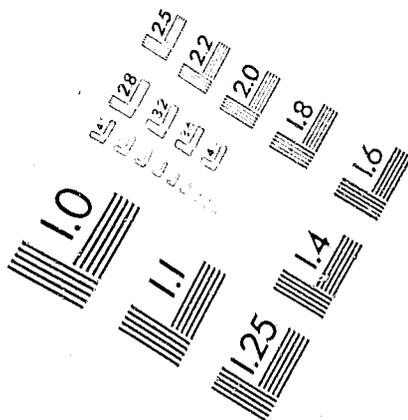
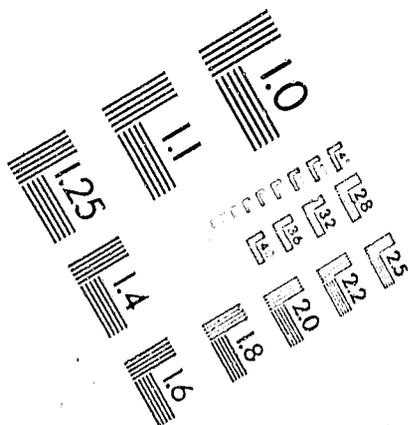
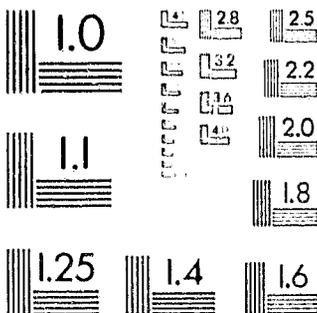
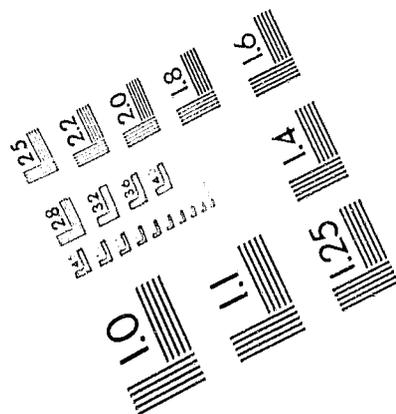
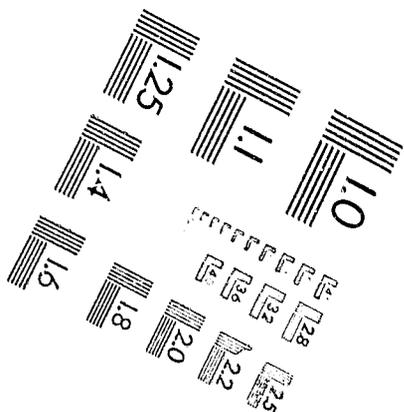


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BARAI CLAUSE JUNCTURES:

TOWARD A FUNCTIONAL THEORY OF INTERCLAUSAL RELATIONS

by

MICHAEL LEON OLSON

Thesis Submitted for the Degree of

DOCTOR OF PHILOSOPHY

of

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To Ashi

Unless otherwise acknowledged, this thesis
is the original work of the author.

M. L. Olson



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PRÉCIS

Barai is a Papuan language of the Koiarian family of languages (Dutton 1969) in the Oro and Central Provinces of Papua New Guinea. Perhaps the most striking feature of Barai and indeed of Papuan languages generally is their profuse chaining of clause and clause-like structures to form sentences of considerable length. These clause chains have steadfastly resisted analysis in terms of some of the most basic linguistic constructs such as the subject, the clause, transitivity, and subordination.

As a result, in this study we have attempted to set aside, to some degree at least, our biases regarding the categorial structure of language and focus our attention on form as it exists in the morphology and syntax of this particular language. Similarly, we do not expect that function should be heavily prescribed in terms of universal absolutes. Clearly, there are universals both in terms of forms and the function of those forms, but if language is indeed a tool of social interaction, it becomes imperative that we strive to capture the particular variety of cooperative structured linguistic activity that a given speech community uses. This will inevitably yield unique aspects of both form and function. The universal aspects of language, then, are to be explained in terms of the constraints inherent in the goals of communication, the biological and psychological constitution of

language users, and in the settings in which language is used (Dik 1978:5).

It is this basic communicative function of language that motivates Role and Reference Grammar, currently being developed by William Foley and Robert VanValin and from which this study has profited considerably. They assess the interaction between form and function as follows:

Since language plays a primary role in human communication, these functions ultimately relate to the exigencies of verbal social interaction. (Cf. Hymes 1974; Gumperz and Cook-Gumperz 1976; Silverstein 1976, 1977; VanValin 1978). Thus when we speak of 'functional considerations', we are concerned with communicative function. Of course, the formal properties of linguistic elements and constructions are not ignored in a functional approach; indeed, one of the major questions to be investigated is the relationship between (communicative) function and form, in particular, how the same form may have different functions and how the same function may be carried out by different forms. However, in a functionally-oriented research strategy function is viewed as analytically prior to form, and so its goal is to describe the latter in terms of the former as much as possible. (Cf. Heath 1978) (Foley and VanValin, 1980)

Clause junctures in Bara¹ exhibit an ideal context for viewing the interaction between form and function. But because of the incompatibility of form as it exists in Bara¹ and many aspects of the categorical structure of modern linguistic theory, it has become necessary to adopt new terminology to describe some of those forms. This is true both for relationships within the 'clause' and between

'clauses'. The glossary includes those key terms which are unique to this study or whose usage here has been significantly altered.

The first three chapters are concerned with establishing categories within the clause which become crucial to understanding the later chapters which deal directly with interclausal relations. Chapter I traces the coding of role through a variety of grammatical devices with multiple functions. We discuss the distribution of several devices which function to disambiguate semantic role for the primary participants within the clause. These devices mark two categories that are important to interclausal relations. We have called them the actor and the fulcrum and each is predictable from the role structure of the clause. A distinction between 'nuclear' and 'peripheral' noun phrases that is vital to the layered structure of the clause as presented in Chapter IV is also introduced in this first chapter.

Chapter II focuses on the special syntactic treatment given the most pragmatically salient noun phrase of the clause. We demonstrate how discourse factors such as definiteness and givenness interact with inherent factors such as egocentricity and animacy to mark another category with relevance at clause junctures. Significant constraints on

the basic SOV word order are discussed in both chapters.

The third chapter discusses the thematic topic as still another noun phrase category that is relevant to clause junctures. The thematic topic is distinguished from the actor, the fulcrum, and the pragmatically prominent noun phrase.

Chapter IV argues for a reanalysis of the internal organization of the clause that recognizes a tri-layered structure where juncture is possible at each layer. Such a view accounts for a number of systematic constraints on various clause chaining constructions and eliminates much of the excessive deletion required by most contemporary analyses of these constructions.

Chapter V challenges the traditional dichotomy between coordination and subordination and proposes a third nexus operation called cosubordination. Support for this third nexus option comes at each level of the clause by means of constraints on the scope of mood, absolute tense, thematic topic, the pragmatically prominent noun phrase, mode, and aspect. It is this variety of nexus that yields the distinctive chaining or serialization phenomena of these languages.

Chapters VI and VII show how various semantic and switch-reference relations interact with the type of nexus and the level of juncture to account for the wide range of distinctions Barai makes in marking relationships between clauses or clause-like structures. Finally, in the last chapter, a wide range of

clause junctures is ordered along a dependency hierarchy based primarily on the relative sententiality of the conjuncts involved in the juncture.

No attempt is made to exhaust all of the juncture possibilities in the language. Rather, the focus of this study has been to account for the chaining phenomena in Barai and other Papuan languages. Nonetheless, in so doing, we encounter the majority of possible junctures between clauses. The notable exceptions are certain paraphrase constructions which in these languages include direct quotes. Such paraphrase constructions function quite differently from other clause junctures and deserve an exhaustive study of their own. Here we will simply refer to Longacre (1976) for a consideration of various paraphrase relations.

Among the examples, the asterisk (*) is used to mark both ungrammatical and unacceptable utterances (Foley and VanValin 1980). Brackets [] are used with examples for glosses that could conceivably be intended by some starred string of linguistic forms. When they are used internal to quoted material, however, they encompass asides by the author. Appendix I orients the reader to the transcriptions used in the Barai illustrations and Appendix II provides the reader with a simplified guide to the order of the various markers that occur bound to the predicate.

ABBREVIATIONS

1	first person	G	goal
2	second person	hab	habitual
3	third person	I	instrument
a	animate	im.fut	immediate fut
A	agent	imp	imperative
abs	absolute	indef	indefinite
acc	accusative	intens	intensive
art	article	interr	interrogative
asp	aspectual	L	location
B	benefactive	N	nucleus
B ₁	base	neg	negative
C	core	nom	nominative
cas	casual	nonspec	nonspecific
conj	conjunctive marker	obj	object
contr	contrastive	P	patient
dat	dative	P ₁	predicate
def	definite	pl	plural
diff	different	poss	possessive
dub	dubitative	pres	present
dur	durative	prog	progressive
E ₁	event	PrPk	pragmatic peak
erg	ergative	R	range
F	force	S	source
fut	future	S ₁	sentence

sg	singular	T	time
Sit	situation	tns	tense
spec	specific	top	topic
		vb	verb

CHAPTER ONE

THE CODING OF ROLE INFORMATION

In this chapter we consider a number of grammatical devices that serve to disambiguate the semantic roles associated with various noun phrases in the state of affairs defined by the predicate together with certain of its accompanying noun phrases. These devices are important not only to the internal organization of the clause, but to inter-clausal relations as well.

Some of these role disambiguating devices overtly mark the noun phrase itself while others do not. We will argue that for Barai this difference reflects a distinction between noun phrases that are definitive to the relevant state of affairs and those that simply provide optional additions to the information pertaining to the state of affairs as a whole. Later in Chapter IV we will show that this distinction is crucial to a system of levels within the clause. Juncture is possible at each of the levels, as well as between full clauses.

There are two systems of such role disambiguating grammatical devices. One system identifies that noun phrase of multi-place predicates that is the initiator or stimulus of the particular state of affairs. The other system functions

to distinguish between stimuli that are responsible for the activity or state of the predicate and those that are not. Both systems, in addition to their role disambiguating function, mark a grammatical category that is relevant to distinctions that are made at clause junctures.

Also in this chapter, we will point out certain variations among these role distinguishing devices which occur with the same predicate, providing evidence that there is no necessary isomorphic relationship between predicates and role or case frames. This same conclusion is reached independently later in Chapter IV to explain other variations at clause junctures.

1.1 Nominal Case Marking

Languages vary dramatically in how they correlate semantic roles with various role disambiguating devices. First of all, they vary according to the type, or combination of types, of such role disambiguating devices. Most languages have some range of nominal case marking which functions to disambiguate the semantic roles of those noun phrases that are definitive of a particular state of affairs, noun phrases we will refer to as the participants of a particular state of affairs. But there are other role disambiguating devices that may also func-

tion in this way. These include word order constraints, cross-referencing on the predicate, and lexical co-occurrence restrictions. Secondly, languages vary in terms of the range of semantic roles that are associated with a particular role disambiguating device, so that instrument and locative, for example, may be distinguished by the same case marker in Barai but require unique case markers in English. However, generalizations can be made that significantly diminish the possible variations on this alignment between semantic roles and role disambiguating devices.

Perhaps the most common of these has to do with the distinction between accusative and ergative languages. In accusative languages, the initiating 'actor' of multi-place predicates is marked in the same way as the sole participant of one place predicates in the commonest active sentences. In ergative languages, on the other hand, a nonactor noun phrase of multi-place predicates is marked in the same way as the sole participant of one place predicates in the commonest active sentences. The generalization is that whenever nominal case markers are used to disambiguate semantic roles among the primary participants of a clause, the case markers will fall into one of these two patterns.

Notice that this traditional distinction between accusative and ergative languages is based entirely on nominal case marking. However, a number of recent studies (e.g., Anderson 1976, Woodbury 1977, and Dixon 1979) have shown that languages whose nominal case marking follows an ergative pattern may also have syntactic processes that single

out noun phrases according to an accusative pattern. Nominal case marking can even be split between an ergative pattern in some instances and an accusative pattern in others. While we may be content to base our definition of accusative and ergative languages on nominal case marking alone, we must also be prepared to talk about accusative type systems and ergative type systems that operate within either type of language, or even in a language that is neither accusative nor ergative by such a definition. Barai is neither an accusative language nor an ergative language since participants do not occur with nominal case markers in the commonest active sentences. However, there are a number of alternative role disambiguating devices, some of which follow a uniformly accusative type system and some of which follow a split ergative type system. As we shall see below, the distinctions here are critical as they identify categories that figure prominently in distinctions made at clause junctures.

We have stated that Barai is neither an accusative nor an ergative language since participants are not case marked in the commonest active sentences. However all other noun phrases are generally marked for case, creating a distinction of relevance to Barai grammar.

We follow Dik (1978:25) in distinguishing between noun phrases that are primary or nuclear to the categorization of a given state of affairs and those that are peripheral to that state of affairs.

The nuclear predication defines a state of affairs, i.e., that set of states of affairs in which the property or relation designated by the predicate holds for the particular terms to which the predicate is applied. Given a nuclear predication defining a set of states of affairs, we can form an extended predication by adding one or more satellites to the nuclear predication. Satellites are constituents which do not function in the definition of the state of affairs as such, but give further information pertaining to the state of affairs as a whole, by specifying the time or location of the state of affairs, giving the reason or cause of its obtaining, and providing other additional information. Satellites provide optional additions to the information contained in the nuclear predication. Nuclear arguments, on the other hand, are necessary for the definition of the state of affairs, although they may be left unspecified under certain contextual or situational circumstances.

Languages vary as to how they categorize which referents are nuclear and which are peripheral (satellites) to a given state of affairs. They may vary in terms of the range of semantic roles they categorize as nuclear relative to a particular state of affairs and they may vary in terms of the grammatical devices that distinguish nuclear from peripheral noun phrases. Barai is exceptionally transparent at this point as it is nominal case marking itself that distinguishes nuclear from peripheral noun phrases. For example, the predicate va 'go' occurs with one participant, the agent¹, for

¹The number of distinctions necessary for a universal system of semantic (case) roles and their precise definition has not been satisfactorily resolved. Nevertheless, the important typological fact that motivates case grammar remains: 'Every language has approximately the same case relationships though they differ widely in their use of case forms' (Blake 1930:34). In Appendix III we follow Grimes (1975) with preliminary definitions of semantic roles for nuclear participants.

which there is no accompanying case marker. Every occurrence of the predicate va entails an agent in the state of affairs it categorizes. However a locative noun phrase² is not entailed in the state of affairs categorized by va and does occur with a nominal case marker.

- (1) fu sitove ij-ia va-e³
 3sg store def-L go-past
 A L

'He went to the store.'

The predicate kira 'prepare' entails both an agent and a patient which occur without case markers. A benefactive noun phrase, however, occurs with a case marker in (2) as the benefactive is peripheral to the state of affairs categorized by kira.

- (2) na fu-efuo ire kira-ke
 1sg 3sg-B food prepare-fut
 A B P

'I will prepare food for him.'

²Again we follow Grimes in claiming that those noun phrases of the clause that function in roles that encode where, when, and under what circumstances actions take place, constitute a separate kind of information. Such roles do not define a particular state of affairs, but rather are general to most states of affairs, a kind of information Grimes refers to as setting (Grimes 1975:3).

³In Barai, tense on the final verb of the sentence is optional and frequently omitted.

(6) na bara-fuo vua kuae
 lsg girl-R talk say
 A R P

'I am saying talk about girls.'

It is not our purpose here to capture the finer distinctions in the relationships between semantic roles and the nominal case markers of Barai, although Appendix V provides a sketch of these relationships. Rather, the important fact for our study here is that whenever a noun phrase is marked for semantic role, its use with that predicate is optional in keeping with its status as a peripheral noun phrase.

1.2 The Actor

In contrast to the peripheral noun phrases, the nuclear noun phrases are not normally case marked. Quite a range of other grammatical devices function together to disambiguate the semantic roles of these noun phrases. Among them are some that function in a uniformly accusative type system. The role disambiguating devices of this system include number agreement, the distribution of mood markers, word order, and suppletive variants for the coding of new information.

Where there is only one participant associated with a particular predicate, no confusion arises as to its semantic role since it is completely predictable from the role (case) frame of that predicate. In the case of multi-place predicates however, the above role disambiguating devices function

to identify one of the noun phrases as the 'potential agent' to use Dixon's term (Dixon 1979). But can we really characterize the role of one noun phrase for every multi-place predicate as the 'potential agent'? Dixon assures us that we can. He argues for a common semantic unity among such roles as the agent with predicates like hit, the patient-experiencer with predicates like see, and the agent-source with predicates like give. He concludes that for most multi-participant events there is just one participant who potentially initiates and controls the activity (Dixon 1979:104). So with the English predicate hit, if anyone is controlling what is happening it is the participant who is doing the hitting. And with the predicate see, only the participant experiencing the event could potentially control it and so on.

There are some predicates for which the notion 'control' seems to be too strong a term. Some of these, like the predicate 'attract' can be accounted for by asserting that an inanimate participant can still be recognized as a potential controller 'through a perceived similarity of this event to activities that are controllable (e.g., 'pull')' (Dixon 1979: 106). Barai frequently encodes such related states of affairs by permitting both animate and inanimate participants to function as stimuli for the similarly perceived activities.

- (7) fu na kan-ie
 3sg lsg strike-lsg
 A PG
 'He struck me.'
- (8) ine ije na kan-ie
 tree def lsg strike-lsg
 A PG
 'The tree struck me.'
- (9) fu na sak-ie
 3sg lsg bite-lsg
 A PG
 'He bit me.'
- (10) miane ije fu na sak-ie
 firestick def 3sg lsg burn-lsg
 A PG
 'The firestick burned me.'

The problem in Barai is that there is a large class of two place predicates for which the notion 'potential agent' cannot be related in any sense to the role of any of their noun phrases. In fact, the distinctness of this class of predicates is that a force participant which provides the initiating stimulus does not control the event or state, potentially or otherwise. It is always viewed as not responsible, not controlling, and unwilling. A partial list of

these predicates appears in Appendix VI. Postal (1971) discusses the unique properties of a similar group in English, almost all members of which designate psychological states, processes, or attributes. Haiman (1976) demonstrates the generality of such a group crosslinguistically in his discussion of passives as agentless sentences, noting that they describe 'unwilled and spontaneous mental states'. The Barai group includes predicates related to both psychological and physical processes, but characteristic of all of them is that the stimulus of the event, the force participant, is not held responsible. We have agreed with Dixon that for some predicates there is a noun phrase that can be recognized as a potential controller through a perceived similarity to events that are controllable. But for predicates such as those in Appendix VI, even this fails. These predicates typically have two nuclear participants, a stimulating force and an experiencing patient, neither of which could be described as a potential controller in its relation to the predicate.⁴

However despite this difference, the force participant with these predicates is always treated like an agent by the set of role disambiguating devices mentioned above.

