸² 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.⁸³

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

⁸²Bybee (1985:147f) points out that inceptive aspect is rarely an inflectional morpheme.

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1972:184, 411ff. for Tagalog).⁸⁴ 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));⁸⁵ 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)).

⁸⁴Cf. Klavans (1982:11, 32) for a discussion of second position enclitics in Tagalog. Cf. also Schachter (1974) for Tagalog clitic order.

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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

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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?*⁸⁶
 still 2sNOM remember DEAD-grandfather 2sGEN
 'Do YOU still remember your dead grandfather?'
-

⁸⁵The 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 *si* and *ni* which occur before personal names and certain kinship terms (cf. §1.3.1). *Ni* is reduced to [n̩] 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."

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With respect to verb phrases, genitive case enclitic pronouns occur in second position following the word *bas* 'PST', e.g. in (120) *ku* '1sGEN' follows *bas*.

- (120) *Bas ku kerai dii Kudat.*
 PST 1sGEN 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)

	NOMINATIVE			GENITIVE		ACCUSATIVE
	Full form	Enclitic	Negated	Full form	Enclitic	
1singular	ou	ou	ndou	ku	ku	diaadn
1dual	kita	ta	ndihita	ta	ta	dihita
1plural-inclusive	kiti	ti	ndihiti	ti	ti	dihiti
1plural-exclusive	ihi	i	ndihi	mi	mi	dihii
2singular	aha	a	ndaha	nu	nu	diha
2plural	uhu	u	nduhu	nyu	nyu	dihu
3singular	sia			nya	nya	nya
3plural	sigelama			sigelama		sigelama

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.

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2singular	aha	a	ndaha	nu	nu	diha
2plural	uhu	u	nduhu	nyu	nyu	dihu
3singular	sia			nya	nya	nya
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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 *giен* 'that' in (97) (cf. footnote 67)).

⁸⁸Dyen (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).

⁸⁹Note that in (48) and (49), [k] is weakened to [h].

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- (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 *giен* 'that' in (97) (cf. footnote 67)).

⁸⁸Dyen (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).

⁸⁹Note 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 initial 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

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pronouns (nominative and genitive case) suggest two different functions. Why should the phasal aspectual auxiliaries occur with nominative case enclitic pronouns, but *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 *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 *bas* in large amounts of text, I hesitate to pigeon-hole *bas* as belonging to one grammatical category as opposed to another. Actually, since *bas* has certain temporal, aspectual, and modal features associated with it, *bas* appears to be a prime candidate for a "fuzzy" category (cf. the analysis of g-marked verbs in §3.1.2).

In the remainder of this section, I present evidence which suggests that *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 *bas* is analyzed as a tense marker. Whereas Bonggi enclitic pronouns occurring with *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 *bay*. On the other hand, Pallensen (1985:101) claims that the basic

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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) <i>Bai</i>	<i>na</i>	<i>amatay.</i>	Proto-Sama-Bajaw
aspect-COMPLETIVE	state-ACHIEVED	verb-DIE	(Pallensen 1985:102)
'Dead already.'			

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.

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- (125) *Adak ku me-dabu' (mV-dabu').*
 almost 1sGEN ACH-fall
 'I almost fell.'
- (126) *Adak ku m-ohodn (-m-ohodn).*
 almost 1sGEN ACY-eat
 'I almost ate it (and was not supposed to).'
- (127) *Adak ku ng-orkng (ng-korikng).*
 almost 1sGEN APL-dry
 'I almost dried it (and was not supposed to).'

The implication associated with *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.

Adak 'almost', like *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, *adak* and *bas* are in complementary distribution; i.e. they are incompatible with each other. These two characteristics of *adak* and *bas* suggest that they belong to the same grammatical category. Both *adak* and *bas* refer to situations that occurred before the time of utterance. The difference between the two is modal. *Bas* refers to situations that really occurred, whereas *adak* refers to situations that did not really occur; i.e. the situation was not actually realized.

Adak 'almost', like *bas*, is not restricted to clause-initial position, e.g. (128b). ⁹³

- (128) a. ... *Adak bali i Mekul mu-tukng.*
 almost house NPIV Michael ACH-burn
 'MICHAEL'S HOUSE almost burned down.'

(3)

⁹³The 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.

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- b. *Bali hu adak mu-tukng.* *Bali raya pudn 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 pudn, 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.'⁹⁴

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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- (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) *Terpaska' 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

⁹⁶This 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.

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current relevance (cf. Comrie 1976:52; Li, Thompson & Thompson 1982).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 *na*. Situations which have current relevance and are viewed as yet to take place are marked with *pa* (cf. King 1991). The enclitics themselves provide an important contribution to viewpoint aspect. For example, *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).⁹⁸ Further analysis needs to be done on the semantics of *na*, *pa*, and other enclitics; specifically, how they interact with other elements of the verb phrase, especially *bas* and *-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. *g-* (cf. §3.1); by a system of free form auxiliaries, e.g. *punga* 'finished' (cf. §3.2); by a system of enclitic particles, e.g. *pa* 'yet' (cf. §3.2); and/or by a system of temporal adverbs, e.g. *kahal* 'still'.

This section deals with the adverbial *kahal* 'still' which occurs outside the verb phrase and has a viewpoint aspectual function.⁹⁹ Although viewpoint aspect may be studied in the verb system

⁹⁷Although 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.

⁹⁸The 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).

⁹⁹Cf. §5 of Boutin (1991a) for a discussion of temporal adverbs in Bonggi. The specific iterative marker *malik* 'again' occurs outside the verb phrase, but it is not included here as it was discussed in §3.1.3.

current relevance (cf. Comrie 1976:52; Li, Thompson & Thompson 1982).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 *na*. Situations which have current relevance and are viewed as yet to take place are marked with *pa* (cf. King 1991). The enclitics themselves provide an important contribution to viewpoint aspect. For example, *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).⁹⁸ Further analysis needs to be done on the semantics of *na*, *pa*, and other enclitics; specifically, how they interact with other elements of the verb phrase, especially *bas* and *-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. *g-* (cf. §3.1); by a system of free form auxiliaries, e.g. *punga* 'finished' (cf. §3.2); by a system of enclitic particles, e.g. *pa* 'yet' (cf. §3.2); and/or by a system of temporal adverbs, e.g. *kahal* 'still'.