⁴These are clearly two place predicates in Barai. First of all, only nuclear participants occur without any case marker on the noun phrase itself. And further, no one place predicates are ever cross-referenced on the predicate with a bound pronoun. Elsewhere such cross-referencing only occurs with multi-place predicates and it does occur with these psychological or physical state predicates as well.

Grimes' agent (A) and Dixon's notion of potential control are comparable in that both have recognized that the pertinent category includes more than animate volitional participants and so admits certain inanimate participants. For Dixon, it is because of perceived similarities between their role and that of animate controllers, but for Grimes, responsibility is the critical factor. Responsibility here is not necessarily a function of animate volitional participants but may be attributed to either animate or inanimate participants.

So for any multi-place predicate, the role disambiguating devices of this uniformly accusative type system will mark the agent (A) if there is one, but the force (F) participant if there is not. Only if there is just one nuclear participant will these devices be associated with some other participant.

We will discuss here four role disambiguating devices that function according to the accusative type pattern. Consider first of all number agreement. Various tense markers cross-reference the 'nominative' noun phrase according to a binary split of person/number options. One form is used if the governing noun phrase is second or third person singular. Otherwise, an alternate form is used.

With a one place predicate like ruo 'come', the sole nuclear noun phrase governs number agreement.

(11) a ruo-mo
 2sg come-pres
 'You are coming.'

(12) fu ruo-mo
 3sg come-pres
 'He is coming.'

(13) na ruo-vo
lsg come-pres

'I am coming.'

(14) bu ruo-vo
3pl come-pres

'They are coming.'

When there is more than one nuclear noun phrase, it is either an agent or a force noun phrase that governs the agreement.

(15) a bu sak-ia-mo
2sg 3pl bite-3pl-pres

A PG

'You are biting them.'

(16) bu a sak-a-vo
3pl 2sg bite-2sg-pres

A PG

'They are biting you.'

The agent governs number agreement in (15) and (16). But the agent-patient governs number agreement in (17) and (18) with g- 'see' and the agent-source governs number agreement in (19) and (20) with vaj- 'give (plural patient)'.

(17) fu na g-ie-mo
3sg lsg see-lsg-pres

AP R

'He sees me.'

- (18) na fu g-a-vo
 lsg 3sg see-3sg-pres
 AP R

'I see him.'

- (19) a iro fu-one bu vaj-ia-mo
 2sg yam 3sg-poss 3pl give-3pl-pres
 AS P R

'You are giving them his yams.'

- (20) bu iro fu-one a vaj-a-vo
 3pl yam 3sg-poss 2sg give-2sg-pres
 AS P R

'They are giving you his yams.'

Finally, with two place predicates whose role frames do not include an agent, the force participant governs number agreement.

- (21) ije na ise-d-ie-mo
 3sg lsg unhappy-V-lsg-pres
 F P

'It is displeasing me.'

- (22) bu a ise-d-a-vo
 3pl 2sg unhappy-V-2sg-pres
 F P

'They are displeasing you.'

- (23) ije na riez-ie-mo
 3sg 1sg attract-1sg-pres
 F P
 'It is attracting me.'

- (24) bu a riez-a-vo
 3pl 2sg attract-2sg-pres
 F P
 'They are attracting you.'

Consider now a second case marking strategy of the uniformly accusative type system, the distribution of the mood markers. Like number agreement, any participant functioning in an agentive role will govern the distribution of the mood marker.

- (25) a be bu sak-ia
 2sg interr 3pl bite-3pl
 A PG
 'Did you bite them?'

- (26) *a bu be sak-ia

- (27) isuame a be bu g-ia
 yesterday 2sg interr 3pl see-3pl
 T AP R
 'Did you ignore them yesterday?'

(28) *a bu be g-ia

(29) a be iro fu-one bu vaj-ia
 2sg interr yam 3sg-poss 3pl give-3pl
 AS P R

'Did you give them his yams?'

(30) *a iro fu-one bu be vaj-ia

It is the agent with sak- 'bite', the agent-patient with g- 'see', and the agent-source with vaj- 'give(pl.patient)' that governs the distribution of the mood marker, which necessarily follows this participant and no other. The mood particle following any other participant is ungrammatical. In each case, this participant functions in an agentive role. But again, with those predicates whose role frame has no agent, the force participant governs its distribution.

(31) ije be a ise-d-a
 3sg interr 2sg unhappy-V-2sg
 F P

'Does it displease you?'

(32) *ije a be ise-d-a

(33) bu be a riez-a
 3pl interr 2sg attract-2sg
 F P

'Do they attract you?'

(34) *bu a be riez-a

Just as in (25)-(30) above, the mood marker may only accompany this particular participant.

Word order is another role disambiguating device of this uniformly accusative type system. Notice in all the above examples, from (15) right through to (34), it is the participant marked by number agreement and the distribution of the mood markers that is the first nuclear noun phrase of the clause. This is the case in each instance where a participant functioning in an agentive role is involved and it is also the case with the force participant where no agent is possible. So with multi-place predicates, only an agent or a force participant will ever govern number agreement, control the distribution of the mood markers, or linearly be the first nuclear participant of the clause. We repeat here the predicates in (15)-(24) illustrating the constraints on the word order of their nuclear participants. The starred examples are ungrammatical because the agent or force participant is not in the initial position.

- (35) a bu sak-ia
 2sg 3pl bite-3pl
 A PG
 'You bite them.'
- (36) *bu a sak-ia
- (37) fu na g-ie
 3sg lsg see-lsg
 AP R
 'He ignores me.'
- (38) *na fu g-ie
- (39) bu iro fu-one a vaj-a
 3pl yam 3sg-poss 2sg give-2sg
 AS P
 'They gave you his yams.'
- (40) *a bu iro fu-one vaj-a
- (41) *iro fu-one bu a vaj-a
- (42) ije na ise-d-ie
 3sg lsg unhappy-V-lsg
 F P
 'It displeases me.'

(43) *na ije ise-d-ie

(44) bu na riez-ie
 3pl lsg attract-lsg
 F P

'They attract me.'

(45) *na bu riez-ie

There is yet one further role disambiguating device of this uniformly accusative type system. That is suppletive variants for the nominal coding of new information. The coding of new information is of course pragmatic information which we will discuss in detail in the next chapter. But there are contrasting forms which are used to mark new information whose distribution coincides with the other strategies of this uniformly accusative type system. The forms are -iebe, -are, and -ene. -iebe marks plural 'nominative' noun phrases, -are marks singular 'nominative' noun phrases, and -ene is reserved for 'accusative' noun phrases regardless of number. So -iebe and -are are restricted either to an agent or to a force participant with multi-place predicates. This, we have seen, is the same distribution as obtains for the other strategies of the uniformly accusative type system.

So again, an accusative type pattern obtains.

We have illustrated four distinct role disambiguating devices of an accusative type system that function uniformly across all predicate types. Number agreement identifies the 'nominative' noun phrase, leaving the 'accusative' zero or unmarked. Mood markers similarly identify the 'nominative' noun phrase, leaving the 'accusative' unmarked. Word order marks the initial nuclear noun phrase as the 'nominative' noun phrase. Since peripheral noun phrases may be interspersed among the nuclear noun phrases, the 'accusative' noun phrases are basically unmarked as per word order. And the new information markers identify the 'nominative' noun phrase with -iebe and -are, and the 'accusative' noun phrase with -ene. Of course, each of these devices has other functions as well. None of them encode only role information, and none of them are obligatory in the sense that they must occur. Nevertheless, operating together, they isolate an actor category for multi-place predicates and thereby help to disambiguate semantic role for the nuclear participants of the clause.

For every multi-place predicate, the initiator or stimulus of the activity or state of the predicate will be the participant that is marked by this accusative type system of role disambiguating devices.

ACTOR: A > F > no other

So every multi-place predicate will have an initiating actor but that actor need not be an agent or even a potential agent. And the identity of that actor is insured by this accusative type system of grammatical devices. It will be the agent of the predicate kan- 'strike' whose role frame is [A, (PG)], the agent-patient of g- 'see' whose role frame is [AP, (R)], and the agent-source of m- 'give' whose role frame is [AS, (P), (G)]. And where no agentive role is part of the role frame of a multi-place predicate, the force participant will be the actor. So with the predicate ma-(d-) 'please' the force participant is marked by this accusative type system as the actor.

We shall see in later chapters that this category is significant not only to the internal organization of the clause but also to interclausal relations as well.

1.3 The Fulcrum

In addition to the uniformly accusative type system of role disambiguating devices, there is another quite independent system of such devices that functions according to a split ergative type system. The devices of this system will follow an accusative type pattern with predicates whose actor is a responsible agent but an ergative type pattern with predicates whose actor is a nonresponsible force participant.

The role disambiguating devices of this system include the distribution of pronominal copies, the distribution of a set of mode particles, and the distribution of the contrastive marker -re.

Consider first of all the distribution of pronominal copies. A pronominal copy immediately follows one of the nuclear noun phrases of the clause. With predicates whose role frame includes an agent, the pronominal copy immediately follows the first nuclear noun phrase. The starred examples are ungrammatical because the pronominal copy does not follow the initial nuclear noun phrase.

(58) e ije bu na kan-ie
 man def 3pl lsg strike-lsg
 A PG

'The people (they) hit me.'

(59) *na e ije bu kan-ia
 lsg person def 3pl strike-3pl
 A PG

'I hit the people (them).'

(60) e ije bu na g-ie
 person def 3sg lsg see-lsg
 AP R

'The people (they) saw me.'

(61) *na e ije bu g-ia
 lsg person def 3pl see-3pl
 AP R

'I saw the people (them).'

(62) e ije bu iro ije na m-ie
 person def 3pl yam def lsg give-lsg
 AS P G

'The people (they) gave me the yam.'

(63) *na iro ije e ije bu m-ia
 lsg yam def person def 3pl give-3pl
 AS P G

'I gave the yam to the people (them).'

(64) *na iro ije fu e ije m-ia
 lsg yam def 3sg person def give-3pl
 AS P G

'I gave the yam (it) to the people.'

Each of the above predicates includes an agent in its role frame and in each case a pronominal copy follows the initial nuclear noun phrase. With one place predicates, the pronominal copy immediately follows that sole nuclear noun phrase.

(65) e ije fu difuri
 person def 3sg run

A

'The man (he) is running.'

(66) kusare ije fu saere
 flower def 3sg wither

P

'The flower (it) withered.'

The distribution of the pronominal copy then follows an accusative type pattern with these predicates since it treats the agent of multi-place predicates in the same manner as it treats the sole nuclear participant of one place predicates. However the same device occurs immediately following the final nuclear noun phrase with those predicates whose role frames have no agent. Here the starred versions are ungrammatical because the pronominal copy does follow the initial nuclear noun phrase.

(67) adame ije e n-one bu visi-nam-ia
 sickness def person lsg-poss 3pl sicken-V-3pl

F

P

'The sickness sickened my people (them).'

(68) *adame ije fu e n-one visi-nam-ia
 sickness def 3sg person lsg-poss sicken-V-3pl

F

P

'The sickness (it) sickened my people.'

(69) fu e ije bu ise-d-ia
 3sg person def 3pl unhappy-V-3pl
 F P

'He displeased the people (them).'

(70) *e ije fu bu ise-d-ia
 person def 3sg 3pl unhappy-V-3pl
 F P

'The person (he) displeased them.'

(71) fu e ije bu riez-ia
 3sg person def 3pl attract-3pl
 F P

'He attracts the people (them).'

(72) *e ije fu bu riez-ia
 person def 3sg 3pl attract-3pl
 F P

'The person (he) attracts them.'

Now the pronominal copy is ungrammatical following the initial nuclear noun phrase, but occurs following the final nuclear noun phrase of the clause. The reader will recall that we demonstrated above that all actors, both the force participant with these predicates and the agent of other multi-place predicates, are marked alike by the role signalling devices of the uniformly accusative type system. However, the pronominal copy which follows the actor when

that actor is an agent follows the nonactor nuclear noun phrase with these predicates whose actor can never be an agent. So with these predicates a nonactor noun phrase is being treated like the sole nuclear noun phrase of one place predicates, an ergative type pattern. For some predicates then the distribution of the pronominal copies follows an accusative type pattern, for others, an ergative type pattern.

The distribution of the mode particles is similar. The set of mode particles includes -ka 'intensive', -me 'casual', and -te 'dubitative'. They normally occur phonologically bound to a pronoun (which may be a pronominal copy in the case of a full noun phrase). Again, if the role frame of the predicate includes an agent, the mode particles will occur bound to the initial nuclear noun phrase. If bound to any other noun phrase, the construction is ungrammatical.

- (73) fu-ka na kan-ie
 3sg-intens lsg strike-lsg
 A PG
 'He really hit me.'

- (74) *fu na-ka kan-ie
 A G

- (75) fu-ka na g-ie
 3sg-intens lsg see-lsg
 AP R
 'He really sees me.'
- (76) *fu na-ka g-ie
 AP R
- (77) fu-ka iro ije na m-ie
 3sg-intens yam def lsg give-lsg
 AS P G
 'He really gave me the yam.'
- (78) *fu iro ije na-ka m-ie
 AS P G
- (79) *fu iro ije fu-ka na m-ie
 AS P G

So whether there is a simple agent as with kan- 'strike' in (73), or an agent-patient as with g- 'see' in (75), or an agent-source as with m- 'give' in (77), the modal particle will follow that agentive participant.

With one place predicates the mode particle is simply bound to the sole nuclear noun phrase.

(80) fu-ka difuri
 3sg-intens run
 A
 'He is really running.'

(81) fu-ka saere
 3sg-intens wither
 P
 'It really withered.'

However, with multi-place predicates whose role frame does not include an agent, the mode particle must occur on the final nuclear participant. Now the construction is ungrammatical if the mode particle is bound to the force participant in the initial position.

(82) ije bu-ka visi-nam-ia
 3sg 3pl-intens sicken-V-3pl
 F P
 'It really sickened them.'

(83) *ije-ka bu visi-nam-ia
 F P

(84) fu bu-ka ise-d-ia
 3sg 3pl-intens unhappy-V-3pl
 F P
 'He really displeases them.'

(85) *fu-ka bu ise-d-ia
 F P

(86) a bu-ka riez-ia
 2sg 3pl-intens attract-3pl
 F P

'You really attract them.'

(87) *a-ka bu riez-ia

Here where the mode particle follows the final nuclear noun phrase, a nonactor noun phrase is being treated like the sole nuclear noun phrase of a one place predicate and so again an ergative type pattern results.

There is yet one other device whose distribution follows this split ergative type pattern and that is the contrastive marker -re.⁵

⁵All three role signalling devices of this split ergative type system may co-occur. However, when the bound mode particle and the bound contrastive marker co-occur, the pronoun or pronominal copy is repeated.

e ije fu-re fu-ka na kan-ie
 person def 3sg-contr 3sg-intens lsg strike-lsg
 A PG

'(It was) this man (who) really struck me.'

Again, where the role frame of the predicate includes an agent, the contrastive marker will occur following the initial noun phrase.

(88) fu-re na kan-ie
 3sg-contr lsg strike-lsg
 A PG

'(It is) he (who) hit me.'

(89) *fu na-re kan-ie
 3sg lsg-contr strike-lsg
 A PG

'(It is) I (whom) he hit.'

(90) fu-re na g-ie
 3sg-contr lsg see-lsg
 AP R

'(It is) he (who) saw me.'

(91) *fu na-re g-ie
 3sg lsg-contr see-lsg
 AP R

'(It is) I (whom) he saw.'

(92) fu-re iro ije na m-ie
 3sg-contr yam def lsg give-lsg
 AS P G

'(It is) he (who) gave me the yam.'

- (93) *fu iro ije na-re m-ie
 3sg yam def lsg-contr give-lsg
 AS P G

'(It is) I (to whom) he gave the yam.'

With one place predicates the contrastive particle occurs bound to the sole nuclear noun phrase and again with multi-place predicates where there is no agent, it occurs bound to the final nonactor noun phrase.

- (94) fu-re difuri
 3sg-contr run
 A

'(It is) he (who) is running.'

- (95) fu-re saere
 3sg-contr wither
 P

'(It is) it (that) withered.'

- (96) ije bu-re visi-nam-ia
 3sg 3pl-contr sicken-V-3pl
 F P

'(It was) they (whom) it sickened.'

- (97) *ije-re bu visi-nam-ia
 3sg-contr 3pl sicken-V-3pl
 F P

'(It was) it (that) sickened them.'

- (98) fu bu-re ise-d-ia
 3sg 3pl-contr unhappy-V-3pl
 F P
 '(It was) they (whom) he displeased.'
- (99) *fu-re bu ise-d-ia
 3sg-contr 3pl unhappy-V-3pl
 F P
 '(It was) he (who) displeased them.'
- (100) fu bu-re riez-ia
 3sg 3pl-contr attract-3pl
 F P
 '(It was) they (whom) he attracted.'
- (101) *fu-re bu riez-ia
 3sg-contr 3pl attract-3pl
 F P
 '(It was) he (who) attracted them.'

So again, as with the pronominal copies and the mode particles, the contrastive marker is bound to the initial nuclear noun phrase with predicates whose role frames include an agent. This noun phrase is the actor so the distribution of the contrastive marker in this case follows an accusative type pattern. But with predicates whose role frame has no agent, the contrastive marker is bound to the final nuclear noun phrase which in this case is the nonactor and so follows an ergative type pattern.

There are then three distinct role disambiguating devices that function in a split ergative type pattern. The particular pattern signals whether or not the actor is responsible for the state or activity of the predicate. Such a split of nominal case marking systems where the split is tied to the semantics of the predicate is rare. However there are several languages where the case marking of one place predicates varies according to whether or not the actor is viewed as controlling the state or activity of the predicate.

Moravcsik (1978:255) discusses these in her study of ergative and accusative patterns and generalizes that 'if voluntariness is a property that delimits ergatively and accusatively marked intransitive subjects from each other, then it is the ergatively marked ones that will be the involuntary ones, rather than vice versa'. She then goes on to suggest that this may be part of an even more general pattern regarding ergative systems based on the inherent 'activeness of their noun phrase referents'.

Voluntary participants of an action are more active in an intuitive sense than involuntary ones...Whenever in a language there are two classes of noun phrases such that members of one class are case-marked accusatively, and there is a semantic difference between the classes related to the activeness of the noun phrase referents, members of the class with more active noun phrase referents will be marked accusatively and members of the less active class, ergatively. (Moravcsik 1978:256).

Moravcsik is concerned here with nominal case marking and splits that reflect properties of the noun phrase referents involved. But it is significant that control or voluntariness is correlated with accusativity and lack of control or involuntariness with ergativity. The Barai data is particularly relevant at this point and the split based on control or responsibility follows naturally from these generalizations, although it involves more subtle role signalling devices than nominal case and marking.

Control or, more precisely, responsibility is clearly behind the split in the distribution of this second set of role disambiguating devices. This split also functions to isolate an important category of the grammar just as the uniformly accusative system isolated the actor category. We will refer to the noun phrase isolated by this split ergative system of role disambiguating devices as the fulcrum since, as we shall see in subsequent chapters, important pragmatic information and certain coreferential deletion rules are keyed to this category.

The fulcrum for any particular clause is predictable from a hierarchy based on both semantic role and animacy.

FULCRUM: A > anim.P > F > other

The fulcrum will always be the agent if there is one, but failing that will be any animate Patient. If neither are part of the role frame for a particular predicate, a force participant will be the fulcrum. Only with one place predicates will a participant functioning in any other role be marked by the devices of this split ergative type system.

As ~~is so~~ with the uniformly accusative type system, this split ergative type system also functions to help disambiguate the semantic roles of nuclear participants. Our discussion here should not suggest that the two systems function redundantly however. All of the grammatical devices involved in both systems have other functions so that their occurrence is never obligatory. However, both systems functioning together normally eliminate any possible ambiguity regarding the semantic role of nuclear participants.

With the predicate kan- [A, (PG)] 'strike' the fulcrum will be the agent. With g- [AP, (R)] 'see' and m- [AS, (P), (G)] 'give(sg.patient)' the fulcrum is the agent-patient and agent-source participants respectively. But with predicates like visi-(nam-) [(F), P] 'sicken', the animate patient will be the fulcrum. In each case the semantic role of one of the nuclear participants of multi-place predicates is identified by the grammatical devices of this split-ergative type system.

It is significant that the fulcrum is also the indispensable noun phrase of the nuclear predication. Normally, except when coreferential deletion occurs, both nuclear noun phrases of two place predicates are overtly expressed. However, noun phrase suppression may block the overt realization of one of these noun phrases under certain conditions.

Noun phrase suppression is the consequence of a particular referent being indefinite, obvious, or insignificant in a given context (Heath 1976). Heath argues that the patient of (102) is suppressed because it is obvious in context rather than indefinite but that in (103) the goal is suppressed because it is indefinite.

(102) He drinks.

(103) Speed kills.

In Barai, among two place predicates, only the fulcrum never undergoes noun phrase suppression. Role suppression is more limited with agentive predicates in any event. Where it is permitted, it can only apply to the nonactor noun phrase, never to the fulcrum which is marked by the grammatical devices of the split ergative type system.

(104) na-te fu samua
 lsg-dub 3sg wait.for
 AP R

'I might be waiting for him.'

(105) na-te samua
 lsg-dub wait.for
 AP

'I might be waiting.'

(106) na-te ire i
 lsg-dub food eat
 A P

'I might be eating food.'

(107) na-te i
 lsg-dub eat
 A

'I might be eating.'

(108) a-te fu fie
 2sg-dub 3sg hear
 AP R

'You might hear him.'

(109) a-te fie
 2sg-dub hear
 AP

'You might hear.'

In each of these examples, the fulcrum is the actor which is marked by the position of the mode particle and it is this noun phrase that is indispensable with these predicates. However the fulcrum is the nonactor with predicates whose role frame has no agent. This noun phrase is marked by the same grammatical devices and it is this noun phrase that is indispensable with these predicates.

(110) ije na-te visi-nam-ie
 3sg lsg-dub sicken-V-lsg
 F P

'It might sicken me.'

(111) na-te visi-nam-ie
 lsg-dub sicken-V-lsg
 P

'I might be sickened.'

(112) fu na-te riez-ie
 3sg lsg-dub attract-lsg
 F P

'He might attract me.'

(113) na-te riez-ie
 lsg-dub attract-lsg
 F

'I might be attracted.'

ise-d-ia-mo

unhappy-V-3pl-pres/hab

'A certain man really displeases my friends (them).

In (114), the role disambiguating devices of the uniformly accusative type system occur with the agent which assumes the initial position, takes the nominative marker -are for new information, and governs verb agreement (since -mo occurs only with second and third singular actors). The same is true for the force participant in (115). However, the role disambiguating devices of the split ergative type system (the distribution of the pronominal copy and the mode particle) occur with the initial agent in (114) but with the final patient in (115). So the actor and the fulcrum may be the same participant as in (114) or distinct participants as in (115).

1.4 Multiple Role Frames

In Chapter IV we discuss how variation among clause junctures reflects a layering of structure within the clause. We will argue there and on independent grounds in this section as well that the relationship between predicates and role

(118) a bu-ka riez-ia
 2sg 3pl-intens attract-3pl
 F P

'You really attract them (inadvertently).'

(119) bu-ka a rieze
 3pl-intens 2sg desire
 AP R

'They really desire you.'

In (116) there is no responsible agent whereas in (117) there is. Not only do the two role frames differ in terms of responsibility associated with the actor, but their non-actor nuclear participants also differ as to semantic role. The same is true for riez- 'attract' in (118) and (119). For each of these predicates, the role frame [(F),P] encodes a state of affairs quite distinct from the role frame [AP,(R)]. Note also that in the former instance the patient is cross-referenced by a bound pronoun on the predicate but that no such cross-referencing occurs in the latter instance.

Still other predicates permit both patterns but predicate cross-referencing does not vary.

(120) a bu-ka ma-d-ia
 2sg 3pl-intens happy-3pl
 F P

'You really pleased them (inadvertently).'

frames is not necessarily isomorphic. Up to this point, we have spoken of predicates as having a particular role frame. However, a particular predicate may have more than one role frame so that a speaker frequently has a choice of encoding more than one state of affairs with a given predicate.

In our discussion above, we often distinguished between predicates whose role frame included an agent and those that did not. Most predicates fall into one class or the other. However, there are a limited number of predicates that allow both the 'accusative' and the 'ergative' patterns of the split ergative type system of role disambiguating devices. The important fact here is that the two patterns reflect distinct role frames for the same predicate. Consider the predicates tot- 'escape.memory' and riez- 'attract'.

(116) a bu-ka tot-ia
 2sg 3pl-intens escape.memory-3pl
 F P

'You really escaped their memory (escape-memory them).'

(117) bu-ka a tote
 3pl-intens 2sg forget
 AP R

'They really forgot you.'

(121) a-ka bu ma-d-ia
 2sg-intens 3pl happy-3pl
 AP R

'You really liked them.'

(122) a bu-ka ise-d-ia
 2sg 3pl-intens unhappy-V-3pl
 F P

'You really displeased them (inadvertently).'

(123) a-ka bu ise-d-ia
 2sg-intens 3pl unhappy-V-3pl
 AP R

'You really dislike them.'

There are important differences in the role frames of each pair, both in terms of actor and nonactor participants, but we again draw your attention to the fact that only where the fulcrum is the actor, is a responsible agent involved. English encodes these different states of affairs with distinct predicates, while Barai alters the role frame of a single predicate.

Certainly there is precedent for claiming that a particular predicate may have more than one role frame, but such a position is generally related to valence increases, i.e., an increase in the number of nuclear participants related to a particular predicate. For example, Foley and VanValin give two role frames for 'dry'.

Dry [P], [A,P]

dry occurs with two case frames, reflecting its two meanings of process and action, respectively. As a process predicate, it occurs with one argument in the role of Patient. As an action predicate, it occurs with both Agent and Patient. (Foley and VanValin (to appear):49)

This was essentially Fillmore's approach in "Case for Case" (1968). While his 'frame features', as he called them, were meant to represent a set of role frame possibilities for a particular predicate, this set was storable for each lexical predicate in terms of one master 'frame feature' which allowed for optional elements. We reproduce here his examples of the various frame options for the English predicate 'open'.

(124) The door opened. [O]

(125) John opened the door. [O,A]

(126) The wind opened the door. [O,I]

(127) John opened the door with a chisel. [O,I,A]

The composite frame feature for 'open' was then given as [O, (I), (A)].

Our claim is that valence increases and varying role frames that do not involve valence increases, both stem from differences in the state of affairs being encoded. Clearly, there is a basic semantic unity with each use of the predicate, but within that unity, more than one nuclear predication defining unique states of affairs may be encoded. In Barai where there is a variation between one and two place nuclear predications for a particular predicate, the stem without the unmarked valence marker indicates the one place option and the stem with the valence marker indicates the two place option. Similarly when the variation is between two and three place nuclear predications, the stem without the valence marker indicates the two place option and the stem with the valence marker indicates the three place option.⁶

Consider valence increases from one to two nuclear participants. The one place predicate ki 'to laugh' occurs only with an agent-patient.

(128) fu ki
 3sg laugh
 AP
 'He is laughing.'

⁶No predicate allows all three valence options.

However with the valence increaser -s-, the same stem is used to encode a situation involving two nuclear participants, the agent-patient and a range noun phrase as well.

- (129) fu na ki-s-ie
 3sg lsg laugh-V-lsg
 AP R
 'He is laughing at me.'

Note that the range noun phrase is clearly a nuclear participant. If it were not, it would have been realized as n-one 'lsg-R', and its peripheral status would have been indicated by the overt marking of case on the noun phrase itself. Two related nuclear predications are encoded with the same predicate by means of distinct role frames, [AP] and [AP,(R)].

Then consider the predicate ufi 'to spin'.

- (130) maja ufi
 wind spin
 P
 'The wind is spinning.'

- (131) tarome ije ufi
 bamboo.leaf def spin
 P
 'The bamboo leaf is spinning.'

The stem without the valence marker encodes a nuclear predication that entails only a patient participant. However, the valence marker in this instance adds a force participant along with the patient.

(132) siare ije na ufi-r-ie
 betelnut def lsg spin-V-lsg
 F P

'The betelnut spins me (i.e., makes me high).'

Again the result is two distinct role frames used with the same predicate to encode related but distinct states of affairs.

-d- and -nam- are the most common of the markers for a valence increase from one to two nuclear participants.⁷

(133) fu-ka ise
 3sg-intens unhappy
 P

'He is really unhappy.'

⁷There are constraints on the person/number options for the nuclear participants with each role frame associated with these particular predicates. These relate to interference from pragmatic variables which is not crucial to our discussion here.

(134) ije na-ka ise-d-ie
 3sg lsg-intens unhappy-V-lsg
 F P

'It really displeases me.'

(135) fu-ka na ise-d-ie
 3sg-intens lsg unhappy-V-lsg
 AP R

'He really dislikes me.'

ise-(d-) may occur with a role frame of only one nuclear participant, the patient [P]. Or it may occur as a two place predicate with the valence marker -d-. As a two place predicate, two role frames are possible: [(F),P] as in (134) and [AP,(R)] as in (135), the two being disambiguated by the grammatical devices of the split ergative type system described above in 1.3.

Other predicates like visi-(nam-) 'sicken' add a force participant with the use of the -nam- valence marker, but these predicates never take a third frame that includes an agentive participant.

(136) fu visi
 3sg sick
 P

'He is sick.'

(137) ije na visi-nam-ie
 3sg lsg sicken-V-lsg
 F P

'It sickened me.'

Consider now valence increases between nuclear predications entailing two participants and those entailing three participants. There are two valence increasing markers of this kind: -r- and -j-. They do not appear to be phonologically conditioned nor is there any one to one correspondence with the incorporation of any particular role.

(138) na ukie isoe
 lsg tattoo draw
 A P

'I am drawing a tattoo.'

(139) na a ukie isoe-r-a
 lsg 2sg tattoo draw-V-2sg
 A G P

'I am drawing a tattoo on you.'

(140) ubije na sak-ie
 3sg lsg bite/sting-lsg
 A PG

'A bee stung me.'

(141) fu na kuriaē sak-r-ie
 3sg 1sg nettle bite/sting-V-1sg
 A PG I

'He stung me with nettle.'

(142) fu kamui nakui
 3sg string.bag hang.up
 A P

'He hung up the string bag.'

(143) fu na kamui naku-r-ie
 3sg 1sg string.bag hang.up-V-1sg
 A B P

'He hung up a string bag for me.'

In (138), (140), and (142), the predicates all take two nuclear participants and occur without any valence increasing marker. But in (139), (141), and (143) where the marker occurs, there are three nuclear participants although the role of the additional participant varies in each instance. In (139) a goal is incorporated into the role frame. In (141) it is an instrument. And in (143) a benefactive is incorporated. There is some variation with the -j- valence increaser as well, although in most instances, it encodes the addition of a benefactive participant.

(144) fu ire kira
 3sg food prepare
 A P

'He is preparing food.'

(145) fu a ire kira-j-a
 3sg 2sg food prepare-V-2sg
 A B P

'He is preparing food for you.'

(146) fu a kan-a
 3sg 2sg hit/strike-2sg
 A PG

'He is hitting you.'

(147) fu a ukie⁸ kana-j-a
 3sg 2sg thorn hit/strike-V-2sg
 A PG I

'He is striking you with a thorn.'

As with -r-, the stems that take -j- encode two nuclear participants in its absence as in (144) and (146), but three nuclear participants when it occurs as in (145) and (147). It encodes the addition of the benefactive role in (145) and

⁸ The stem for 'tattoo' in (138) and the form for 'thorn' in (147) are homophonous--ukie.

the instrument role in (147).

(148) na a ukie ij-ia ukie isoe-r-a
 lsg 2sg thorn def-I tattoo draw-V-2sg
 A G I P

'I drew a tattoo on you with a thorn.'

isoe, in fact, may occur with either valence increasing marker, incorporating a goal with -r- and a benefactive with -j-.

(149) na a divave isoe-j-a
 lsg 2sg tapa draw-V-2sg
 A B P

'I will draw a tapa for you.'

A significant difference between the valence increases from one to two nuclear participants and those from two to three is that these predicates that incorporate a third nuclear participant may also be two place nuclear predications with the same third participant being peripheral to the predication. Thus with the predicate sak- 'bite/sting' the speaker may encode a state of affairs with three nuclear participants using the -r- valence increaser as in (141) where the instrument is a nuclear participant. Alternatively, he may encode a related but distinct state of affairs with only

two nuclear participants where the instrument occurs as a peripheral noun phrase and need not occur at all as in (150).

- (150) fu kuriae ij-ia na sak-ie
 3sg nettle def-I lsg bite/sting-lsg
 A I PG

'He stung me with the nettle.'

In (150), an instrument identical to the one incorporated as a nuclear participant in (141) occurs as a peripheral noun phrase but need not occur at all as in (140). The same is true of the -j- valence increaser.

- (151) fu o-efuo ire kira
 3sg 2sg-B food prepare
 A B P

'He is preparing food for you.'

When we compare (151) with (145), again the same range of participants are involved, the difference being that the benefactive is a nuclear participant in (145) where it occurs with no case marker on the noun phrase and with the -j- valence increaser on the predicate. In (151) however, it is peripheral and does take a case marker on the noun phrase, but no valence increaser occurs on the predicate.

The important question, of course, is what motivates the distinction. The phenomenon is similar in form to what Givon (1979) describes as dative-shifting. In Givon's terms, dative-shifting changes an 'indirect or prepositional object' into a 'direct object' where two critical features in the case marking system are usually taken to be associated with this change. One is that the 'indirect object' loses its case marking morpheme during the promotion and the other is that the word order of 'direct object' preceding 'indirect object' is switched around. However, he gives a variant to the word order switch as the coding on the predicate of the role of the noun phrase closest to that predicate. Kinyarwanda (Kimenyi 1979), a Bantu language, exhibits this kind of dative-shift.

- (152) umugabo a-ra-tema igiti n-umupaanga
 boy he-asp-cut tree with-iron

'The boy cut the tree with {an iron.'
 the iron.'

- (153) umugabo a-ra-tem-eesha umupaanga igiti
 boy he-asp-cut-inst iron tree

'The boy cut the tree with {the iron.'
 *an iron.'

'The boy used the iron to cut the tree.'

In (152), the instrument carries a nominal case marker but there is no indicator of role on the predicate. In (153) on the other hand, no case marker appears on the instrument noun phrase but the predicate does bear a marker referencing the instrument role. This is similar to the structure of Barai. Givon argues that in terms of function these variants share a common core. The most common function of the dative-shift rule involves changing the relative topicality of the 'accusative' viz-à-viz the 'prepositional object'. Topicality is defined in terms of discourse factors. Kinyarwanda conforms very nicely to the generalization. Kimenyi (1976) has shown how that the 'direct object' promoted by dative-shift is obligatorily definite (or generic), although it may be either definite or indefinite reading for the instrument. In addition, the dative-shift is blocked altogether whenever the 'accusative object' is an anaphoric pronoun because of its high topicality. So in Kinyarwanda (154-156) are grammatical, but (157) is blocked.

(154) umugabo y-a-taa-ye igitabo mu-maazi
 boy he-past-throw-asp book in-water
 'The boy threw the book into (the) water.'

(155) umugabo y-a-taa-ye-mo amaazi igitabo
 boy he-past-throw-asp-loc water book
 'The boy threw the/a book into the water.'

- (156) umugabo y-a-gi-taa-ye mu-maazi
 boy the-past-it-throw-asp in-water
 'The boy threw it into (the) water.'

- (157) *umugabo y-a-gi-taa-ye-mo amaazi
 boy he-past-it-threw-asp-loc water

The reason the locative noun phrase of (157) cannot undergo dative-shift while the one in (145) can, is because of the high topicality of the 'accusative object' as an anaphoric pronoun. Clearly, Givon's generalization holds for Kinyarwanda.

But although the variation in Barai is structurally similar, these discourse constraints do not motivate the distinction. First of all, a pronominalized 'accusative object' does not block the dative-shift.

- (158) fu bu kuriae saki-r-ia
 3sg 3pl nettle sting-V-3pl
 A PG I
 'He stings them with ^a the nettle.'

- (159) fu kuriae ije bu saki-r-ia
 3sg nettle def 3pl sting-V-3pl
 A I PG
 'He stings them with the nettle.'

In (158), dative-shift marks the predicate to reference the instrument as a nuclear participant in spite of the fact that the 'accusative' noun phrase (i.e., the nonactor participant not involved in the dative-shift) is a highly topical anaphoric pronoun.

Further, the constraint in Kinyarwanda that the indirect object must be definite after dative-shift again does not apply in Barai. Definiteness of the 'indirect object' will alter word order, but does not condition the dative-shift. In (158) the instrument is not marked for definiteness although it is in (159). However in both instances the 'indirect object' is a nuclear participant marked on the predicate rather than a peripheral noun phrase with case marking on the nominal itself.

Clearly, there is no doubt from the evidence cited by Givon that dative-shift is largely governed by topicality or pragmatic variables in numerous languages. But just as clearly, they do not condition the shift in Barai. In fact, even a noun phrase overtly marked as indefinite may undergo dative-shift.