This section deals with the adverbial *kahal* 'still' which occurs outside the verb phrase and has a viewpoint aspectual function.⁹⁹ Although viewpoint aspect may be studied in the verb system

⁹⁷Although 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.

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and in adverbials,¹⁰⁰ the function of this section is not to examine the complete adverbial system in terms of its contribution to aspect. Even though such a study would be very interesting, especially when enclitic particles with an adverbial function are considered (e.g. *ga* and *ba* in (132)), it is beyond the scope of this work.¹⁰¹

- (132) *M-ori (ng-bori) a ga ba tei!*
 APL-give 2sNOM CONTRAST EMPH -
 'Go ahead and give it to them!'¹⁰²

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 exemplars 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).

¹⁰⁰See, 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).

¹⁰¹Because 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*.

¹⁰²The 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.

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The temporal adverb *kahal* 'still' (e.g. (133)) indicates that a situation is continuing. It denotes continuous viewpoint aspect (cf. Boutin 1991a: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.*
 still 1sNOM 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,

¹⁰³Progressive aspect is restricted to nonstatives (cf. Comrie 1976:12; Bybee 1985:196; and Chung & Timberlake 1985:219).

¹⁰⁴Cf. §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.

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it is the leftmost constituent of the verb phrase (e.g. *nda' pa nambukng 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 aspectual 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)),¹⁰⁵ and because *ou* '1sNOM' is both the full and enclitic form (cf. Table 3.1), the pronoun following *kahal* in (133) is not necessarily an enclitic.

- (141) a. *Kali-kali sia kerai dii Kudat.* b. *Sia kali-kali kerai dii Kudat.*
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).

¹⁰⁵There 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.

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¹⁰⁵There 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.'

- (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.

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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

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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.¹ 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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choices are not interchangeable. Choices depend on the situation type and viewpoint aspect as shown in (1).

(1)		Simple viewpoint aspect	Marked viewpoint aspect
Activity		-m-	
Accomplishment		ng-	
Activity or Accomplishment			<i>meg-</i> 'Distributive' <i>g-</i> 'nonDistributive'

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.² 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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Thus, agents should have the greatest number of affixes in his view.

example, when accomplishment verbs such as *mosi* (*ng-posi*) '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

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).

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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

⁴Cf. 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.

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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;⁵ 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-*.

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.

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REFERENCES

- Agama, Jose. 1923a. Legends II. British North Borneo Herald 41(11):104.
- Agama, Jose. 1923b. Legends III: The reason why Islams don't eat pork. British North Borneo Herald generative semantics and Montague's PTQ. Dordrecht: D. Reidel.
- Agama, Jose. 1923c. Legends III: The cause of earthquake. British North Borneo Herald 41(12):113.
- Agama, Jose. 1923d. Legends IV. British North Borneo Herald 41(13):126.
- Anderson, Stephen R. 1985. Inflectional morphology. Language typology and syntactic description. Vol. III, Grammatical categories and the lexicon, ed. Timothy Shopen, 150-201. Cambridge: Cambridge University Press.
- Anderson, Stephen R. 1988a. Morphological theory. Linguistics: The Cambridge Survey. Vol. 1, Linguistic theory: Foundations, ed. Fredrick J. Newmeyer, 146-91. Cambridge: Cambridge University Press.
- Anderson, Stephen R. 1988b. Morphological change. Linguistics: The Cambridge Survey. Vol. 1, Linguistic theory: Foundations, ed. Fredrick J. Newmeyer, 324-62. Cambridge: Cambridge University Press.
- Anderson, Stephen R. 1993. Wackernagel's revenge: Clitics, morphology, and the syntax of second position. Language 69(1):68-98.
- Anderson, Stephen R., and Edward L. Keenan. 1985. Deixis. Language typology and syntactic description. Vol. III, Grammatical categories and the lexicon, ed. Timothy Shopen, 259-308. Cambridge: Cambridge University Press.
- Antworth, Evan. 1979. A grammatical sketch of Botolan Sambal. Philippine Journal of Linguistics, Special monograph No. 8. Manila: Linguistic Society of the Philippines.
- Appell, George. 1968. The Dusun languages of North Borneo: Rungus Dusun and related problems. Oceanic Linguistics 7:1-15.
- Beaman, Reed S., John H. Beaman, Clive W. Marsh, and Paul V. Woods. 1985. Drought and forest fires in Sabah in 1983. Sabah Society Journal 8(1):10-30.
- Bell, Sarah. 1983. Advancements and ascensions in Cebuano. Studies in relational grammar, ed. David M. Perlmutter, 143-218. Chicago: University of Chicago.
- Bellwood, Peter. 1978. Man's conquest of the Pacific: The prehistory of Southeast Asia and Oceania. Auckland: Collins.
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REFERENCES