(160) na ire ije e bino-be kira-j-ia
 1sg food def person other-indef prepare-V-3pl
 A P B

'I am preparing the food for some people.'

We are suggesting then that the function of dative-shift in Barai is not involved with changing the relative topicality of the 'accusative' vis-à-vis the 'prepositional object'. Rather the speaker may choose to encode a state of affairs with two nuclear participants or to encode a state of affairs with three nuclear participants. This choice is comparable to that which we described for ki 'laugh' as either [AP] or [AP, (R)]; or for 'dry' in English as either [P] or [A, (P)].

Our notion of nuclear participants is clearly vital to the organization of clause level grammar. We have departed from the theoretical position that associated a particular set of semantic roles with each predicate. If we maintain our position that the nuclear participants are the ones that define the state of affairs of a nuclear predication, then predicates that permit 'dative-shifts' allow more than one nuclear predication to be encoded with a particular predicate. Multiple role frames will also be needed in Chapter IV to explain certain kinds of clause junctures.

We have outlined the coding of role information within the clause as it pertains to information that is encoded at various kinds of clause junctures. The distinction between actor and fulcrum is crucial to the organization of the clause and both categories are relevant to distinctions coded at clause junctures as well. The same is true for the distinction

between nuclear and peripheral noun phrases. This is especially important as we will be arguing in Chapter IV that the predicate together with its nuclear participants form a core to the clause, and that clause cores may be conjoined just as clause predicates or full clauses may be conjoined.

CHAPTER TWO

THE CODING OF PRAGMATIC INFORMATION2.1 Pragmatic Structure

The organization of the clause encodes pragmatic as well as role information. What we will call the pragmatic structure of the clause encompasses those aspects of the organization of the clause that are reflexes of the pragmatic salience of its various noun phrases.¹ This pragmatic salience stems from two sources. One is the context. The other is the inherent topicality of the noun phrase. The context may be either linguistic or extralinguistic, so that discourse factors such as definiteness and givenness may be crucial to the structure of the clause.

In Turkish, for example, word order is usually determined by role status, but superimposed on that common word order are pragmatic constraints that shift an indefinite nuclear noun phrase to the right. The following examples are taken from Underhill (1972).

- (1) adam taş-ı oğlan-a at-tı
 man stone-obj. boy-dat throw-past

'The/*A man threw the/*a stone at the/a boy.'

¹See Foley and VanValin (to appear) for a more extensive discussion of the pragmatic structure of the clause.

(2) taş-ı oğlan-a bir adam at-ti
 stone-obj. boy-dat a man throw-past
 'A/*The man threw *a/the stone at the boy.'

(3) oğlan-a bir adam taş at-ti
 boy-dat. a man stone throw-past
 'A/*The man threw a/*the stone at the boy.'

In (1), where all three noun phrases are definite, the 'actor' assumes the initial position, followed by the 'object', and then the 'dative' noun phrase. However, when the 'actor' is indefinite as in (2), it must follow the definite 'object' and 'dative' noun phrases. And should the dative occur in the initial position as in (3) both the 'actor' and the 'object' are necessarily indefinite.

A definite noun phrase is one whose referent the speaker assumes the hearer can identify regardless of whether or not it was assumed that he was thinking about it at the time of the utterance (Chafe 1976). There is more than one means of establishing the definite status of a noun phrase, some of which Chafe discusses. The most obvious, of course, is through prior mention in the discourse. And although perhaps the most common overt reflex of this status is some kind of article, other variables in the organization of the clause may reflect such pragmatic information as well. In Turkish, word order plays a significant role.

Since language as a tool for communication is basically interactional, it is not surprising that the organization of the clause is sensitive to such pragmatic information as the definiteness of significant noun phrases. Chafe includes it in what he calls packaging devices that 'have to do primarily with how the message is sent and only secondarily with the message itself' (1976:28). So the same lexical content may be organized in different ways depending on contextual factors.

Another contextually governed variable that determines the pragmatic salience of particular noun phrases has to do with their status in terms of the given/new distinction. Consider the following Russian examples (Comrie 1978).

- (4) kto zaščiščajet Viktora?
'Who defends Victor?'
- (5) Viktora zaščiščajet Maksim
?Maksim zaščiščajet Viktora
'Maxim defends Victor.'
- (6) kogo zaščiščajet Maksim?
'Whom does Maxim defend?'
- (7) Maksim zaščiščajet Viktora
?Viktora zaščiščajet Maksim
'Maxim defends Victor.'

Neither role nor the definiteness of the referent account for the variation of word order in Russian. And yet word order is not entirely unconstrained. The former of the two options for (5) and (7) are the preferred answers to (4) and (6) respectively.

Givenness is attributed to a noun phrase whose referent the speaker assumes has already been activated in the hearer's consciousness, that is, he assumes that the selective attention of the hearer is still focused on the referent in question (Chafe 1976). New information, on the other hand, is attributed to a noun phrase whose referent the speaker assumes he is activating in the hearer's consciousness at the time of the utterance. Given information is normally expressed in a weaker and more attenuated manner than new information and is often pronominalized. But it may be reflected in the more formal organization of the clause as well, as in the Russian example. The preferred word order in (5) and (7) reflects the fact that the initial noun phrase carries given information which was established by its occurrence in the question that immediately precedes in the discourse. Conversely, in Russian, new information normally occurs at the end of the clause (Comrie 1978). The noun phrases carrying given information in (5) and (7) are the same noun phrases that carry new information in (4) and (6) where they are newly introduced into the discourse.

But contextual factors are only one source of pragmatic salience. A second intersecting parameter we might refer to as the inherent topicality of the noun phrase. Recent studies have indicated that languages often give preferential treatment to noun phrases according to what Zubin (1976) calls the speaker's focus of interest. In fact, noun phrases may be hierarchically ordered along an egc-centered hierarchy. Various such hierarchies have been proposed. Foley (1976) states the hierarchy in universal terms as follows:

(8) Inherent Topicality Hierarchy:

speaker > hearer > human proper > human common > animate > inanimate

Zubin suggests that this ordering has a psychological basis stemming from a principle of egocentrism in which the speaker will be interested in the entity most similar to himself. Cooper and Ross (1976) refer to it as the entity which the prototypical speaker identifies with most closely. A speaker's interest in the world starts with himself and diminishes as the objects of perception become more remote in kind. Zubin draws support for his egocentrism principle from a number of current works:

This hierarchy closely corresponds to what Erica Garcia (1975:260-261) calls the 'inherent focus hierarchy' of Spanish in dealing with distributional problems of the weak deictic *se*. It also corresponds to what Herbert Clark (1971) calls a 'dominance hierarchy' in a study of acceptability judgements about two participant English sentences in which subject and object were independently

varied over the hierarchy; and in part to what Cooper and Ross (1975) call the 'me first' principle, which they formulated in an investigation of co-ordinate conjoined NP's. A similar concept - 'natural topic hierarchy' - is used by Annie Hawkinson and Larry Hyman (1974) for dealing with topicalization in Shona, and by Evelyn Ranson (1975, 1976a) - 'humanness-animacy constraint' - in dealing with problems of dative movement and passivization. This constraint is based on Kuno's (1976) notion of 'empathy focus', the speaker's identifying within varying degrees, persons who participate in the event he/she describes in a sentence. Charles Osgood and Kathryn Brock (1975) make use of a similar concept, called 'motivation-of speaker', in dealing with ordering phenomena in English, including what entity is coded as the surface subject. (Zubin 1976:6)

In addition, Michael Silverstein (1977) proposes a similar hierarchy which he calls the inherent lexical content hierarchy. There is then widespread support for the position that this self-oriented bias in perception may be significant to the organization of the clause.

In Tlalhuitoltepec Mixe (Lyon 1967) the higher ranked noun phrase controls an agreement affix on the predicate. If the actor outranks the goal, one of the actor oriented prefixes will mark the agreement. But if the goal outranks the actor, goal will control agreement.

(9)	Actor-oriented	Goal-oriented
1	n-	s-
2	m-	m-
3	y-, t-	∅, y-

(10) tə əhc ha hɔɔʔy n-wopy
 past lsg art person lsgA-hit

'I hit the person.'

(11) tə əhc ha hɔɔʔy s-wopy
 past lsg art person lsgG-hit

'The person hit me.'

(12) tə paat ha hɔɔʔy t-wopy
 past Peter art person 3A-hit

'Peter hit the person.'

(13) tə paat ha hɔɔʔy w-y-opy-ə
 past Peter art person 3G-hit-G

'The person hit Peter.'

(14) tə paat ha həyuhk t-wopy
 past Peter art animal 3A-hit

'Peter hit the animal.'

In (10) and (11), the speaker is cross-referenced on the predicate despite the fact that he is the actor in (10) and the goal in (11). Similarly in both (12) and (13), paat, being a proper noun and therefore higher on the hierarchy than hɔɔʔy, is the noun phrase cross-referenced on the predicate, despite the difference in role. And in (14), the proper noun is ranked over the common noun.

Animates rank over inanimates in a similar manner. Clearly it is inherent topicality rather than discourse topicality that is reflected in the pragmatic structure of the Tlalhuitoltepec Mixe clause.

Pragmatic structure, for those languages that exhibit it, is characterized by the preference that is given one noun phrase of the clause by virtue of its pragmatic salience in terms of either discourse topicality or inherent topicality or both. In Turkish, and Russian, this preferential treatment is exhibited in word order so that the initial noun phrase is pragmatically the most salient noun phrase of the clause. In Tlalhuitoltepec Mixe on the other hand, preferential treatment is exhibited by cross-referencing on the predicate and it is this noun phrase that is pragmatically most salient. We will refer to the pragmatically most salient noun phrase of the clause as the pragmatic peak.

Frequently, both kinds of pragmatic information (discourse and inherent) together determine which noun phrase becomes the pragmatic peak of the clause. Zubin discusses how the two intersect to determine which noun phrase gets nominative case within the relative clause in German. He suggests that...

...the speaker will employ at least two strategies in using the nominative: local interest if his interest is motivated externally by what is salient in the immediate discourse context or situation, and ego-centered interest if his interest is motivated internally by a cognitive disposition...

local interest predicts that the relative pronoun in relativization will be in the nominative, while ego-centered interest predicts that the higher entity on the hierarchy will be in the nominative. (Zubin 1976:8-9)

He then goes on to demonstrate that, when the two strategies conflict, ego-centered interest plays the greater role, so that in German, inherent topicality outweighs discourse topicality in determining the selection of the pragmatic peak.

Both kinds of pragmatic information influence the organization of the Barai clause and are relevant to important distinctions at clause junctures as well. We will discuss the morphological and syntactic devices that encode pragmatic peak selection. We will also demonstrate that in Barai, which in this regard is unlike German, discourse topicality outweighs inherent topicality in determining the pragmatic peak.

But before doing that, we point out here a basic rule that consistently identifies the pragmatic peak in Barai. Where the relevant role frame of a particular predicate includes an agent, the first nuclear noun phrase is the pragmatic peak. But where no agent is involved, the final nuclear noun phrase is the pragmatic peak. Our discussion explains why the fulcrum normally occurs in this position but that certain pragmatic conditions alter this preference.

2.2 Discourse Topicality

The Barai speaker may use either the article ije or one of a set of deictics with spatial parameters to encode defin-

iteness . It is important to note here that the coding of definiteness is a packaging tool at the speaker's disposal in the communicative act to assist the hearer in decoding the message (Chafe 1976). As such, it is not imperative that the speaker mark each noun phrase as either definite or indefinite. The feature of definiteness may include a neutral unmarked status as well where the speaker chooses not to encode any assumption regarding the hearer's knowledge of the referent. So the overt coding of either definiteness or indefiniteness may be reserved for those instances where the speaker feels the hearer will be able to make a better judgement about the identity of the referent if he provides him with the additional cue that he (the speaker) assumes that the hearer can identify the referent (in the case of definiteness) or cannot identify the referent (in the case of indefiniteness).

To illustrate, consider the following situation. A man is sitting with some children on the verandah of his house. The man gets up and goes into the house. Moments later, as he is returning to the verandah, one of the boys says (15) where (16) would be inappropriate.

(15) e ruo
 person come

'A/The man is coming.'

(16) e ije ruo
 person def come

The man is coming.'

Clearly the speaker would assume that his hearers would know the identity of the referent he had in mind, but encoding that fact in this situational context would be entirely superfluous. There is no need for the speaker to assist the hearer in identifying the referent.

If, however, two speakers have been discussing a third person who subsequently appears in the peripheral vision of one of them, he would likely use (16) rather than (15) to encode the situation that the man in question is approaching. The overt coding of definiteness, in this instance, is an important cue from the speaker that is intended to assist the hearer in identifying the referent.

The coding of indefiniteness follows a similar principle. The speaker will only use an overt marker for indefiniteness when he feels that, by making his assumption that the hearer cannot identify the referent overt, he will assist the hearer in correctly interpreting the message.

There are two means by which the indefiniteness of a noun phrase may be marked in Barai. The article be which is phonologically independent, carrying its own pitch/stress, encodes a specific indefinite referent, that is, one that the speaker has in mind but assumes the hearer cannot identify. The other is a phonologically bound clitic -be which does not carry any independent pitch/stress. The bound clitic encodes a nonspecific indefinite referent, i.e., one where the speaker is encoding the fact that he cannot identify the referent in

prior position. This position is marked by the grammatical devices of the split ergative type system which we outlined in Chapter I. Thus the role disambiguating devices of the split ergative type system also identify the pragmatic peak of the clause. Other things being equal, the fulcrum will be the pragmatic peak of the clause. But features of both discourse and inherent topicality can and do override that preference to insure that the pragmatically most salient of the nuclear participants is marked as the pragmatic peak.

- (19) e ije fu-ka ame ije kan-ia
 mān def 3sg-intens child def hit-3pl

'The man really hit the children.'

- (20) *ame ije bu-ka e ije kan-ia

- (21) e be fu-ka ame ije kan-ia
 man indef/spec 3sg-intens child def hit-3pl

'A certain man really hit the children.'

- (22) *ame ije bu-ka e be kan-ia

- (23) ame ije bu-ka e-be kan-ia
 child def 3pl-intens person-indef/nonspec hit-3pl

'Someone really hit the children.'

- (24) *e-be fu-ka ame ije kan-ia

Again, an actor that is a responsible agent is shifted out of the pragmatic peak position because of its weak pragmatic status. An indefinite/nonspecific actor is outranked in terms of pragmatic salience by an indefinite/specific nonactor.

And a noun phrase that is unmarked in terms of definiteness or specificity will be outranked by a noun phrase marked either as definite or indefinite/specific.

(28) are ije ine kan-a
 house def tree hit/strike-3sg
 'A/The tree struck the house.'

(29) are be ine kan-a
 house indef/spec tree hit/strike-3sg
 'A/The tree struck a certain house.'

In both (28) and (29), the nonactor nuclear noun phrase outranks the actor noun phrase. These facts lead us to posit the following hierarchy for the salience of noun phrases in terms of discourse topicality.

(30) Discourse Topicality Hierarchy:
 definite > indefinite/specific > unmarked > indefinite/nonspecific

Among the nuclear noun phrases of the clause, unless they are of comparable status in terms of discourse topicality, the

noun phrase with higher status on the hierarchy will assume the position of the pragmatic peak. Should the nuclear noun phrases be of comparable status in terms of discourse topicality, role determines word order (although there may still be further interference from inherent topicality as will be discussed below).

It is not only the definiteness parameter of discourse topicality that is reflected in the organization of the Barai clause. The distinction between given and new information is also relevant both morphologically and syntactically. The reader will recall that the marking of new information expresses the assumption on the part of the speaker that the referent is just being activated in the hearer's consciousness, that is, that he was not thinking about it at the time of the utterance. Only definite new information gets distinctive overt marking in Barai. This may be a consequence of the fact that indefinite referents are normally new information in any event and in Barai take the overt marker -be. Clearly, if the speaker assumes the hearer cannot identify a referent (definiteness), he is hardly likely to assume that he is thinking about that referent (givenness). Definite referents, however, may certainly be either given or new. This is the one instance in Barai where nuclear noun phrases take case markers directly on the noun phrase itself. These markers encode both role and pragmatic information. We discussed their role function above in the previous chapter showing how

they function along with the other role disambiguating devices of the uniformly accusative type system. It is their pragmatic function that is of interest to us here, however.

Definite new information is frequently marked on noun phrases with commonly known referents that are being newly introduced in the discourse. This typically occurs in the first sentence of a familiar legend.

(31) ino viegi ij-iebe rigi oe
 pair cousin def-new(pl) bird.trap set

'The pair of cousins were setting bird traps.'

(32) eove ij-are tanabae kore
 old.man def-new(sg) cucumber plant

'The old man planted cucumbers.'

The recounting of traditional legends is a familiar pastime the Barai share from infancy. As a result, it is to be expected that the speaker can assume his hearer can identify an important referent in such a legend and yet assume he was not thinking about the referent at the time. This is the case in both (31) and (32) where the actor noun phrase takes a nominative case marker for new information. Both sentences introduce traditional Barai legends.

However the coding of new information is hardly limited to the first introduction of new noun phrases. It also occurs for the reintroduction of already mentioned referents which are not in the immediate context.

Consider the following portion of a text.

- (33) bara kabaekua ij-iebe dome be
 girl teenage def-new house indef/spec

ajia-na
 go.up-conj

'The teenage girls went up (into) a certain house
 and then...'

bu ij-ia nao-eva-ga baru ije bu
 3pl def-L sleep-conj-conj man def 3pl

ari va
 descend go

'they slept there and some time later the men went
 down (from the tree)...'

- (34) bara fudiad-ia nao-e. Nao-ma-ma una
 girl fondle-3pl sleep-past. Sleep-cont do.again

va
 go

'and fondled the girls and slept. They slept there
 until they went back...'

ij-ia kari-na kuke una ajia ro
 def-L stay-conj again do.again go.up come

'and stayed there and then went back again and came
 up (into the tree) and...'

(35) ij-ia nao-eva bara ij-iebe uri baru
 def-L sleep-conj girl def-new arise man
ije man-ia-e.
 def marry-3pl-past

'Sleep there and some time later the girls arose
 and married the men.'

The teenage girls are introduced at the beginning (33) and coded for definite new information. The same referent occurs as a patient of fudiad- 'fondle' later in the same complex sentence (34) where the speaker does not mark it for new information. The same referent occurs the next time late in the following complex sentence after a sentence juncture and some nine intervening predicates where it is again coded for new information (35). Clearly, the referent in (35) is not being newly activated in the hearer's consciousness but reactivated on the grounds that the speaker assumes that the selective attention of the hearer is not still focused on the referent in question.

This is consistently the case. The referent of a noun phrase marked for definite new information does not occur in the immediate context since the whole point of coding new information is to give the hearer the additional cue that the correct referent is one the speaker assumes is not in the forefront of his consciousness, though it may well be one known to him or even one previously mentioned. Thus, the second of the two occurrences of bara 'girl' in the following

sentence is not acceptable because bara 'girl' cannot be coded for new information in a context where it has been a nuclear noun phrase in the preceding clause.