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- Agama, Jose. 1923b. Legends III: The reason why Islams don't eat pork. British North Borneo Herald generative semantics and Montague's PTQ. Dordrecht: D. Reidel.
- Agama, Jose. 1923c. Legends III: The cause of earthquake. British North Borneo Herald 41(12):113.
- Agama, Jose. 1923d. Legends IV. British North Borneo Herald 41(13):126.
- Anderson, Stephen R. 1985. Inflectional morphology. Language typology and syntactic description. Vol. III, Grammatical categories and the lexicon, ed. Timothy Shopen, 150-201. Cambridge: Cambridge University Press.
- Anderson, Stephen R. 1988a. Morphological theory. Linguistics: The Cambridge Survey. Vol. 1, Linguistic theory: Foundations, ed. Fredrick J. Newmeyer, 146-91. Cambridge: Cambridge University Press.
- Anderson, Stephen R. 1988b. Morphological change. Linguistics: The Cambridge Survey. Vol. 1, Linguistic theory: Foundations, ed. Fredrick J. Newmeyer, 324-62. Cambridge: Cambridge University Press.
- Anderson, Stephen R. 1993. Wackernagel's revenge: Clitics, morphology, and the syntax of second position. Language 69(1):68-98.
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- Boutin, Michael E. 1984. Banggi kinship terminology. *Anthropological Linguistics* 26(3):305-12.
- Boutin, Michael E. 1990. The Bonggi. Social organization of Sabah societies, ed. Sherwood G. Lingenfelter, 91-110. Kota Kinabalu: Sabah Museum and State Archives.
- Boutin, Michael E. 1991a. Aspect and temporal reference in Banggi. Thematic continuity and development in languages of Sabah, ed. Steven H. Levinsohn, 7-28. *Pacific Linguistics*, C-118.
- Boutin, Michael E. 1991b. Address and reference in the languages of Sabah. Paper presented at the Sixth International Conference on Austronesian Linguistics, Honolulu, Hawaii, May 1991.
- Boutin, Michael E. 1992. Prolegomena to Bonggi verb morphology. Unpublished manuscript.
- Boutin, Michael E. 1994. The sociohistorical context of English borrowings in Bonggi. Paper presented at the Borneo Research Council, Third Biennial International Conference, Pontianak, West Kalimantan, Indonesia, 10-14 July 1994.
- Boutin, Michael E. (in press). Evaluating written and oral sources in ethnohistory studies: The case of Bonggi. *Language and oral traditions in Borneo*, ed. James T. Collins. Papers from The First Extraordinary Session of The Borneo Research Council, August 4-9, 1990, Kuching, Sarawak, Malaysia. Williamsburg, VA: The Borneo Research Council Inc.
- Boutin, Michael, and Alanna Boutin. 1985. Report on the languages of Banggi and Balambangan. *Sabah Society Journal* 8(1):89-92.
- Boutin, Michael, and Alanna Boutin. 1987. Classification of disease among the Banggi of Sabah. *Anthropological Linguistics* 29(2):157-69.
- Boutin, Michael E., and William Howery. 1991. A computational analysis of voicing in Bonggi preploded nasals. *Proceedings of the International Conference on Current Issues in Computational Linguistics*, Universiti Sains Malaysia, Penang, Malaysia, 10-14 June 1991, 303-17.
- Brewis, Richard, and Stephen H. Levinsohn. 1991. Topic and emphasis in Timugon Murut. Thematic continuity and development in languages of Sabah, ed. Steven H. Levinsohn, 29-43. *Pacific Linguistics*, C-118.
- Brewis, Richard. 1992. Timugon verb morphology. Unpublished manuscript.
- Brinton, Laurel J. 1988. The development of English aspectual systems. Cambridge: Cambridge University Press.
- Bybee, Joan L. 1985. Morphology: A study of the relation between meaning and form. Amsterdam: John Benjamins.
- Bybee, Joan L., William Pagluica, and Revere D. Perkins. 1990. On the asymmetries in the affixation of grammatical material. *Studies in typology and diachrony for Joseph H. Greenberg*, eds. William Croft, Keith Denning, and Suzanne Kemmer, 1-42. Amsterdam: John Benjamins.
- Bygate, M. 1987. Speaking. Oxford: Oxford University Press.

- Boutin, Michael E. 1984. Banggi kinship terminology. *Anthropological Linguistics* 26(3):305-12.
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- Boutin, Michael, and Alanna Boutin. 1985. Report on the languages of Banggi and Balambangan. *Sabah Society Journal* 8(1):89-92.
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- Bybee, Joan L., William Pagluica, and Revere D. Perkins. 1990. On the asymmetries in the affixation of grammatical material. *Studies in typology and diachrony for Joseph H. Greenberg*, eds. William Croft, Keith Denning, and Suzanne Kemmer, 1-42. Amsterdam: John Benjamins.
- Bygate, M. 1987. Speaking. Oxford: Oxford University Press.

- Chung, Sandra. 1978. Case marking and grammatical relations in Polynesian. Austin: University of Texas Press.
- Chung, Sandra, and Alan Timberlake. 1985. Tense, aspect and mood. Language typology and syntactic description. Vol. III, Grammatical categories and the lexicon, ed. Timothy Shopen, 202-58. Cambridge: Cambridge University Press.
- Comrie, Bernard. 1976. Aspect: An introduction to the study of verbal aspect and related problems. Cambridge: Cambridge University Press.
- Cooper, Robin. 1985. Aspectual classes in situation semantics. Leland Stanford Junior University: Center for the Study of Language and Information.
- Dahl, Osten. 1984. Temporal distance: Remoteness distinctions in tense-aspect systems. Explanations for language universals, eds. Brian Butterworth, Bernard Comrie, and Osten Dahl, 105-22. Berlin: Mouton.
- Dahl, Osten. 1985. Tense and aspect systems. Oxford: Basil Blackwell.
- Dahl, Otto Christian. 1986. Focus in Malagasy and Proto-Austronesian. FOCAL I: papers from the Fourth International Conference on Austronesian Linguistics, eds. Paul Geraghty, Lois Carrington, and S.A. Wurm. Pacific Linguistics, C-93.
- Dalrymple, Alexander. 1769. A plan for extending the commerce of this kingdom and of the East-India Company. London: n.p.
- De Guzman, Vide P. 1986. The subject of Tagalog identificational sentences. Language in global perspective, ed. Benjamin F. Elson, 347-62. Dallas: The Summer Institute of Linguistics.
- Dell, François. 1983-84. An aspectual distinction in Tagalog. *Oceanic Linguistics* 22-23(1-2):175-206.
- Dik, Simon C. 1981. Functional grammar. North-Holland linguistic series 37. Amsterdam: North-Holland. (2nd edition.)
- Dixon, Robert M.W. 1977. Where have all the adjectives gone? *Studies in Language* 1:19-80.
- Dowty, David Roach. 1979. Word meaning and Montague grammar. Dordrecht: D. Reidel.
- Dryer, Matthew S. 1986. Primary objects, secondary objects, and antitative. *Language* 62(4):808-45.
- Dyen, Isidore. 1965. A lexicostatistical classification of the Austronesian languages. *International Journal of American Linguistics Memoir* 19. Baltimore.
- Dyen, Isidore. 1974. The Proto-Austronesian enclitic genitive pronouns. *Oceanic Linguistics* 13(1-2):17-31.
- Ferrell, Raleigh J. 1983. Intent and volition in Paiwan and Tagalog verbs. Papers from the Third International Conference on Austronesian Linguistics. Vol. 4, Thematic variation, eds. Amran Halim, Lois Carrington, and S.A. Wurm. Pacific Linguistics, C-77.