- (36) baru ije bu bara ij-ene davane
 man def 3pl girl def-new engagement.gift
vaj-ia-ga bara *ij-iebe uri baru ije
 give-3pl-diff girl def-new arise man def
man-ia-e.
 marry-3pl-past

'The men gave engagement gifts to the girls and the girls arose and married the men.'

Givenness has no distinctive marker in Barai. It is certainly an important factor in pronominalization, but it is not the case that all given information is pronominalized. Such a heavy use of pronominalization would certainly yield intolerable levels of ambiguity. Consequently the speaker must make judgements about whether to pronominalize given information or not on the basis of his predictions about resulting ambiguities. This is not specific to Barai, of course. Chafe makes the same point regarding pronominalization when he says that it...

...can be applied only to items that convey given information, but it tends not to be applied when the speaker is aware that ambiguity would result (when there are two or more given items competing equally for the same pronoun). Thus, the speaker has to monitor his speech not only with respect to what he assumes to be in the addressee's consciousness, but also with respect to the addressee's ability to interpret the referents of pronouns correctly. Speakers frequently err in both respects. (Chafe 1976:31)

But despite the fact that there is no overt marking for given information, the given/new distinction is relevant to the organization of the Barai clause since new information is treated syntactically much like indefiniteness. The basic word order of actor before nonactor is reversed whenever the unmarked choice for pragmatic topic is coded for new information and is outranked by a nonactor in terms of its pragmatic status. In (31) and (32) above, although the actor noun phrase is the unmarked choice for the pragmatic peak and is also coded for new information, no word order shift occurs because the nonactor noun phrases in both examples have such low pragmatic status. Should the nonactor noun phrase be marked for definiteness, however, that noun phrase assumes the pragmatic peak position.

- (37) are ije fu ame sikuru ij-iebe sa-e
 house def 3sg child school def-new build-past
 'The school boys built the house.'

- (38) *ame sikuru ij-iebe (bu) are ije sa-e

- (39) taraketa ije fu e faerate ij-iebe amaeri
 tractor def 3sg man pilot def-new fix
 'The pilots fixed the tractor.'

- (40) *e faerate ij-iebe ij-iebe (bu) taraketa ije
amaeri

In both (37) and (39), the actor noun phrase is marked for new information and occurs with a pragmatically salient nonactor noun phrase by virtue of its definite article, in which case the nonactor occurs in the initial pragmatic peak position and governs the person/number of the pronominal copy. As with the similar shift that eventuates with indefinite/nonspecific actors, the word order here is rigid. The opposite word order in (38) and (40) is ungrammatical.

Since Barai only marks definite/new information and it can be shown to outrank the pragmatic distinctions of indefinite/specific, unmarked, and indefinite/nonspecific, we can conflate both the definiteness and the givenness aspects of discourse topicality into the following hierarchy of accessibility to the pragmatic peak.

(41) Discourse Topicality Hierarchy:

definite > def/new > indef/specific > unmarked > indef/nonspec/new

The first sentence in (33), repeated here as (42), demonstrates that the status definite/new outranks indefinite/specific.

(42) bara kabaekua ij-iebe dome be ajia
 girl teenage def-new house indef/spec ascend

'The teenage girls went up into a certain house.'

(43) *dome be (fu) bara kabaekua ij-iebe ajia

So the actor noun phrase which is the unmarked choice for the pragmatic peak with this predicate is still more pragmatically salient than the indefinite/specific nonactor, despite its being marked for new information. We demonstrated in (31) and (32) above that definite/new outranks unmarked. And of course noun phrases marked for definite/new outrank those marked for indefinite/specific although they encode new information as well. This discourse topicality hierarchy then predicts the accessibility of nuclear noun phrases to the pragmatic peak position by virtue of their pragmatic salience in terms of givenness and definiteness.

2.3 Inherent Topicality

However, the pragmatic structure of the clause is not limited to encoding discourse topicality, but reflects inherent topicality as well. It will be recalled that the proposed universal hierarchy for inherent topicality places animate referents over inanimates in terms of pragmatic salience so that animates may be subject to preferred treatment. There is evidence from Barai that suggests this distinction is relevant to the organization of the Barai clause as well. Let us consider first of all the pronominal system. There are two forms for third person singular referents. One form fu is used with both animate and inanimate referents when they are the pragmatic peak of the clause, that is, when the referent is pragmatically

the most salient noun phrase of the clause. Elsewhere, fu is only used with animate referents and an alternate form, ije, the same form as the definite article, is used for inanimate referents. This illustrates the preferential treatment given animate referents. They are identified with pragmatic salience in a way that inanimate referents are not. We illustrate with the following examples:

(44) fu-ka ije sa-e
 3sg-intens 3sg build-past
 'He really built it.'

(45) *fu-ka fu sa-e

(46) *ije-ka fu sa-e

(47) fu-ka e ij-iebe sa-e
 3sg-intens man def-new build-past
 'The men really built it.'

(48) *ije-ka e ij-iebe sa-e

(49) ije na-ka visi-nam-ie
 3sg lsg-intens sicken-V-lsg
 'It really sickened me.'

(50) *fu na-ka visi-nam-ie

- (51) na fu-ka visi-nam-ie
 lsg 3sg-intens sicken-V-lsg
 'It really sickened me.'

- (52) *na ije-ka visi-nam-ie

Both forms are used in (44). The referent in the initial pragmatic peak position is animate and realized with fu while the other nuclear noun phrase is inanimate and realized with ije. Reversing the order for either form is ungrammatical. In (47), again there is a referent that is third singular inanimate, but this time that referent is realized with fu rather than ije as it is in the pragmatic peak position. This is because the actor noun phrase which is the unmarked choice for the pragmatic peak position is marked for new information triggering the rearrangement because of its lower pragmatic salience. The inanimate noun phrase, being given and definite, outranks the noun phrase marked for new information and assumes the pragmatic peak position. Note that a similar referent is pronominalized in (44) as ije but in (47) as fu. There is no semantic conditioning involved. The variation is entirely governed by variables of discourse topicality.

In (49) and (51) the situation is reversed since the pragmatic peak occurs in the subsequent position. This means that the actor is not in the pragmatic peak position

in (49) and, being inanimate, is realized as ije. fu is ungrammatical here. But if a rearrangement occurs² placing this same referent in the pragmatic peak position, it will be realized as fu and not ije, as in (51). We have shown that only animate referents are pronominalized as fu regardless of their relation to the pragmatic peak. Now this identity in pronominal form between animate referents and referents prominent in terms of discourse topicality suggests that animate referents are indeed pragmatically more salient than inanimate referents.

We noted earlier that inherent topicality had a role in predicate cross-referencing as well. This situation is complex in Barai since animacy, definiteness, and role all interact to determine whether a nonactor noun phrase will be cross-referenced on the predicate. But when cross-referencing does occur, it is normally the nonactor noun phrase that is cross-referenced. However, there is interference here from the speaker who has the highest position on the inherent topicality hierarchy. The speaker will be cross-referenced regardless of his semantic role as a consequence of his rank on the inherent topicality hierarchy. There is a further constraint on this phenomenon however. Such interference of the role coding function of predicate

²Recall that the patient is the fulcrum or indispensable noun phrase with predicates like visi-(nam-) 'sick' and then note that a rearrangement has occurred here even though that patient is both definite and given. Motivation for this kind of rearrangement is discussed below in 2.4.

cross-referencing applies only to actors that are not responsible agents. The following examples with the predicate ma-(d-) 'please' [(F),P] demonstrate this.

(53) a bu-ka ma-d-ia
 2sg 3pl-intens happy-V-3pl
 'You certainly please them (inadvertently).'

(54) *a bu-ka ma-d-a
 2sg

(55) a na-ka ma-d-ie
 2sg 1sg-intens happy-V-1sg
 'You certainly please me (inadvertently).'

(56) *a na-ka ma-d-a
 2sg

(57) na a-ka ma-d-ie
 1sg 2sg-intens happy-V-1sg
 'I certainly please you (inadvertently).'

(58) *na a-ka ma-d-a
 2sg

It is normally the nonactor noun phrase that is cross-referenced on the predicate, so that in (53), the third person plural nonactor noun phrase governs cross-referencing,

- (66) je-ro na n-e-g-anue
 2sg-A 1sg like-1sg-vb.class.marker-2sg
 'You like me.'
- (67) na-ro ja n-e-g-e
 1sg-A 2sg like-1sg-vb.class.marker-1sg
 'I like you.'
- (68) *na-ro ja n-a-g-e
 1sg-A 2sg like-2sg-vb.class.marker-1sg
 ['I like you.']

It is the marker immediately following the stem that is of interest to us here. In (65) and (66), where the actor is not the speaker, the nonactor noun phrase is cross-referenced. But the speaker will be so cross-referenced regardless of whether it is the actor or the nonactor noun phrase as (67) demonstrates.

The pragmatic salience of animate noun phrases is also exhibited in the hierarchy of accessibility to the fulcrum category which is the pragmatic peak wherever other things are equal. We stated in Chapter I that this hierarchy (A > anim P > anim F > other) results from the interaction of semantic role and animacy so that inherent topicality is necessarily involved. The 'other' slot of the hierarchy applies only to one place predicates, which means there are basically three different classes of multi-place predicates

if they are classified in terms of the most likely role to be the pragmatic peak. For those predicates whose role frame includes a responsible agent, that agent is most likely to be the pragmatic peak. Of course, there is a great propensity for those agents to be animate which we have amply illustrated already. However, where there is no responsible agent, if the role frame includes an animate patient, that patient will most likely be the pragmatic peak. This is the case with other predicates like those in (69) and (70) whose role frame includes an optional force and an indispensable patient participant.

- (69) ije na-ka visi-nam-ie 'It really sickens me.'
ije/fu na-ka ise-d-ie 'It/He really displeases me.'
ije/fu na-ka oefia-d-ie 'It/He really saddens me.'
- (70) ije/fu na-ka tot-ie 'It/He really escapes my memory.'
ije/fu na-ka riez-ie 'It/He really attracts me.'
ije/fu na-ka vieraf-ie 'It/He really creates longing in me.'

With predicates like these, the nonactor patient noun phrase is always animate and will be the pragmatic peak, other things being equal. These we have also discussed in some detail.

However, the third class of predicates we have reserved for discussion here. These predicates typically take neither an agent nor an animate patient. Rather, their nuclear participants are typically an indispensable inanimate patient and an optional animate force participant. This force participant is again an initiator, but one devoid of responsibility.

(71) sea ije na-ka tua
 chair def lsg-intens break
 P F

'I really broke the chair (inadvertently).'

(72) *na sea ije fu-ka tua
 lsg chair def 3sg-intens break
 F P

(73) sea ije fu-ka tua
 chair def 3sg-intens break
 P

'The chair really broke.'

(74) *na-ka tua
 lsg-intens break
 F

(75) do ije na-ka usiae
 water def lsg-intens spill
 P F

'I really spilled the water (inadvertently).'

(76) *na do ije fu-ka usiae
 lsg water def 3sg-intens spill
 F P

(77) do ije fu-ka usiae
 water def 3sg-intens spill
 P

'The water really spilled.'

(78) *na-ka usiae
 lsg-intens spill
 F

Clearly the patient is the indispensable noun phrase and as such must be the fulcrum and yet whenever the force participant occurs it assumes the pragmatic peak position. This is because the inherent topicality of the animate force participant is more pragmatically salient than the inanimate patient. Consequently, it is outranked for access to the pragmatic peak position despite its indispensability.

Notice that the constraints on animacy here are just the reverse of those with the predicates in (69) and (70) although the role frame for both sets is [(F),P]. In both

cases, however, it is the necessarily animate participant that is the fulcrum and hence most likely to be the pragmatic peak.

Since the pragmatic peak for predicates with no responsible agent is always in the subsequent nuclear position we have a situation with these predicates where, other things being equal, the basic word order is nonactor, actor, predicate or OSV. This is clearly a departure from the SOV basic word order with the other major classes of predicates. But the exceptional behaviour of these predicates is clearly a consequence of the interaction of inherent topicality and semantic role in determining access to the fulcrum and hence to the pragmatic peak.

It is still the case however that the nuclear noun phrase most salient in terms of discourse topicality will override any other constraints on word order and assume the pragmatic peak position. This was the case with (37) and (39) above, which we repeat here as (79) and (80).

(79) are ije fu ame sikuru ij-iebe sa-e
 house def 3sg child school def-new build-past
 'The school boys built the house.'

(80) taraketa ije fu e faerate ij-iebe amaeri-i
 tractor def 3sg man pilot def-new fix-past
 'The pilots fixed the tractor.'

In both (79) and (80), the semantically based constraint on word order fails. The actor noun phrase follows the non-actor. And the constraint based on inherent topicality fails in both as well. The animate actor does not occur in the initial pragmatic peak position. Rather, an inanimate non-actor noun phrase assumes the pragmatic peak position by virtue of its discourse topicality alone. The inanimate nonactor noun phrase is marked for definiteness and so outranks the animate actor which is marked for new information so that discourse topicality overrides both the semantic based roles and inherent topicality for the control of word order. We may then posit a pragmatic peak accessibility hierarchy for Barai which orders the three intersecting parameters of pragmatic peak selection.

- (81) Pragmatic Peak Accessibility Hierarchy:
 discourse topicality > inherent topicality > role

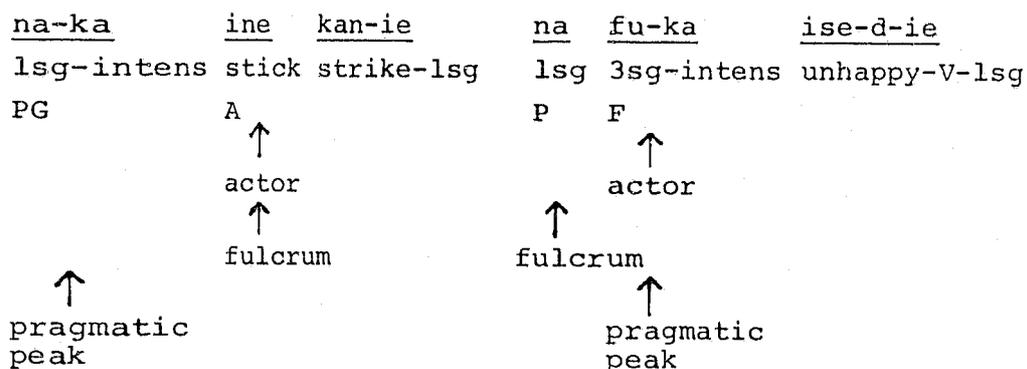
2.4 Marking the Peak

In our discussion of the split ergative type system of role disambiguating devices in Chapter I, we referred to three such devices that function together to identify the fulcrum of the clause, other things being equal. These included the distribution of mode particles, pronominal copies, and the contrastive marker -re. Now, in this

chapter, having considered these 'other things' in our discussion of pragmatic variables, can we still maintain that these devices mark the fulcrum of the clause? They immediately follow the pragmatic peak which may or may not be the fulcrum so they clearly mark the pragmatic peak. But their position relative to the other nuclear noun phrases will identify the fulcrum as well. If they occur following the initial nuclear noun phrase, the fulcrum will be the actor. But if they occur following the final nuclear noun phrase, the fulcrum will be the nonactor. So the one set of grammatical devices identify both the fulcrum and the pragmatic peak although the two may in fact be distinct noun phrases.

In distinguishing the two it is important to remember that the fulcrum is the indispensable noun phrase and that it is predictable from the relevant role frame associated with its predicate. The pragmatic peak on the other hand is not predictable from the relevant role frame associated with its predicate, but is sensitive to various pragmatic variables. We have now isolated three categories of Barai grammar which must be carefully distinguished: actor, fulcrum, and pragmatic peak. They each have their own function and identifying features, but in a given clause, two or even all three of them may conflate on a given noun phrase. Compare the two different patterns of overlap in (82) below.

(82)



'A tree really struck me.' 'It really displeased me.'

In (82) with kan- 'strike', the agent is both actor and fulcrum and the patient-goal is the pragmatic peak. But with ise-(d-) 'unhappy' the force participant is actor and pragmatic peak while the patient is the fulcrum. There is no necessary identity between any two of the three categories.

We stated in Chapter I that the primary function of the pronominal copy would be discussed under the coding of pragmatic information. We include that here as the pronominal copy is probably the most common of the grammatical devices that mark the pragmatic peak.

The primary function of the pronominal copy is to identify a noun phrase prominent in terms of discourse topicality. As such it is not sensitive to either role or inherent topicality but occurs only with noun phrases relatively high on the discourse topicality hierarchy. It will occur following those pragmatic peaks that are either

definite, definite/new, or indefinite/specific but will not occur with pragmatic peaks that are either unmarked or indefinite/nonspecific.

(83) e ije fu ruo
man def 3sg come

'The man is coming.'

(84) e ij-are fu ruo
man def-new 3sg come

'The man is coming.'

(85) e be fu ruo
man indef/spec 3sg come

'A certain man is coming.'

(86) *e fu ruo
man 3sg come

(87) *e-be fu ruo
man-indef/nonspec 3sg come

A pragmatic peak marked for definiteness (83) will take a pronominal copy as will a pragmatic peak marked for definite/new information. However, with multi-place predicates, a noun phrase marked for definite/new information is normally shifted out of the pragmatic peak position and

cannot then take a pronominal copy. But with a one place predicate, even a noun phrase marked for definite/new information will take a pronominal copy as in (84). Indefinite/specific noun phrases as pragmatic peaks will also take a pronominal copy (85). But the distribution of the pronominal copy terminates at this point on the hierarchy. Unmarked noun phrases (86) and noun phrases marked for indefinite/nonspecific (87) will not take a pronominal copy despite their pragmatic peak status. The pragmatic function of the pronominal copy is to mark only the more highly salient pragmatic peaks at the higher ranges of the discourse topicality hierarchy.

Pronominal copies only occur with full noun phrases, of course, but there is a related phenomenon with the same distribution that applies to pronouns as well, one which we will refer to as pronominal reiteration. The pragmatic peak and only that noun phrase may be reiterated. It typically occurs in clauses that contain peripheral noun phrases in addition to their nuclear ones.

(88) no oe nuvuo-one ij-ia no a
 lpl gall.bladder lpl-poss def-L lpl 2sg
vierafe-ve
 think-perfect

'We have been thinking about you in our hearts.'

- (89) no dua a no tot-uo-mo
 lpl also 2sg lpl escape.memory-lpl-pres/hab
 'You escape our memory too.'