- Chung, Sandra. 1978. Case marking and grammatical relations in Polynesian. Austin: University of Texas Press.
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- Fillmore, Charles J. 1968. The case for case. *Universals in linguistic theory*, eds. E. Bach and R. Harms, 1-88. New York: Holt, Rinehart and Winston.
- Foley, William A., and Robert D. Van Valin., Jr. 1984. Functional syntax and universal grammar. Cambridge Studies in Linguistics 38. Cambridge: Cambridge University Press.
- Freeze, Ray. 1992. Existentials and other locatives. *Language* 68(3):553-95.
- French, Koleen Matsuda. 1988. Insights into Tagalog reduplication, infixation, and stress from nonlinear phonology. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.
- Givón, T. 1983. Topic continuity in discourse: An introduction. *Topic continuity in discourse: a quantitative cross-language study*, ed. T. Givón, 1-41. Amsterdam: John Benjamins.
- Givón, T. 1984. Syntax: A functional-typological introduction, vol. 1. Amsterdam: John Benjamins.
- Gregerson, Kenneth. 1979. Predicate and argument in Rengao grammar. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.
- Halliday, M.A.K. and Ruqaiya Hasan. 1976. Cohesion in English. London: Longman.
- Heny, Frank. 1982. Tense, aspect and time adverbials, Part II. *Linguistics and Philosophy* 5:109-54.
- Hockett, Charles F. 1958. A course in modern linguistics. New York: Macmillan.
- Holisky, Dee A. 1987. The case of the intransitive subject in Tsova-Tush (Batsbi). *Lingua* 71:103-32.
- Hopper, Paul J., and Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56(2):251-99.
- Hopper, Paul J., and Sandra A. Thompson. 1984. The discourse basis for lexical categories in universal grammar. *Language* 60(4):703-52.
- Hopper, Paul J., and Elizabeth Closs Traugott. 1993. Grammaticalization. Cambridge: Cambridge University Press.
- Hurlbut, Hope M. 1988. Verb morphology in Eastern Kadazan. *Pacific Linguistics*, B-97.
- Ikegami, Yoshihiko. 1987. 'Source' vs. 'Goal': a case of linguistic dissymmetry. *Concepts of case*, eds. René Dirven and Günter Radden, 122-46. Tübingen: Gunter Narr Verlag.
- Jeffers, Robert J., and Arnold M. Zwicky. 1980. The evolution of clitics. *Papers from the 4th International Conference on Historical Linguistics*, eds. Elizabeth Closs Traugott, Rebecca Labrum, & Susan Shephard, 221-31. Amsterdam: John Benjamins. Also in: *Working Papers in Linguistics* No. 24, Clitics and ellipsis, ed. Arnold M. Zwicky, 55-64. Columbus: The Ohio State University.
- Jolly, Julia A. 1987. An analysis of selected English prepositions within the framework of Role and Reference Grammar. *Davis Working Papers in Linguistics* No. 2, ed. Robert D. van Valin, Jr., 60-114. Davis: Linguistics Program University of California.

- Fillmore, Charles J. 1968. The case for case. *Universals in linguistic theory*, eds. E. Bach and R. Harms, 1-88. New York: Holt, Rinehart and Winston.
- Foley, William A., and Robert D. Van Valin., Jr. 1984. Functional syntax and universal grammar. Cambridge Studies in Linguistics 38. Cambridge: Cambridge University Press.
- Freeze, Ray. 1992. Existentials and other locatives. *Language* 68(3):553-95.
- French, Koleen Matsuda. 1988. Insights into Tagalog reduplication, infixation, and stress from nonlinear phonology. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.
- Givón, T. 1983. Topic continuity in discourse: An introduction. *Topic continuity in discourse: a quantitative cross-language study*, ed. T. Givón, 1-41. Amsterdam: John Benjamins.
- Givón, T. 1984. Syntax: A functional-typological introduction, vol. 1. Amsterdam: John Benjamins.
- Gregerson, Kenneth. 1979. Predicate and argument in Rengao grammar. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.
- Halliday, M.A.K. and Ruqaiya Hasan. 1976. Cohesion in English. London: Longman.
- Heny, Frank. 1982. Tense, aspect and time adverbials, Part II. *Linguistics and Philosophy* 5:109-54.
- Hockett, Charles F. 1958. A course in modern linguistics. New York: Macmillan.
- Holisky, Dee A. 1987. The case of the intransitive subject in Tsova-Tush (Batsbi). *Lingua* 71:103-32.
- Hopper, Paul J., and Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56(2):251-99.
- Hopper, Paul J., and Sandra A. Thompson. 1984. The discourse basis for lexical categories in universal grammar. *Language* 60(4):703-52.
- Hopper, Paul J., and Elizabeth Closs Traugott. 1993. Grammaticalization. Cambridge: Cambridge University Press.
- Hurlbut, Hope M. 1988. Verb morphology in Eastern Kadazan. *Pacific Linguistics*, B-97.
- Ikegami, Yoshihiko. 1987. 'Source' vs. 'Goal': a case of linguistic dissymmetry. *Concepts of case*, eds. René Dirven and Günter Radden, 122-46. Tübingen: Gunter Narr Verlag.
- Jeffers, Robert J., and Arnold M. Zwicky. 1980. The evolution of clitics. *Papers from the 4th International Conference on Historical Linguistics*, eds. Elizabeth Closs Traugott, Rebecca Labrum, & Susan Shephard, 221-31. Amsterdam: John Benjamins. Also in: *Working Papers in Linguistics* No. 24, Clitics and ellipsis, ed. Arnold M. Zwicky, 55-64. Columbus: The Ohio State University.
- Jolly, Julia A. 1987. An analysis of selected English prepositions within the framework of Role and Reference Grammar. *Davis Working Papers in Linguistics* No. 2, ed. Robert D. van Valin, Jr., 60-114. Davis: Linguistics Program University of California.

- Jolly, Julia A. 1993. Preposition assignment in English. Advances in Role and Reference Grammar, ed. Robert D. van Valin, Jr., 275-310. Amsterdam: John Benjamins.
- Joseph, Brian D., and Richard D. Janda. 1988. The how and why of diachronic morphologization. Theoretical morphology, eds. Michael Hammond and Michael Noonan, 193-210. San Diego: Academic Press.
- Kerr, Harland K. 1965. The case-marking and classifying functions of Cotabato Manobo voice affixes. *Oceanic Linguistics* 4:15-47.
- King, Julie K. 1991. Thematic continuity and development in Tombonuo narrative discourse. Thematic continuity and development in languages of Sabah, ed. Steven H. Levinsohn, 45-74. *Pacific Linguistics*, C-118.
- Klavans, Judith L. 1982. Some problems in a theory of clitics. Bloomington: Indiana University Linguistics Club.
- Kroeger, Paul R. 1988a. Verbal focus in Kimaragang. Papers in Western Austronesian linguistics No. 3, ed. Hein Steinhauer, 217-240. *Pacific Linguistics*, A-78.
- Kroeger, Paul R. 1988b. Case marking in Kimaragang causative constructions. Papers in Western Austronesian linguistics No. 3, ed. Hein Steinhauer, 241-76. *Pacific Linguistics*, A-78.
- Kroeger, Paul R. 1990. Stative aspect and unaccusativity in Kimaragang Dusun. *Oceanic Linguistics* 29(2):110-31.
- Kroeger, Paul R. 1992a. Phrase structure and grammatical relations in Tagalog. Chicago: University of Chicago.
- Kroeger, Paul R. 1992b. Vowel harmony systems in three Sabahan languages. Paper presented at the Borneo Research Council, 2nd Biennial Meeting, 13-17 July 1992, Kota Kinabalu, Sabah, Malaysia.
- Lakoff, George. 1987. Women, fire, and dangerous things: What categories reveal about the mind. Chicago: University of Chicago Press.
- Lasimbang, Rita B., and Carolyn P. Miller. (in press). Language labelling and other factors affecting perception of ethnic identity in Sabah. Language and oral traditions in Borneo, ed. James T. Collins. Papers from The First Extraordinary Session of The Borneo Research Council, August 4-9, 1990, Kuching, Sarawak, Malaysia. Williamsburg, VA: The Borneo Research Council Inc.
- Lebar, Frank M., ed. 1972. Ethnic groups of insular Southeast Asia. Volume 1: Indonesia, Andaman islands, and Madagascar. New Haven: Human Relations Area File.
- Levinsohn, Steven H., ed. 1991. Thematic continuity and development in languages of Sabah. *Pacific Linguistics*, C-118.
- Li, Charles N., Sandra A. Thompson, and R. Mcmillan Thompson. 1982. The discourse motivation for the perfect aspect: The Mandarin particle *le*. Tense-aspect: Between semantics & pragmatics, ed. Paul J. Hopper, 19-43. Amsterdam: John Benjamins.

- Jolly, Julia A. 1993. Preposition assignment in English. Advances in Role and Reference Grammar, ed. Robert D. van Valin, Jr., 275-310. Amsterdam: John Benjamins.
- Joseph, Brian D., and Richard D. Janda. 1988. The how and why of diachronic morphologization. Theoretical morphology, eds. Michael Hammond and Michael Noonan, 193-210. San Diego: Academic Press.
- Kerr, Harland K. 1965. The case-marking and classifying functions of Cotabato Manobo voice affixes. *Oceanic Linguistics* 4:15-47.
- King, Julie K. 1991. Thematic continuity and development in Tombonuo narrative discourse. Thematic continuity and development in languages of Sabah, ed. Steven H. Levinsohn, 45-74. *Pacific Linguistics*, C-118.
- Klavans, Judith L. 1982. Some problems in a theory of clitics. Bloomington: Indiana University Linguistics Club.
- Kroeger, Paul R. 1988a. Verbal focus in Kimaragang. Papers in Western Austronesian linguistics No. 3, ed. Hein Steinhauer, 217-240. *Pacific Linguistics*, A-78.
- Kroeger, Paul R. 1988b. Case marking in Kimaragang causative constructions. Papers in Western Austronesian linguistics No. 3, ed. Hein Steinhauer, 241-76. *Pacific Linguistics*, A-78.
- Kroeger, Paul R. 1990. Stative aspect and unaccusativity in Kimaragang Dusun. *Oceanic Linguistics* 29(2):110-31.
- Kroeger, Paul R. 1992a. Phrase structure and grammatical relations in Tagalog. Chicago: University of Chicago.
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- Lakoff, George. 1987. Women, fire, and dangerous things: What categories reveal about the mind. Chicago: University of Chicago Press.
- Lasimbang, Rita B., and Carolyn P. Miller. (in press). Language labelling and other factors affecting perception of ethnic identity in Sabah. Language and oral traditions in Borneo, ed. James T. Collins. Papers from The First Extraordinary Session of The Borneo Research Council, August 4-9, 1990, Kuching, Sarawak, Malaysia. Williamsburg, VA: The Borneo Research Council Inc.
- Lebar, Frank M., ed. 1972. Ethnic groups of insular Southeast Asia. Volume 1: Indonesia, Andaman islands, and Madagascar. New Haven: Human Relations Area File.
- Levinsohn, Steven H., ed. 1991. Thematic continuity and development in languages of Sabah. *Pacific Linguistics*, C-118.
- Li, Charles N., Sandra A. Thompson, and R. Mcmillan Thompson. 1982. The discourse motivation for the perfect aspect: The Mandarin particle *le*. Tense-aspect: Between semantics & pragmatics, ed. Paul J. Hopper, 19-43. Amsterdam: John Benjamins.