In (88) it is the actor noun phrase that is reiterated and in (89) it is the nonactor noun phrase that is reiterated. Both are the pragmatic peaks for their respective clauses. And like pronominal copies, reiterated pronouns occur with noun phrases relatively high on the discourse topicality hierarchy, but not with unmarked or indefinite/nonspecific noun phrases. Both the pronominal copy and reiteration have a pragmatic function although neither is a necessary or sufficient condition for identifying the pragmatic peak.

Foley and VanValin (to appear) suggest that the best diagnostic for pragmatic structure is the control of zero anaphora across clause boundaries. There are a variety of clause junctures in Barai and we will elaborate in Chapter IV on how the control of zero anaphora varies with the kind of juncture involved. Nonetheless, we can quite readily establish here that zero anaphora is controlled by pragmatic peaks, at least at certain kinds of clause junctures. We will consider the following examples.

- (90) e ije fu-ka na kan-ie-na \emptyset va
 man def 3sg-intens lsg hit-lsg-conj go
 'The man really hit me and then he left.'

(91) *e ije fu-ka na kan-ie-na fu va
 ['The man really hit me and then he left.']

(92) e ije fu-ka na kan-ie-mo na va
 man def 3sg-intens lsg hit-lsg-conj lsg go
 'The man really hit me and then I left.'

(93) *e ije fu-ka na kan-ie-na \emptyset va
 ['The man really hit me and then I left.']

The conjunctive particle used along with zero anaphora in (91) is different from that used in (92) where no zero anaphora obtains. In (90), the actor noun phrase in the pragmatic peak position is marked by the pronominal copy and mode particle. The pronominal copy is coreferential with the sole nuclear noun phrase in the subsequent clause and zero anaphora obtains. In fact, it is obligatory since the insertion of the pronoun is ungrammatical. And in (92) where that initial actor is not coreferential with the sole nuclear noun phrase in the subsequent clause, there is no zero anaphora. The other nuclear noun phrase of the initial clause is coreferential with the sole nuclear noun phrase of the subsequent clause but zero anaphora and the use of the -na conjunctive particle are blocked. However, whenever a nonactor is promoted to the pragmatic peak position, zero anaphora will apply to the promoted nonactor.

(94) na-ka e-be kan-ie-na \emptyset va
 lsg-intens man-indef hit-lsg-conj go

'Someone really hit me and then I left.'

(95) *na-ka e-be kan-ie-na na va
 ['Someone really hit me and then I left.']

(96) na-ka e-be kan-ie-mo fu va
 lsg-intens man-indef hit-lsg-conj 3sg go

'Someone really hit me and then he left.'

(97) *na-ka e-be kan-ie-na \emptyset va
 ['Someone really hit me and then he left.']

Now zero anaphora and the use of the -na conjunctive particle apply to the promoted nonactor (94). And in (96) where the actor is in fact coreferential with the sole nuclear noun phrase in the subsequent clause, zero anaphora and the use of the -na conjunctive particle are still blocked. Clearly it is pragmatic peaks that govern zero anaphora at these clause junctures rather than actors.

Now if the function of the passive construction relates to discourse cohesion (Dixon 1979, VanValin 1977, 1978) and these rearrangements in Barai can be traced to discourse topicality, how do these rearrangements compare with passive (and/or antipassive) constructions? It is not our purpose here to try and establish universal criteria for passive and

antipassive constructions, but it is important, in distinguishing between different rearrangement patterns in Barai, to see how they differ relative to some of the more standard passive and antipassive constructions.

Perhaps the most general defining criterion for the passive construction is that (in our terms) a nonactor noun phrase displaces an actor noun phrase in terms of significant morphological or syntactic treatment. The resulting status of the 'demoted' actor and the question of transitivity however have been the subject of some debate (Langacker and Munro 1975, Keenan 1975, 1976, Perlmutter and Postal 1977).

Another significant fact noted by both Dixon and VanValin is the correlation between accusative case marking and passivization and between ergative case marking and antipassivization.

It is thus generally true (but as a conclusion, not as a premise) that passive operates in languages that are morphologically and syntactically nominative/accusative and that antipassive will be found predominantly in languages that have some measure of ergativity at the syntactic and morphological levels. (Dixon 1979:119)

These generalizations together with general agreement about the function of the passive construction relating to discourse cohesion give us a starting point for our comparisons.

In our discussion in Chapter I of the split ergative type system of grammatical devices that disambiguate the semantic roles of the nuclear participants of the clause,

the actor was given significant syntactic treatment whenever a responsible agent was involved. The result was an accusative type pattern. Then in this chapter, we have shown how a nonactor nuclear participant can be given that same syntactic treatment if it is more pragmatically salient than the actor and that this nonactor then governs the zero anaphora across certain clause junctures. In these respects, the Barai rearrangement resembles a passive construction.

But, apart from the question of whether or not the actor is really demoted, the construction still seems questionable as a passive in that the oppositions are completely predictable from the pragmatic status of the particular noun phrases involved.

This is not the case, however, with the rearrangements that occur when the relevant role frame does not include a responsible agent, i.e., where the actor is a nonresponsible force participant and the relevant grammatical devices follow an ergative type pattern. We referred to this kind of opposition earlier with (49) and (51) which we repeat here as (98) and (99).

(98) ije na-ka visi-nam-ie
 3sg lsg-intens sicken-V-lsg
 F P

'(It) really sickened me.'/'I was really sickened
 (by it).'

(99) na fu-ka visi-nam-ie
 lsg 3sg-intens sicken-V-lsg
 P F

'It really sickened me.'

The English glosses are somewhat problematic. However, the significant syntactic treatment normally associated with a nonactor (here the patient) is now associated with an actor (here the force). This significant syntactic treatment includes the distribution of mode particles which is associated with the patient in (98) but the force in (99). The rearrangement then resembles an antipassive construction if we allow that in an antipassive construction an actor displaces a nonactor in terms of significant morphological or syntactic treatment.

But where the passive-like construction was conditioned by the pragmatic status of the relevant noun phrases, this antipassive-like construction is not. Here, either arrangement may occur in apparently identical contexts, leaving the alternation up to the point of view of the speaker. This latter opposition then is much closer to the kind of voice oppositions that are familiar in English, for example.

But why should point of view oppositions only occur where no responsible agent is involved? We suggest that this difference can be attributed to a high functional load for the pragmatically based rearrangements where responsible agents are involved but a low functional load for such

rearrangements where there is no such responsible agent. This means that point of view alternations would interfere with the primary function of the former construction but not with the latter, or at least not to the same extent. There are frequent occasions where it is useful for the speaker to be nonspecific about a responsible agent so as not to accuse him. In fact this option seems to be extremely important to the Barai. So the rearrangements based on specificity are frequently invoked. But in the absence of any responsible agent, no such concern exists. Reference to nonspecific patients with these predicates is rare, leaving the construction open to use for point of view alternatives.

We have illustrated a number of morphological and syntactic devices that encode pragmatic information in Barai. Several of these function together to isolate an important category which we have called the pragmatic peak, a category distinguishable both formally and functionally from the actor and fulcrum categories we discussed in Chapter I, although all three may conflate on a single noun phrase in a particular instance.

Then we have demonstrated how, in Barai, features of discourse topicality outrank features of inherent topicality in determining the selection of the pragmatic peak. Finally we looked briefly at discourse cohesion to establish that zero anaphora is a function of pragmatic peaks rather than actors, at least at certain types of junctures. We will deal

further with the role of pragmatic peaks in interclausal relations in subsequent chapters.

CHAPTER THREE

THE CODING OF THEMATIC INFORMATION3.1 The Thematic Topic

In this chapter we shall be concerned with the strategies Barai uses to encode what we will call a thematic topic. By way of introduction to the kinds of phenomenon that will concern us, we offer the following examples taken from Li and Thompson (1976) together with one from Barai.

Lahu

- (1) he chi tê pè? ̄ dà jà
 field this one classifier rice very good
 'As for this field, the rice is very good.'

Mandarin

- (2) neī-chang huǒ xìngkui xīaofang-duì
 that-classifier fire fortunate fire-brigade
lái de kuài
 come adv particle quick
 'As for that fire, fortunately the fire brigade came quickly.'

Korean

- (3) siban-in hakkjo-ga manso
 now-topic marker school-subj.marker many

'As for the present time, there are many schools.'

Japanese

- (4) gakkoo-wa boku-ga isogasi-kat-ta
 school-topic marker I-subj.marker busy-past tense

'As for the school, I was busy.'

Barai

- (5) ire, bu erare ifej-ia
 food 3pl who help-3pl

'As for food, who is helping them?'

In each of the above, the noun phrase that concerns us assumes the initial position. In some cases, it bears a special marker. In others, it does not. But this kind of construction is typical of what we want to call thematic topicalization. In using the term topic to refer to this phenomenon, we are again faced with a morass of conflicting definitions associated with a major linguistic term. Our thematic topic is intended to parallel the topic of the familiar topic/comment distinction where the topic is taken

to be what the speaker is talking about and the comment is what he says about that topic. Grimes (1975:324) calls it the 'theme' or point of departure. Hornby calls it the 'topic'.

The part of speech which constitutes what the speaker is talking about will be called the topic...the rest of the sentence, the comment, provides new information about the topic.
(Hornby 1971:1976)

Chafe refers to the same notion as the 'subject'. He refers to the subject as 'identifying some particular as a starting point and adding to the addressees knowledge about' and notes that 'the best way to characterize the subject function is not very different from the ancient statement that the subject is what we are talking about (Chafe 1976:44). Subject, topic, and theme are all currently used for what we will identify as the thematic topic.

The more traditional term is subject. Sapir's view reflects the traditional usage. 'There must be something to talk about and something must be said about this subject of discourse once it is selected' (Sapir 1921:119). But it was Hockett who popularized the terms topic and comment.

The most general characterization of predicative constructions is suggested by the terms 'topic' and 'comment'...:The speaker announces a topic and then says something about it. Thus...

John/ran away.

That new book by Thomas Guernsey/I haven't read yet.

In English and the familiar languages of Europe, topics are usually also subjects, and comments are predicates: so in 'John/ran away'. But this identification fails sometimes in colloquial English... and more generally in some non-European languages.'
(Hockett 1958:201)

And it was Halliday who adopted the term 'theme' in an attempt to distinguish this notion from a number of other phenomena upon which it is frequently superimposed. He says 'the theme is what is being talked about, the point of departure for the clause as a message; and the speaker has within certain limits the option of selecting any element of the clause as thematic' (Halliday 1967:212). He holds that in English, the theme is assigned the initial position of the clause.

It should be clear then that this notion is not to be confused with theme in any sense of recurring themes throughout the discourse. It is far more local, being the point of departure for a fairly narrow structural unit which we will argue is between the clause and the sentence. It is not therefore inherently discourse dependent. We will give evidence from Baraj for distinguishing the discourse dependent pragmatic peak from the discourse free thematic topic in our discussion below.

First, however, we will peruse some of the criteria that have been suggested as properties of topics. These derive from a symposium held at the University of California, Santa Barbara, in March of 1975 where an effort was made 'to achieve a thorough and precise understanding of the two grammatical notions, subject and topic, against a background of empirical evidence gathered from as many linguistic areas as possible' (Li 1976:1). The results were disappointing as no universal

criteria for identifying either subject or topic eventuated. But, as we will argue here, this situation was and continues to be aggravated by a failure to distinguish pragmatic peaks from thematic topics.

We are distinguishing four significant categories in Barai grammar that may but need not conflate. There are the two categories in Chapter I that are predictable from the role frame of the predicate, the actor and the fulcrum. It is the actor together with the sole nuclear noun phrase of one place predicates that is frequently labeled the 'subject' or 'logical subject' of the clause. Then in Chapter II we distinguished from these a further category which we called the pragmatic peak. We are now attempting to distinguish the thematic topic from all of the above as a distinct category, equally important both to the organization of the clause/sentence and to interclausal relations. Barai marks this category uniquely as well.

We mention the four interacting categories here to highlight the fact that frequently they are not distinguished, so that the resulting attempts to identify the properties of topics are bound to reflect the merging of properties of a topic that is discourse oriented with one that is not. The terminological dichotomy between subject and topic is consequently inadequate.

Where three categories have been distinguished (Halliday 1970, Hornby 1971) one of the three is reserved for thematic topic in the sense we are defining it. Halliday calls it the psychological subject in contrast to the logical and grammatical subject, referring to it as the peg on which the message is hung. We have avoided the term subject altogether since it has been used in so many ways.

Li and Thompson are among those who treat the subject/topic problem as dichotomous. They provide a list of properties for distinguishing subjects from topics that is a useful heuristic for distinguishing a thematic topic from any role, prominent or pragmatically prominent noun phrases of the clause. We summarize here the properties they associate with their topic.

- a. the topic is confined to the initial position
- b. the topic need not have any selectional relation with any verb of the sentence
- c. the topic cannot be predicted from the semantics of the verb
- d. the topic cannot govern obligatory verb agreement
- e. the topic plays no role in grammatical processes such as reflexivization, passivization, equi-NP deletion, verb serialization, and imperativization.
- f. the topic is definite
- g. the topic's function appears to be to limit the applicability of the main predication to a certain restricted domain.

Li and Thompson suggest that all these properties are

common to the topic noun phrase in (1-4) above. They are largely characteristic of the Barai analogue as well. So in (5) above, as well as (6) and (7) here, the thematic topic occurs in the initial position and bears no selectional relation with the predicate.

- (6) na, bara n-one ame fari biete
 lsg woman lsg-poss child son give.birth
 'As for me, my wife gave birth to a son.'

- (7) vua o-one ije, na vua-ko
 talk 2sg-poss def lsg come-im.fut
 'As for your talk, I am about to come.'

There is no possible verb agreement with this noun phrase either, despite the fact that several types of cross-referencing occur in Barai. Recall that the actor noun phrase governs number agreement. Predicate stem suppletion is also governed by a role determined noun phrase, normally the non-actor nuclear noun phrase. And further, there are the bound pronouns governed by both semantic role and inherent topicality. There is no evidence of any verb agreement triggered by the thematic topic.

The fact that the thematic topic need not bear any selectional relation to the predicate does not imply that it can not, for it certainly may. The same construction occurs

in Barai where the thematic topic may be a noun phrase functioning in any semantic role. This then is consistent with Halliday's view above, that virtually any element of the clause may be thematic.

3.2 Topicalized Peripheral Noun Phrases

Let us consider first of all the peripheral noun phrases of the clause such as time and location. All peripheral noun phrases may take a case marker on the noun phrase itself whereas the nuclear noun phrases do not. However, if the thematic topic is simultaneously a peripheral noun phrase of the clause, that noun phrase occurs in the initial position, without any case marker. It is also followed by a pause which is common to all fronted thematic topics in Barai. This does not mean a shift in the status of the noun phrase from peripheral to nuclear, but rather is a means of marking its topicality.

- (8) ve ij-ia bu iro i
 time def-T 3pl yam eat

'At the time they were eating yams.'

- (9) bu ve ij-ia iro i
 3pl time def-T yam eat

'At the time they were eating yams.'

- (10) ve ije, bu iro i
 time def 3pl yam eat

'As for (that) time, they were eating yams.'

- (11) *bu ve ije iro i

The time noun phrase in (8) bears the case marker -ia and it occurs either initially or following the initial nuclear noun phrase as in (9). However, in (10), the time noun phrase is the thematic topic for the clause and as such, does not take a case marker. Further, word order in this instance is constrained so that the time noun phrase may only occur in the initial position. Peripheral noun phrases are elided when they are simultaneously the thematic topic. No trace is permissible within the clause.

- (12) *ve ije, bu ij-ia iro i
 time def 3pl def-T yam eat

['As for (that) time, they were then eating yams.']

- (13) *kuriae ije, fu ij-ia na sak-ie
 nettle def 3sg 3sg-I lsg sting-lsg

['As for the nettle, he stung me with it.']

- (14) *e n-one ije, no bu-efuo ire kira
 person lsg-poss def lpl 3pl-B food prepare

['As for my people, we prepared food for them.']

(12), (13), and (14) are then ungrammatical because of the pronominal trace retained within the clause for the noun phrase which is simultaneously the thematic topic.

3.3 Topicalized Nuclear Noun Phrases

Nuclear noun phrases also occur as thematic topics. Nonactor nuclear noun phrases are again fronted and followed by a pause. They are never followed by pronominal copies. In this they differ from pragmatic peaks which may be followed by such copies. If topicalization were to indiscriminately allow the thematic topic to be reiterated by a pronominal trace, a reiterated pronoun could no longer consistently identify the pragmatic peak. This grammatical device carries a fairly heavy functional load that is particularly crucial with those predicates that allow role frame options which differ in terms of whether or not they include a responsible agent.

- (15) fase ije, bara n-one fu abe
 letter def woman lsg-poss 3sg take
 'As for the letter, my wife took it.'

- (16) *fase ije, bara n-one fu ije abe

- (17) bara ije, Vito fu-te davane m-a-e
 woman def Vito 3sg-dub gift give-3sg-past

'As for the woman, Vito might have given her a gift.'

- (18) *bara ije, Vito fu-te fu davane m-a-e

In (15), fase ije is both the patient of abe and the thematic topic of the clause. As such it is fronted and followed by a pause but no pronominal trace is retained within the clause. The form fu must be the pronominal copy associated with the pragmatic peak. Were it a trace of a nonactor nuclear noun phrase not in the pragmatic peak position, it would have to be realized with ije, the form reserved for the pronominalization of inanimate referents that are not pragmatic peaks. With the three place predicate in (17) bara ije is both the goal of m- 'give' and the thematic topic. Again, a pronominal trace is blocked. Also in this case, the occurrence of the mode particle with the pronoun fu clearly indicates that its referent is the pragmatic peak, Vito, and not the thematic topic.

This means that pragmatically governed rearrangements are quite distinct constructions from those which result from thematic topicalization. This can be demonstrated by a comparison of (15) and (17) with (19) and (20) where an indefinite actor entails a pragmatic rearrangement but there

has been no overt topicalization.

- (19) fase ije fu bara-be abe
 letter def 3sg woman-indef/nonspec take

'Some woman took the letter.'

- (20) bara ije fu e-be davane m-a-e
 woman def 3sg person-indef/nonspec gift give-3sg-past

'Some person gave a/the gift to the woman.'

Now, the pronominal copy of (19) follows the nonactor noun phrase. The same applies in (20). The pronominal copy no longer occurs with the actor due to its low pragmatic salience stemming from its status as indefinite/nonspecific. Furthermore, there is no pause in (19) and (20).

The nonidentity of this construction with the pragmatically governed rearrangements is most significant here and further substantiates the important distinction between pragmatic peak and thematic topic. The fact that the fronted noun phrase is distinct from the noun phrase governing the pronominal copy is strong evidence that the thematic topic need not be coterminous with the pragmatic peak. That is to say, what the sentence is about need not be the most salient noun phrase in terms of discourse prominence. The theoretical importance of this distinction has been the subject of a long

standing disagreement.