- Lichtenberk, Frantisek. 1991. Semantic change and heterosemy in grammaticalization. *Language* 67(3):474-509.
- Longacre, Robert E. 1976. An anatomy of speech notions. Lisse: The Peter De Ridder Press.
- Lyons, John. 1977. Semantics. Cambridge: Cambridge University Press.
- McCawley, James D. 1983. Towards plausibility in theories of language acquisition. *Communication and Cognition* 16:169-83.
- Matthews, P.H. 1981. Syntax. Cambridge: Cambridge University Press.
- Michaelis, Laura. 1993. On deviant case-marking in Latin. *Advances in Role and Reference Grammar*, ed. Robert D. Van Valin, Jr., 311-73. Amsterdam: John Benjamins.
- Milner, George B. 1980. On the centrality of Austronesian syntax. *Austronesian studies: Papers from the Second Eastern Conference on Austronesian Languages*, ed. Paz B. Naylor, 1-17. Michigan Papers on South and Southeast Asia, No. 15. Ann Arbor: University of Michigan.
- Morreall, John. 1978. Statives and commands. *Forum Linguisticum* 3(1):82-84.
- Murdock, George Peter. 1960. Cognatic forms of social organization. *Social structure in Southeast Asia*, ed. George Peter Murdock, 1-14. Chicago: Quadrangle Books.
- Needham, Rodney. 1954. The system of tekonyms and death-names of the Penan. *Southwestern Journal of Anthropology* 11:416-31.
- Nevis, Joel A., and Brian D. Joseph. 1992. Wackernagel affixes: Evidence from Balto-Slavic. *Yearbook of Morphology 1992*, eds. Geert Booij and Jaap van Marle, 93-111. Dordrecht: Kluwer Academic Publishers.
- Nik Safiah Karim. 1978. Bahasa Malaysia syntax: Some aspects of standardization. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Noonan, Michael. 1985. Complementation. *Language typology and syntactic description*. Vol. II, Complex constructions, ed. Timothy Shopen, 42-140. Cambridge: Cambridge University Press.
- PalleSEN, A. Kemp. 1985. Culture contact and language convergence. Manila: Linguistic Society of the Philippines.
- Palmer, F.R. 1986. Mood and modality. Cambridge: Cambridge University Press.
- Pittman, Richard S. 1966. Tagalog *-um-* and *mag-*: An interim report. *Linguistic Circle of Canberra Publications*, ed. S.A. Wurm. *Pacific Linguistics*, A-8. Canberra: The Australian National University. Reprinted in 1973 in *Readings in Philippine Linguistics*, eds. Andrew B. Gonzalez, Teodoro Llamzon, and Fe T. Otanes. Manila: Linguistic Society of the Philippines.
- Prentice, D.J. 1970. The linguistic situation in northern Borneo. *Pacific Linguistic Studies in Honour of Arthur Capell*, eds. S.A. Wurm and D.C. Laycock, 369-408. *Pacific Linguistics*, C-13.

- Lichtenberk, Frantisek. 1991. Semantic change and heterosemy in grammaticalization. *Language* 67(3):474-509.
- Longacre, Robert E. 1976. An anatomy of speech notions. Lisse: The Peter De Ridder Press.
- Lyons, John. 1977. Semantics. Cambridge: Cambridge University Press.
- McCawley, James D. 1983. Towards plausibility in theories of language acquisition. *Communication and Cognition* 16:169-83.
- Matthews, P.H. 1981. Syntax. Cambridge: Cambridge University Press.
- Michaelis, Laura. 1993. On deviant case-marking in Latin. *Advances in Role and Reference Grammar*, ed. Robert D. Van Valin, Jr., 311-73. Amsterdam: John Benjamins.
- Milner, George B. 1980. On the centrality of Austronesian syntax. *Austronesian studies: Papers from the Second Eastern Conference on Austronesian Languages*, ed. Paz B. Naylor, 1-17. Michigan Papers on South and Southeast Asia, No. 15. Ann Arbor: University of Michigan.
- Morreall, John. 1978. Statives and commands. *Forum Linguisticum* 3(1):82-84.
- Murdock, George Peter. 1960. Cognatic forms of social organization. *Social structure in Southeast Asia*, ed. George Peter Murdock, 1-14. Chicago: Quadrangle Books.
- Needham, Rodney. 1954. The system of tekonyms and death-names of the Penan. *Southwestern Journal of Anthropology* 11:416-31.
- Nevis, Joel A., and Brian D. Joseph. 1992. Wackernagel affixes: Evidence from Balto-Slavic. *Yearbook of Morphology 1992*, eds. Geert Booij and Jaap van Marle, 93-111. Dordrecht: Kluwer Academic Publishers.
- Nik Safiah Karim. 1978. Bahasa Malaysia syntax: Some aspects of standardization. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Noonan, Michael. 1985. Complementation. *Language typology and syntactic description*. Vol. II, Complex constructions, ed. Timothy Shopen, 42-140. Cambridge: Cambridge University Press.
- PalleSEN, A. Kemp. 1985. Culture contact and language convergence. Manila: Linguistic Society of the Philippines.
- Palmer, F.R. 1986. Mood and modality. Cambridge: Cambridge University Press.
- Pittman, Richard S. 1966. Tagalog *-um-* and *mag-*: An interim report. *Linguistic Circle of Canberra Publications*, ed. S.A. Wurm. *Pacific Linguistics*, A-8. Canberra: The Australian National University. Reprinted in 1973 in *Readings in Philippine Linguistics*, eds. Andrew B. Gonzalez, Teodoro Llamzon, and Fe T. Otanes. Manila: Linguistic Society of the Philippines.
- Prentice, D.J. 1970. The linguistic situation in northern Borneo. *Pacific Linguistic Studies in Honour of Arthur Capell*, eds. S.A. Wurm and D.C. Laycock, 369-408. *Pacific Linguistics*, C-13.

- Quakenbush, Steven. 1986. Language use and proficiency in a multilingual setting: A sociolinguistic survey of Agutaynen speakers in Palawan, Philippines. Ph.D. dissertation, Georgetown University.
- Reid, Lawrence A. 1992. On the development of the aspect system in some Philippine languages. *Oceanic Linguistics* 31(1):65-91.
- Richards, Barry. 1982. Tense, aspect and time adverbials, Part I. *Linguistics and Philosophy* 5:59-107.
- Richards, Jack C. 1990. The language teaching matrix. Cambridge: Cambridge University Press.
- Ruch, Edward. 1974. Role combinations and verb stem classes in Kalamian Tagbanwa. *Papers in Philippine Linguistics* 5, *Pacific Linguistics*, A-41:23-60.
- Schachter, Paul. 1974. Constraints on clitic order in Tagalog. *UCLA Working Papers in Linguistics*.
- Schachter, Paul. 1985. Parts-of-speech systems. *Language typology and syntactic description*. Vol. I, Clause structure, ed. Timothy Shopen, 3-61. Cambridge: Cambridge University Press.
- Schachter, Paul, and Fe T. Otanes. 1972. Tagalog reference grammar. Berkeley: University of California Press.
- Schneeberger, W.F. 1937. A short vocabulary of the Banggi and Bajau language. *Journal of the Malaysian Branch of the Royal Asiatic Society* 15(3):145-64.
- Schwartz, Linda. 1993. On the syntactic and semantic alignment of attributive and identificational constructions. *Advances in Role and Reference Grammar*, ed. Robert D. Van Valin, Jr., 433-63. Amsterdam: John Benjamins.
- Shibatani, Masayoshi, ed. 1988. Passive and voice. Amsterdam: John Benjamins.
- Smith, Carlota S. 1983. A theory of aspectual choice. *Language* 59(3):479-501.
- Smith, Carlota S. 1991. The parameter of aspect. *Studies in Linguistics and Philosophy*, 43. Dordrecht: Kluwer Academic Publishers.
- Smith, Kenneth D. 1984. The languages of Sabah: A tentative lexicostatistical classification. *Languages of Sabah: a survey report*, eds. Julie K. King and John Wayne King, 1-49. *Pacific Linguistics*, C-78.
- Soenjono Dardjowidjojo. 1983. Some problems in the theory of generative morphology: A case in Indonesian. *Papers from the Third International Conference on Austronesian Linguistics*, vol. 4: Thematic variation, eds. Amran Halim, Lois Carrington, and S.A. Wurm. *Pacific Linguistics*, C-77.
- Spencer, Andrew. 1991. Morphological theory: An introduction to word structure in Generative Grammar. Oxford: Basil Blackwell.
- Talmy, Leonard. 1985. Lexicalization patterns: Semantic structure in lexical forms. *Language typology and syntactic description*. Vol III, Grammatical categories and the lexicon, ed. Timothy Shopen, 57-149. Cambridge: Cambridge University Press.

- Quakenbush, Steven. 1986. Language use and proficiency in a multilingual setting: A sociolinguistic survey of Agutaynen speakers in Palawan, Philippines. Ph.D. dissertation, Georgetown University.
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- Richards, Jack C. 1990. The language teaching matrix. Cambridge: Cambridge University Press.
- Ruch, Edward. 1974. Role combinations and verb stem classes in Kalamian Tagbanwa. *Papers in Philippine Linguistics* 5, *Pacific Linguistics*, A-41:23-60.
- Schachter, Paul. 1974. Constraints on clitic order in Tagalog. *UCLA Working Papers in Linguistics*.
- Schachter, Paul. 1985. Parts-of-speech systems. *Language typology and syntactic description*. Vol. I, Clause structure, ed. Timothy Shopen, 3-61. Cambridge: Cambridge University Press.
- Schachter, Paul, and Fe T. Otanes. 1972. Tagalog reference grammar. Berkeley: University of California Press.
- Schneeberger, W.F. 1937. A short vocabulary of the Banggi and Bajau language. *Journal of the Malaysian Branch of the Royal Asiatic Society* 15(3):145-64.
- Schwartz, Linda. 1993. On the syntactic and semantic alignment of attributive and identificational constructions. *Advances in Role and Reference Grammar*, ed. Robert D. Van Valin, Jr., 433-63. Amsterdam: John Benjamins.
- Shibatani, Masayoshi, ed. 1988. Passive and voice. Amsterdam: John Benjamins.
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- Smith, Carlota S. 1991. The parameter of aspect. *Studies in Linguistics and Philosophy*, 43. Dordrecht: Kluwer Academic Publishers.
- Smith, Kenneth D. 1984. The languages of Sabah: A tentative lexicostatistical classification. *Languages of Sabah: a survey report*, eds. Julie K. King and John Wayne King, 1-49. *Pacific Linguistics*, C-78.
- Soenjono Dardjowidjojo. 1983. Some problems in the theory of generative morphology: A case in Indonesian. *Papers from the Third International Conference on Austronesian Linguistics*, vol. 4: Thematic variation, eds. Amran Halim, Lois Carrington, and S.A. Wurm. *Pacific Linguistics*, C-77.
- Spencer, Andrew. 1991. Morphological theory: An introduction to word structure in Generative Grammar. Oxford: Basil Blackwell.
- Talmy, Leonard. 1985. Lexicalization patterns: Semantic structure in lexical forms. *Language typology and syntactic description*. Vol III, Grammatical categories and the lexicon, ed. Timothy Shopen, 57-149. Cambridge: Cambridge University Press.