V. Mathesius published a paper in 1939 where he conflates the two. He defines what he calls the theme as that which is known or at least obvious in the given situation and from which the speaker proceeds. He tries to look at the sentence in terms of the information it conveys and is contrasting a theme, which contributes only minimally if at all to the information the sentence is providing, with the rheme or remainder of the sentence which is held to convey new information and thus is heavy in terms of information content. Our quote from Hornby above also implies a correlation between topic/comment and given/new. Later Prague School linguists disagreed with Mathesius at this point. Firbas (1964) redefines theme so that it need not necessarily convey known information or such as can be gathered from the verbal or situational context. Halliday also denies any necessary correlation between theme and given information.

The functions 'given' and 'new' are however not the same as those of 'theme' and 'rheme'. The two are independently variable (hence the avoidance of the terms 'topic' and 'comment'). (Halliday 1967:205)

He goes on to point out, however, that in the unmarked instance, the theme is also given. Chafe agrees.

...there is no necessary correlation of subject status with givenness, or for that matter of non-subject status with newness. [Recall that Chafe's notion of subject corresponds to our thematic topic.]

There is also a special means of topicalizing agents. However, since the word order constraint already specifies that the unmarked word order places the agent as actor first among the nuclear noun phrases, fronting is vacuous as a means of marking thematic topic. Generally speaking, only a peripheral noun phrase precedes any actor (except of course under predictable pragmatic conditions which trigger a rearrangement) and even that is fairly infrequent. Since fronting is not a possibility for the topicalization of agents, it is not surprising that Barai utilizes quite a different strategy here. The particle -je (probably derived from the article ije) occurs only with responsible agents.

- (23) fu-je, fu-ka na kan-ie
 3sg-Top 3sg-intens lsg hit-lsg
 'As for him, he really hit me.'
- (24) *na-je, fu-ka na kan-ie
 ['As for me, he really hit me.']
- (25) *na-je, na-ka e-be kan-ie
 lsg-Top lsg-intens person-indef/nonspec hit-lsg
 ['As for me, someone really hit me.']

Example (23) is the only grammatical use of -je among the examples (23-25). There, the agent is also the thematic topic and occurs in the initial position, again followed by a pause. A nonactor noun phrase cannot be topicalized with the same strategy, as in (24). Example (25) demonstrates that it is in fact the agent and not the pragmatic peak position that allows the -je strategy. Notice, in addition that a pronominal trace is retained in the clause whenever topicalization applies to any pragmatic peak. In all the examples of thematic topicalization we have discussed so far, a pronominal trace has been blocked. It is used here with an agentive actor which is also the pragmatic peak.

However, the pronominal trace is not restricted to such responsible agents. It is important in other instances where fronting is not an efficient means of thematic topicalization. We refer here to those predicates whose role frame does not include a responsible agent and who consequently place the pragmatic peak in the subsequent position. These are also the predicates that undergo rearrangements for point of view. We repeat here (49) and (51) of Chapter II as (26) and (27).

(26) ije na-ka visi-nam-ie
 3sg lsg-intens sicken-V-lsg
 F P

'It really sickened me.'

(27) na fu-ka visi-nam-ie
 lsg 3sg-intens sicken-V-lsg
 P F

'It really sickened me.'

We argued earlier that (26) and (27) differ in terms of point-of-view, the speaker's point of view on the situation encoded by the predicate. But notice the functional similarity between point of view and thematic topic. We will demonstrate further in Chapter V that the thematic topic is quite distinct from point of view or any other variable of the pragmatic peak accessibility hierarchy by virtue of its scope. It is clearly an operator over a unit greater than that of the clause, while the point of view option is restricted to the internal organization of the clause, despite the functional similarity between the two.

Li and Thompson make a similar point although it is important to realize that they use the term subject here as it corresponds to our pragmatic peak rather than as a role related or 'logical' subject. They define the function of the topic as setting the framework within which the main predication holds and the subject as providing the orientation or point of view of the action, experience, or state denoted by the predicate and then argue for the distinctiveness of the two on the basis of the fact that the domain of the subject (our pragmatic peak) is internal to the clause while that of the topic (our thematic topic) is not.

This difference in the functional roles between the subject and the topic explains the fact that the subject is always an argument of the verb, while the topic need not be... The explanation runs as follows: if we are to view the action, experience, state, etc. denoted by the verb from the point of view of an entity (or orient the description towards that entity), the entity must be involved in the action, experience, or state, etc., and must therefore be an argument of the verb. Thus we see that the distinct functions of the topic and the subject turn out to explain the differences between them in definiteness and selectional relations. (Li and Thompson 1976:424)

This of course does not preclude point of view from being the most likely choice for thematic topic, a point we will take up again shortly.

We will now consider the difference in strategies associated with topicalizing these nonresponsible actors vis-à-vis responsible actors. As the difference is the clearest where the thematic topic is a pronoun, note how (29) is not acceptable despite the fact that its analogue for a predicate with a responsible actor is acceptable. We repeat (23) above, here as (28) along with (29).

(28) fu-je, fu-ka na kan-ie
3sg-Top 3sg-intens 1sg hit-1sg

'As for him, he really hit me.'

(29) *fu-je, na fu-ka visi-nam-ie
3sg-Top 1sg 3sg-intens sick-V-1sg

'As for it, it really sickened me.'

(29) is ungrammatical where -je is used with a nonresponsible actor. The -je suffix occurs only on responsible actors. The nonresponsible actors are treated very much like the nonactor nuclear noun phrases, i.e., they are simply fronted with no marker and followed by a pause.

(30) ije, na fu-ka visi-nam-ie
 3sg lsg 3sg-intens sick-V-lsg
 'As for it, it really sickened me.'

Note that the form of the pronoun used here is still ije and not fu, although fu is used for the same referent internal to the clause that has assumed the position of the pragmatic peak. This is consistent with our position that the pragmatic peak is sensitive to pragmatic variables while the thematic topic is not. However, there is an important difference between the strategy used in (15) with other nuclear noun phrases, and that of (30), that being the use of the pronominal trace. The pronominal trace is not suppressed because the thematic topic is also the pragmatic peak.

But what of the nonactor noun phrases with such predicates, the unmarked choice for pragmatic peaks where the role frame does not entail a responsible agent? If no trace occurred, fronting would be disastrous as the nonactor is the most likely choice for the pragmatic peak. It is marked by the pronominal copy and mode particles and their distribution is particularly important for those predicates which have two related role frames and differ

primarily in terms of the responsibility of the actor. If no pronominal trace was permitted within the clause, whenever thematic topicalization applied, there would be no mechanism for expressing any of the modals since they are bound to the pronouns. The means of distinguishing between the role frame with a responsible agent and the one without would also be considerably weakened. It is most important then that the pronominal trace is not blocked with these predicates when a nonactor pragmatic peak is topicalized.

- (31) e-rafa fu-one, a bu-ka ise-d-ia
 person-pl 3sg-poss 2sg 3pl-intens unhappy-V-3pl
 'As for his people, I really displease them.'

In (31) erafa fuone is both the thematic topic and the pragmatic peak. It is fronted and a pronominal copy is retained within the clause. This pronominal copy bears the mode particle and so marks a role frame that does not include a responsible agent.

We can predict then that a pronominal trace is permissible with a topicalized nonactor when it occurs in the position of the pragmatic peak and the role frame of the predicate includes a responsible agent. This is in fact the case. Topicalizing the nonactors of (19) and (20) which are already the pragmatic peaks of their respective clauses, results in (32) and (33).

- (32) fase ije, fu bara-be abe
 letter def 3sg woman-indef/nonspec take
 'As for the letter, the woman took it.'

- (33) bara ije, fu e-be davane m-a-e
 woman def 3sg person-indef/nonspec gift give-3sg-
 past
 'As for the woman, some person gave her a/the gift.'

The linear order of the noun phrases is identical. In fact the same lexical string results. But it is clearly the case that a pronominal trace is never blocked when the thematic topic is simultaneously the pragmatic peak. This is undoubtedly the most likely choice for thematic topic in any case as we pointed out above.

It seems quite clear that the first five of Li and Thompson's properties for topics above do apply to the thematic topic of Barai. The thematic topic does occur in the initial position. It need not have any selectional relation with any predicate of the sentence, although it certainly may and often does. Nor does the thematic topic govern any obligatory predicate agreement, or predicate agreement of any kind. While we have not demonstrated that the thematic topic plays no role in grammatical processes such as reflexivization, passivization, equi-NP deletion, verb serialization, and imperativization, it clearly follows

that this is so as a consequence of the thematic topic not having any selectional relation to the predicate.

This brings us to the question of the definiteness of the thematic topic. We have argued that the thematic topic is distinct from the pragmatic peak in Barai, and have demonstrated in Chapter II how definiteness and givenness govern the choice for pragmatic peak. However, we have not established that the thematic topic need not be definite as well.

We have said that a definite noun phrase is one where the speaker encodes his assumption that the hearer can identify the referent. Barai utilizes an article to accomplish this purpose but it is very much a dynamic tool of the communicative situation, a device the speaker uses as Chafe puts it, to 'Adjust what he says to what he assumes the addressee is thinking of at the moment so that his message will be readily assimilated' (Chafe 1976:28). It is reasonable then that there need be no strict dichotomy between the status of definite and indefinite for the noun phrases of the clause. And we have shown that Barai has an unmarked status where the speaker chooses not to encode any assumption about whether or not the hearer can identify the referent. This unmarked status is frequently that of the thematic topic.

- 4) kofu sosaeti, na kosi abe-kiro
 coffee society 1sg course take-desiderative
 'As for (the) coffee society, I want to take
 (the) course.'

Here, kofu sosaeti is the thematic topic. It is not coded for definiteness and occurred in a context where there could be no possible confusion on the part of the speaker's audience in identifying the referent of kofu sosaeti, 'coffee society'. This is precisely the kind of situation where marking the referent for definiteness is of little use. However, we would assume that this is not the kind of situation Li and Thompson intend to exclude by saying the topic must be definite. The force of this constraint is more likely to be that the thematic topic must not be indefinite. And this constraint does hold for the thematic topic in Barai. It cannot be marked as indefinite. Li and Thompson clarify this as well: 'The functional role of topic as setting the framework within which the predication holds precludes the possibility of an indefinite topic.' (Li and Thompson 1976:464)

Generics may also be thematic topics. This is the case in (5) above repeated here as (35).

- (35) ire, bu erare ifej-ia
 food 3pl who help-3pl
 'As for food, who is helping them?'

So thematic topics may be definite, generic, or unspecified for definiteness, but cannot be indefinite.

Finally, Li and Thompson adopt their function of topic from Chafe (1976) noting that it appears to limit the applicability of the main predication to a certain restricted domain. Haiman contrasts this position with one that states the topic is what the speaker is talking about. He also favours a position close to Chafe concluding that the topic 'constitutes the framework which has been selected for the following discourse' (Haiman 1978:585). Our position is that there is no need to contrast the two. Surely the thematic topic can be both what the speaker is talking about and, as such, limit the applicability of the main predication to a restricted domain. Haiman suggests that if 'comments are really about the topic, it would be natural to expect that the comment part of the sentence contain some reference to the topic' and he points to the ample evidence that the left-dislocated topic of a sentence does not necessarily have a corresponding anaphor within the sentence itself. This is undoubtedly the case, but we would argue that there does not need to be a direct correspondence of referents between the comment and the topic in order for the comment to be about the topic.

We conclude then that all of Li and Thompson's properties

of topics serve to identify the thematic topic in Barai. The weakness of Li and Thompson's set of criteria is that they do not go far enough. Their criteria succeed in distinguishing the thematic topic from other kinds of subject notions, but there is no attempt to further distinguish between the thematic topic and a discourse oriented topic or pragmatic peak.

3.4 Scope of the Thematic Topic

We have suggested that one of the major distinctions between the thematic topic and the pragmatic peak has to do with scope. The pragmatic peak is internal to the clause and always functions in some role relationship with the predicate. This is not true of the thematic topic which may well be a noun phrase that does not bear any role relationship to the predicate. It is said to be an artifact of the 'sentence', generally left undefined. But for Papuan languages where what appears to be the sentence is very often a complex clause chain of considerable length, the domain of the topic demands closer scrutiny. This is because new topics may be introduced within these chains, and if the domain of the thematic topic is the 'sentence' or even some quasi-sentence unit, we ought to be able to define its boundaries. This is,

in fact, one of the major goals of Chapter IV and V, but we will point out briefly here some of the constraints on the distribution of these thematic topics. We do this to show that the scope of the thematic topic lies somewhere between the clause and the sentence or clause chain.

The most obvious example of a change of thematic topic within a sentence is at junctures marked by the basic 'co-ordinate' conjunction -ro, roughly comparable to certain uses of 'and' or 'but' in English.

- (36) na vua-ro a-je, a irere abe
 lsg come-conj 2sg-Top 2sg what do/take
 'I am coming but you, what are you doing?'

In (36) the thematic topic is 'unmarked' (see discussion below) in the first clause but a change of thematic topic occurs at the juncture marked by -ro. This points to the fact that whatever the domain of thematic topic is, there are two such units at junctures marked by -ro.

There are a number of other conjunctive linkages that permit a variation of thematic topic as well. For example, the conjunctive marker -ga also joins units with potentially distinct thematic topics.

- (37) na ae sa-ga ire, no erare ifej-uo
 lsg house build-conj food lpl who help-lpl
 'We are house-building and, as for food, who is helping us?'

Again the thematic topic is unmarked in the first clause of (37) but a new thematic topic is overtly specified in the second. -ga and -ro are then among those conjunctive linkages that permit a change of thematic topic introducing a new unit defined by the minimal scope of this thematic topic.

But there are other clause junctures that block the introduction of a new thematic topic. The minimal domain of the thematic topic then must cross certain kinds of clause junctures. With such units, the thematic topic may or may not be a participant of one of the clauses.

- (38) kofu sosaeti ije, na Devidi ku-a fu
 coffee society def lsg David speak-3sg 3sg
samua-ke
 look.after=fut

'As for the coffee society, I spoke to David and he will look after it.'

- (39) *na Devidi ku-a kofu sosaeti ije, fu samua-ke
 'I spoke to David and, as for the coffee society, he will look after it.'

Both (37) and (38) topicalize a noun phrase that is a nonactor nuclear noun phrase in the second of two conjoined clauses. In (38) the clauses are joined simply by juxtaposition, a linkage that blocks any change of thematic topic. Example (39) is ungrammatical on that account.

We will be arguing then, that constraints on the distribution of the thematic topic provide important clues regarding the internal organization of the complex clause chains of Papuan languages. Clearly the domain of the thematic topic is greater than that of the clause, but it is not coterminous with full sentences either. Such clause chains potentially entail a number of topic units and the identity of these units is directly related to the nature of the juncture involved. So thematic topic, like actor, fulcrum, and pragmatic peak, is critical to interclausal relations in Barai.

3.5 Unmarked Thematic Topics

There is still a crucial problem that remains to be addressed. Once the minimal domain of the thematic topic is defined, how do we account for the fact that every such unit does not overtly mark its thematic topic, particularly since, as we have just outlined above, there are strategies for overtly marking any noun phrase as the thematic topic? A survey of text material makes it immediately obvious that the overt marking of the thematic topic has a relatively low

functional load.

For our answer, we refer again to the fact that language manifests itself in a dynamic communicative system, a system that is interactional so that the speaker is constantly making adjustments that are based on his assumptions about what the addressee is thinking at the moment of the utterance. This being the case, the speaker need not mark thematic topic just as he need not mark noun phrases for definiteness or new information unless he assumes it will be of assistance to the addressee in interpreting the message correctly. Clearly every 'sentence' must have a thematic topic in the sense we have defined it. That is, every sentence or topic unit will be about some theme, but if that theme is deemed by the speaker to be apparent to the addressee either from the linguistic context or the situational context of the utterance, the topic will be unmarked. If his assumption is that the hearer is uncertain of the theme or that he may make a wrong judgement regarding the theme, he will overtly mark the topic.

Further, it seems likely that both the considerable overlap between thematic topic and pragmatic peak and the confusion in the literature stem from the fact that there is an important relationship between the two. We have suggested that the pragmatic peak is the unmarked preference for thematic topic. This does not imply that only noun phrases that are not pragmatic peaks need be overtly marked for thematic topic.

Pragmatic salience does not constrain the speaker's choice of thematic topic. The pragmatic peak is a likely choice for thematic topic because the two share overlapping properties in moving from the known to the unknown.

In Chapter II we showed how the most likely choice for the pragmatic peak is a responsible actor. It is not merely coincidence then that the normal word order, other things being equal, is actor before nonactor nuclear participant and that, at the same time, an identifying property of thematic topics is their initial position.

We have laboured the point of distinguishing thematic topic from actor, fulcrum, and pragmatic peak because each of them effects distinctions made at clause junctures in Barai in some way. Failure to distinguish these categories obscures the internal organization of the clause and probably accounts, at least in part, for the fact that many analysts of Papuan languages propose numerous apparently interchangeable construction types. But these apparently interchangeable construction types may indeed be constrained in terms of both form and function.

We will demonstrate in Chapter VI that this thematic topic which we have shown can be clearly marked, though it need not be, is not only important to the internal organization of clause chains in Barai but is also overtly monitored by a switch reference system as well.

CHAPTER FOUR

THE LEVELS OF JUNCTURES4.1 The Sentence

In this chapter, we will consider an alternative view to the internal structure of the clause that is crucial to interclausal relations and explicates the organization of so-called clause chains both in Barai and Papuan languages generally. In so doing it becomes important to establish what we mean by the widely presupposed notions of sentence and clause, extremely vital notions that still seem to evade definition. We will aim to establish whether the clause chains typical of Papuan languages fall within the domain of the most widely accepted criteria for sentencehood. And we will clarify the obfuscation around the notion clause by explicating its levels of internal structure, levels that are reflected both in case marking strategies and in the kinds of junctures possible between clauses and clause-like units.

Bloomfield talks about the sentence in terms of 'independent linguistic form'. An utterance is a sentence when it is 'not by any meaningful conventional grammatical arrangement united into a larger form' (Bloomfield 1934:170). Allerton suggests that what Bloomfield intends is that this

structural independence is its 'freedom of occurrence relative to its neighbors (if any)...the capacity of the form to occur in isolation, i.e., to form a complete utterance' (Allerton 1969:30).

Either rendering has its problems. The fact is, of course, that no linguistic forms do occur in isolation. There is always a linguistic or nonlinguistic context and even the form of units we traditionally render as sentences in Indo-European languages often exhibit tell-tale signs of dependency. We need only consider sentential conjunctions such as but and therefore to establish that such structural as well as semantic dependencies exist between even the most widely accepted form of sentences. Then there is conversation, advertising, two-way radio communication, and other specialized varieties of communication, all of which exhibit important grammatical dependencies that make defining the sentence difficult in terms of 'independent linguistic form'.