- Taylor, John R. 1989. *Linguistic categorization: Prototypes in linguistic theory*. Oxford: Clarendon Press.
- Thompson, Sandra A. 1989. A discourse approach to the cross-linguistic category 'adjective.' *Linguistic categorization*, eds. Roberta Corrigan, Fred Eckman, and Michael Noonan, 245-65. Amsterdam: John Benjamins.
- Topping, Donald. M., and Bernadita C. Dungca. 1973. *Chamorro reference grammar*. Honolulu: University of Hawaii Press.
- Van Valin, Robert D., Jr. 1990. Semantic parameters of split intransitivity. *Language* 66(2):221-60.
- Van Valin, Robert D., Jr. 1991. Another look at Icelandic case marking and grammatical relations. *Natural Language and Linguistic Theory* 9:145-94.
- Van Valin, Robert D., Jr. 1993. A synopsis of Role and Reference Grammar. *Advances in Role and Reference Grammar*, ed. Robert D. Van Valin, Jr., 1-164. Amsterdam: John Benjamins.
- Van Valin, Robert D., Jr., ed. 1993. *Advances in Role and Reference Grammar*. Amsterdam: John Benjamins.
- Van Valin, Robert D., Jr. 1994. Textbook on Role and Reference Grammar. Unpublished manuscript.
- Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca: Cornell University Press.
- Vendler, Zeno. 1984. Adverbs of action. Papers from the parasession on lexical semantics, eds. David Testen, Veena Mishra, and Joseph Drogo, 297-307. Chicago: Chicago Linguistic Society.
- Vet, Co. 1990. Aktionsart, aspect and duration adverbs. Unity in diversity, eds. Harm Pinkster and Inge Genee, 279-89. Dordrecht: Foris.
- Wallace, Stephen. 1979. Voice, mode or aspect? The semantics of verbal prefixes in Jakarta Malay. Contributions to grammatical studies. Semantics and syntax, eds. Linda R. Waugh and Frans van Coetsem, 151-78. Leiden: E.J. Brill.
- Wallace, Stephen. 1982. Figure and ground: the interrelationships of linguistic categories. Tense-aspect: Between semantics & pragmatics, ed. Paul J. Hopper, 201-23. Amsterdam: John Benjamins.
- Walton, Charles. 1979. A Philippine language tree. *Anthropological Linguistics* 21:70-98.
- Walton, Charles. 1983. Sama verbal semantics: Classification, derivation and inflection. M.A. thesis, Temple University.
- Wierzbicka, Anna. 1988. *The semantics of grammar*. Amsterdam: John Benjamins.
- Wilkins, David P., and Robert D. Van Valin, Jr. 1993. The case for a case reopened: Agents and agency revisited. Center for Cognitive Science Technical Report 93-2. Buffalo: State University of New York.

- Taylor, John R. 1989. *Linguistic categorization: Prototypes in linguistic theory*. Oxford: Clarendon Press.
- Thompson, Sandra A. 1989. A discourse approach to the cross-linguistic category 'adjective.' *Linguistic categorization*, eds. Roberta Corrigan, Fred Eckman, and Michael Noonan, 245-65. Amsterdam: John Benjamins.
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- Van Valin, Robert D., Jr. 1990. Semantic parameters of split intransitivity. *Language* 66(2):221-60.
- Van Valin, Robert D., Jr. 1991. Another look at Icelandic case marking and grammatical relations. *Natural Language and Linguistic Theory* 9:145-94.
- Van Valin, Robert D., Jr. 1993. A synopsis of Role and Reference Grammar. *Advances in Role and Reference Grammar*, ed. Robert D. Van Valin, Jr., 1-164. Amsterdam: John Benjamins.
- Van Valin, Robert D., Jr., ed. 1993. *Advances in Role and Reference Grammar*. Amsterdam: John Benjamins.
- Van Valin, Robert D., Jr. 1994. Textbook on Role and Reference Grammar. Unpublished manuscript.
- Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca: Cornell University Press.
- Vendler, Zeno. 1984. Adverbs of action. Papers from the parasession on lexical semantics, eds. David Testen, Veena Mishra, and Joseph Drogo, 297-307. Chicago: Chicago Linguistic Society.
- Vet, Co. 1990. Aktionsart, aspect and duration adverbs. Unity in diversity, eds. Harm Pinkster and Inge Genee, 279-89. Dordrecht: Foris.
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- Wurzel, Wolfgang Ullrich. 1989. Inflectional morphology and naturalness. Dordrecht: Kluwer Academic Publishers.
- Zwický, Arnold M. 1977. On clitics. Bloomington: IULC.
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- Wurzel, Wolfgang Ullrich. 1989. Inflectional morphology and naturalness. Dordrecht: Kluwer Academic Publishers.
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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.

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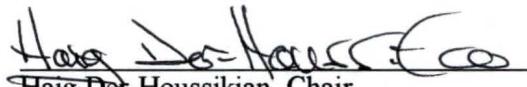
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Michael and Alanna went to Malaysia in November 1981. They studied Malay together in Kuala Lumpur from December 1981 - April 1982. After doing some research in the state of Sabah, including a language survey of Banggi Island, they moved to Limbuak 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 tekonyms, parents are called by the name of their firstborn.

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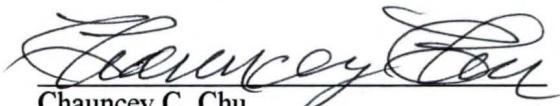
Michael and Alanna went to Malaysia in November 1981. They studied Malay together in Kuala Lumpur from December 1981 - April 1982. After doing some research in the state of Sabah, including a language survey of Banggi Island, they moved to Limbuak Darat, Banggi Island in November 1982. They stayed in 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 tekonyms, 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.



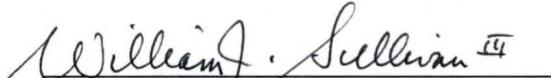
Haig Der-Houssikian, Chair
Professor of Linguistics

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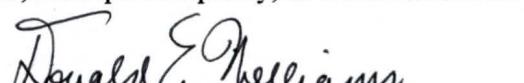
Chauncey C. Chu
Professor of Linguistics

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William J. Sullivan III
Associate Professor of Germanic and Slavic
Languages and Literatures

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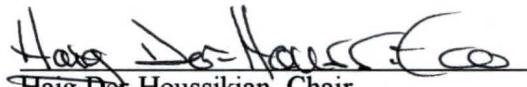
Donald E. Williams
Professor of Communication Processes and Disorders

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

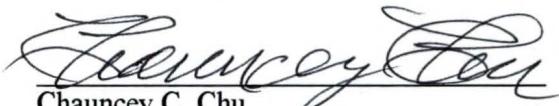
Dean, Graduate School

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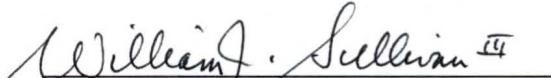
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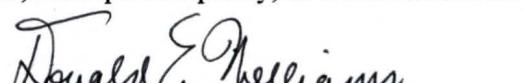
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