It is clear however, that the intent of this kind of a rendering for the notion sentence is to give 'grammatical' substance to strings that include any clause junctures that may be incorporated under a 'sentential' intonation contour. Such sentential intonation contours are widely recognized. For example, Lyons directly states that...

...a particular utterance token may...be clearly identifiable as a text-sentence by virtue of its having superimposed upon the string of forms of which it is in part composed, a particular kind of sentential intonation contour. (Lyons 1977:626)

The phonological features of such contours are certainly language specific but universally, clauses are linked together in strings over which some such intonation contour is superimposed. This is undoubtedly the most widely accepted criterion for sentencehood. A great variety of clausal junctures do occur within the bounds of such sentential intonation contours including the most semantically neutral forms of coordination and even juxtaposition.

- (1) I am going overseas and what will you do?
- (2) I am going overseas. And what will you do?
- (3) The men played; the women didn't.

Example (1) constitutes a sentence with an internal juncture between two coordinated 'clauses', as the entire utterance takes a single sentential intonation contour. The same applies to (3) where the linkage is simply juxtaposition as opposed to any overt conjunction. But (2) is a sequence of sentences by virtue of the fact that two sentential intonation contours are involved. Written English generally captures these distinctions with orthographic devices so that while the lexical strings and grammatical form of (1) and (2) are identical, differences in punctuation and capitalization reflect the contrast in intonation patterns.

By the way of contrast, Sapir adopts a position in his Language where he falls back on the old logical definition of the sentence as 'the linguistic expression of a proposition'. It combines a subject of discourse with a statement regarding this subject, a position that is reminiscent of the topic/comment distinction we discussed under thematic topicalization. So our example (1) would presumably constitute two sentences under his definition of sentence.

'Coordinate sentences' like I shall remain but you may go may only doubtfully be considered as truly unified predications, as true sentences. They are sentences in a stylistic sense rather than from the strictly formal linguistic standpoint. (Sapir 1921:36,fn7)

From this point of view the intonation contour superimposed over such junctures is considered relatively superficial. However, once we consider the clause chains of many Papuan languages, it is clear that the unit defined by such sentential intonation patterns may carry with it significant grammatical reflexes that are clearly formal linguistic structure as opposed to 'stylistics'. The most general of these are the final predicate and the initial recapitulated clause.

'Coordinated' structures such as that in (1) above and the one given by Sapir, commonly involved predicates of equal rank in Indo-European languages and perhaps in the majority of the world's languages. However, one of the distinctive features of Papuan languages is that the final

predicate in a chain marked by a 'sentential' intonation contour is structurally distinct from any other predicate in the chain. Typically, a final predicate will have unique tense/aspect markers not common to the nonfinal predicates of the sentence. They may cross-reference some nuclear noun phrase in a way that nonfinal predicates do not. Or they may lack switch-reference markers indicating the person and number of a prominent noun phrase in the subsequent clause, markers that are common to nonfinal predicates.

Longacre comments on this same distinction.

There is a grand structural division between the distinctive verb of the main clause which is often called the independent or final verb, and the verbs of the other clauses which are sometimes referred to as dependent or medial verbs. Consequently, in languages which have only this structure, if we want to express something in the order of 'I went downtown and Mary stayed home', we have to choose one of these clauses for distinctive treatment with a distinctive verb form and put the other clause into a quite different grammatical mold with a different sort of verb. (Longacre 1972:2)

The second striking feature of these clause chains has to do with the initial clause of the chain. It is frequently the case that lexically this clause is merely a recapitulation of the final clause of the previous chain but never amplifies it with additional constituents. The predicate does not take the distinctive properties of final predicates but is treated like the 'medial' predicates typical of junctures within the chain. The status of this initial

clause is unique in that it bears no new information. It functions together with the distinctive predicate at the end of the chain to mark the boundaries of the same string over which the 'sentential' intonation contour is superimposed.

So the contrast between these two views of the sentence points to a question of the organization of the discourse which concerns not only the relevance of intonation patterns, but also grammatical distinctions as important as the form of the predicate. The Bloomfieldian view of the sentence would see the Papuan clause chains with their recapitulated introductory clause, their medial and final predicates, and their unifying intonational pattern as a single sentence. However, the Sapirist's view of the sentence would allow sentence boundaries internal to the clause chains, presumably at junctures that permit a change of 'subject'. And in fact, another important distinctive feature of these chains in Papuan languages is their overt marking of different 'subjects' at points internal to the clause chains.

The following pair of sentences is taken from Kewa (Franklin 1971:104 and 108).

(4) ni reko-a agaa la-lo
 lsg stand-same talk say-lsg+asp

'I stood up and am speaking.'

- (5) ni reka-na agaa la-a
 lsg stand-diff talk say-3sg+asp
 'I stood up and he talked.'

In both (4) and (5), the linkage between reko 'stand' and the following clause marks whether the subject noun phrase in the following clause is the same referent or a different referent as the subject in the prior clause. It is important to bear in mind that not every nonfinal predicate exhibits such a 'switch-reference' marker. In actual texts, change of 'subject' markers occur sporadically throughout a complex sentence, though not at every clause juncture. We will discuss these switch-reference markers in some detail in Chapter VI, but note here the fact that many Papuan languages mark changes of 'subject' at points internal to the unit identified by the 'sentential' intonation contour. On the basis of such switch-reference markers, Longacre adopts a multi-sentential view of clause chains in his treatment of Fore, a Papuan language. To facilitate our discussion here, we will consider a typical Fore clause chain. The important fact for our consideration relates to the marking of same and different 'subjects'. Longacre explains.

In the same subject chains, Fore has three important suffixes (and their shortened variants in stripped down verbs) which are the following: -gi 'process, actions associated very closely with each other'; -tegi 'simultaneity'; -magi 'sequence'.

On the other hand, different subject sequences are marked by twenty seven portmanteau inflectional suffixes which do not distinguish the above categories but rather mark tense, person, and number; these are referred to as -oga class suffixes...there is still another suffix...the suffix -nta which occurs in same subject strings but which is nonspecific as to any of the three categories mentioned. (Longacre 1972:27-30)

And then he suggests that the -nta suffix functions to mark sentence boundaries where no change of 'subject' eventuates.

- (6) a. agasiya yabu yuganamakana puma?ma
 an extreme sugar garden he did and
mintogana
 did and was there,
- b. ka yagarama, kotupisa awanama taru
 one man, and out of the lake two tusks
umaba
 was there and
- c. pabitu agasiya puma awa e'ernataga
 wait extremely it did and being with the very
karinamampa
 long tusks
- d. imagina, pi ntabu yugaba kagisa
 came up and at the fence edge of that
awamore
 sugar garden

- e. asu mintana, warana pe,
it came up and was there, and fall down
yogana
it said, and
- f. pabigo kagisaba warara pawaogana
completely the fence fell down flat, and
pabigo
completely
- g. yabuba asu maema asu
the sugarcane it went up and took and up and
maema
took and
- h. asu maemutantana pabigo maegina,
up and took, and completely it took, and
kotupintiya
into the lake
- i. momo puma momo pumutategina
down down it did and down down it did and
pigo
alright
- j. to tumigaintana, ituru pe,
again it went down completely, and stand up,
yogana
it said,

k. ituru puwaewantiye, iye
and (the fence) all stood up, so they say.

'He made a very large sugarcane field and was there-that man. Then out of the lake came up a being with two tusks; this being with the very long tusks acted very ruthlessly as it came up and took its stand at the edge of the sugarcane field. 'Fall down', it said and the fence fell flat. So the monster went up and kept taking and taking the sugarcane. He took all of it and carried it away trip by trip down into the lake. Then, 'Stand up', it said, and the fence stood up again, so they say.'

The suggestion, then, is that this Fore clause chain contains seven internal boundaries, some marked with -nta- when the same 'subject' is retained over the following clause, and others marked with -oga- where the referent changes. The structure of the final predicate is unique in that only it may take the mood suffix -e, for 'indicative', although two such final predicates close this particular clause chain. The entire unit takes the 'sentential' intonation contour that terminates with the final predicates.

Longacre analyzes this clause chain as a paragraph with each of the -oga and -nta markers encoding sentence boundaries, although he is quick to point out that such an analysis gives the paragraph a lot more formal closure than occurs in Indo-European languages at least, and a lot less closure for the sentence. He comments further in a footnote on this use of sentence and paragraph:

Much useless breath (not to speak of pen and ink) can be squandered here on whether the terms

'paragraph' and 'sentence' are legitimately used in this section. My point of view divested of such terms is this: (1) There are languages where medial-final chains encode sizeable discourse-level chunks; (2) in these same languages there are devices which break up such chains into subchains; (3) these units--chains and subchains--are relevant to the structure of discourse in these languages. That I equate (1) with paragraph and (2) with sentence is based on a theory of language universals in which the paragraph and the sentence figure as frequently encountered units of surface structure organization. (Longacre 1972:50)

This identity between a structural level of paragraph and the clause chains of Papuan languages has not received much support. And yet it is most certainly the case that the overt structures associated with these clause chains are distinctive and to some degree unlike traditional 'sentence' structures. Still, we will argue that functionally, the kinds of junctures that occur within these chains are not uncommon cross-linguistically, even in English. This means that although these clause chains capitalize on certain types of juncture in a way that many more familiar languages do not, we are talking about the same sort of phenomenon in both instances. Either the unit characterized by the sentential intonation contour is the sentence in both Indo-European and Papuan languages or the unit encompassing each topic/comment within such a chain is the sentence in both Indo-European and Papuan languages.

Because of the significant grammatical as well as phonological closure that characterizes the clause chains in Papuan languages and because of the wide support for intonation as a

fundamental criterion of sentencehood, we are adopting the former position. In this study we will consider a variety of factors that are crucial to important distinctions between different kinds of juncture that may occur within such clause chains. In fact, Longacre also comes back to this position in a later publication where he talks about clause chaining as one of two typologically contrastive sentence types.

Sentence, it seems to me, is pre-eminently the level of clause combination, i.e., predications combined into propositions. As such we can distinguish among the languages of the world two main models of sentence structure...the two models may occur side by side in the same language or a given language may exclusively have sentences of one model. (Longacre 1976:274-5)

The first model has the following characteristics:

- (a) their nuclei contains one or more independent clauses
- (b) their peripheries contain subordinate clauses of time, condition, concession, cause, purpose and the like.

He then offers the following example.

- (7) When I stopped in, Mother was sewing, my younger brothers and sisters were watching TV, and Dad was reading.

And then he notes that the 'nucleus of this sentence contains three clauses none of which is subordinated to the other or has a predicate of subordinated rank. The entire nucleus is accompanied by a time margin expounded by a subordinate clause:

When I stopped in.' We will not digress at this point to pursue Longacre's use of terms like nucleus, subordinate, and independent, but simply point to the fact that he is contrasting the form of two important typological patterns for combining clauses into what he here calls the sentence.

The other model has sentences which permit only one predicate in the sequence with the rank of the final predicate.

A sentence such as that above would single out one verb--typically the last verb (was reading) for special treatment as a 'final' verb, and make all other verbs in the sentence a different structure which we may call the 'medial' verb. Final and medial verbs in turn determine final and medial clauses. The first link in such chains, i.e., the first clause can however be a bit specialized in function somewhat like our temporal margin in English. The implication is that both models perform the same function despite their structural differences. (Longacre 1976:274)

We conclude then that these clause chains typical of Papuan languages are sentences. They possess characteristic intonation contours that terminate with a final verb of distinctive structure. And they normally begin with a recapitulated clause from a preceding chain that conveys no new information.

This still leaves us with the question of junctures such as those marked by -nta and -oga of Fore. If their internal structure is complex in that they contain sequences of clauses bounded by junctures marked by -nta and -oga, what sort of units are these? Analysts working with these

languages have often puzzled over these junctures and a number have posited intermediate levels between the clause and the sentence to account for them. Graham Scott, in earlier work, first posited a unit he called the colon which was bounded by just these junctures, but later altered the analysis (Scott 1973:34). Healey encounters the same difficulty with Telefol and winds up positing two such levels between the clause and the sentence.

In Telefol, this area [i.e., the identification of levels above the clause] has proved a problem too, which has been solved by positing two levels intermediate between clause and sentence. These have been called the paratactic level and the dependent level. Neither of these intermediate levels exhibits the multiplicity of contrastive structures such as is found at the clause level and the sentence level. (Healey 1966:1)

Our point here is simply that the traditional distinction between the sentence and the clause is inadequate to account for the internal organization of such clause chains.

4.2 The Clause

So far we have not attempted to define the clause. The notion clause is presupposed in the literature to an ever greater degree than the notion 'sentence'. In general terms, it is used to refer to a predicate and its accompanying noun phrases. However, when we approach the less clearly defined areas of construction with multiple predicates, two approaches to the notion 'clause' emerge. The first of these approaches

sees the subject/predicate dichotomy as fundamental to the identity of the clause. The second focuses on the predicate as the fundamental core of the clause, so that a sequence of predicates constitutes a sequence of clauses.

Introductory linguistic textbooks generally define the clause in terms of both subject and predicate. This is Pearson's (1977) approach, for example, where both subject and predicate are essential to his concept of the clause. This is probably the most common interpretation for the clause in the literature, although the point is rarely discussed in detail. For example, Grimes (1975), in discussing a practical display of the kinds of information in discourse, organizes a text by clause divisions such that (8) is treated as a single clause.

(8) If he had chosen to look back...

And yet no explicit criteria are given for identifying the clause. He implies that the clause is roughly equivalent to the proposition, which he defines as a predicate with one or more arguments. However, it becomes apparent that certain processes like his 'proposition consolidation' function to merge propositions into single complex 'clauses'.

Lyons (1977) also avoids the term, except for informal usage, and talks about 'predicative structures' instead. These predicative structures in their most basic form are

not simply the predicates but the predicate plus its nuclear noun phrases. His basic structures with illustrative examples are as follows.

(9) NP + V
The boy works (hard) (nowadays) (at school).

(10) NP + V + NP
Caroline plays the guitar (in the evening).

(11) NP + (V) + N
He is an American.

So the nuclear noun phrases are identifying characteristics of each basic predicative structure (or clause). It is not solely a question of the number of predicates involved, although again, Lyons is not addressing himself specifically to complex predicate constructions. This kind of treatment of the clause is typical of a stream of thought in the literature that would consider (8) above as a single clause.

Longacre, and indeed most analysts that have worked with Papuan languages, tend to lean the other direction. That is, predicate complexity means clausal complexity. Each predicate is the minimal expression of a clause. Longacre stresses that 'it is important to distinguish clauses which are single units of predication from sentences which are combinations of predications'. Accordingly

Longacre treats (12)-(14) below as sequences of clauses.

(12) They intend to have finished by then.

(13) They started to talk about it.

(14) We made him do it.

He explains (1972:91) that such sequences as 'intend to have finished', 'started to talk', and 'made...do' bear little resemblance to the elements of the verb phrase-- especially the discontinuous latter sequence with its intrusive pronoun. He further suggests that the three sentences cited above resemble the following poorly formed pairs of clauses.

(15) They intend; they will have finished by then.

(16) They started; they talked about it.

(17) We made (forced) him; he did it.

And he concludes that (15), (16), and (17) are English merged sentences 'with phonological, grammatical, and lexical specialization'. The sentences of (12)-(14) then constitute strings of clauses. This same position is strikingly

illustrated in what has become known as the 'process sentence' in Papuan studies where completely stripped predicate stems may be concatenated, sometimes with intervening adjuncts, othertimes not. The sequence typically has the same 'subject' and 'a surface meaning of association of single-process' (Longacre 1972:22). Here each predicate is viewed as the minimal manifestation of its clause.

- (18) agekasa fu ije abe dabe usiae
 agriculture 3sg 3sg take carry arrive
m-uo-e
 give-lpl-past

'The agriculture (officer) took, carried, arrived, and gave it to us.'

The above sentence, taken from an earlier study of Barai sentence structure (Olson 1973:70), was analyzed as a process sentence by virtue of the fact that a string of related predicates are associated together as a single process. Longacre notes that such a sentence has certain peculiarities (Longacre 1972:49): (1) It has the phonological unity of a single clause while other sentence types permit internal pauses and junctures; (2) its second verb is non-finite (infinitive, gerund, or verb word) and it may have a noun in dual function (e.g. 'him' which is the object of the first clause and subject of the second as in 14); (3) severe lexical restrictions dictate the selection of the first verb in each

type of merged sentence. Even with these peculiarities, he concludes that these structures are sentences. They are combinations of clauses, but with certain special properties.

We mentioned above in our discussion of the sentence that some analysts of Papuan languages have revised the standard view of hierarchy to try to accommodate some of the unusual structural features of such clause chains. Interestingly enough, even with the additional hierarchical levels, merged sentences in most studies still constitute a sequence of 'clauses'. Thus, Healey's (1966) levels of clause (paratactic, dependent, and sentence) for Telefol still treat such predicate sequences as that in (18) as sequences of clauses. Two of her examples are given here as (19) and (20).

- (19) kw-eeb noo kub-a'silib
 get-her go they-buried-her
 'They took her and buried her.'

- (20) u-ngkwaa kw-eeb noo kub-dii kub-kaanalale
 kill-it get-it go hang-it-up he-left-it-and
 'He killed it, took it away, and left it hanging up.'

(19) is then a sequence of three clauses and (20), a sequence of five clauses.

We present here one further view of predicate chains or merged sentences where the analyst concludes in tagmemic terms

that they are best treated as 'compound' clauses. Again, the predicate is the minimal manifestation of the clause.

In Kunimaipa there are CHAINS of non-finite clauses...followed by an independent clause the whole of which functions as a unit and which manifests sentence level tagmemes in the same manner as the clause does. The expansion possibilities are too great to allow this unit to be described as a verb phrase and in considering whether or not it could be a sentence type, it seemed unlikely that embedding could occur on such a grand scale. In every sentence base where a clause can occur this unit also occurs, and in any other tagmeme where a clause occurs, this unit also occurs. Wherever a clause embeds in another construction this unit also embeds. Although this unit is made up of a string of non-finite clauses and all clause level tagmemes can occur within these clauses, the occurrence of these tagmemes is less frequent than with other clauses, and the meaning of such clause level tagmemes often relates to more than one, and sometimes all, of the clauses in the unit.

The setting up of another level between clause and sentence has also been considered. This would have simplified the grammatical description but such a level would not demonstrate any of the complexity found on the grammatical levels of Kunimaipa and for this reason has not been followed. Since this unit acts on higher levels and in all other constructions like a clause and because it is a closely linked unit, it is described here as a compound clause. (Geary 1977:78)

Geary with Kunimaipa struggles with the same problem that faced Scott with Fore, and Nealey with Telefol. The traditional notions of clause and sentence, diffuse as they are, fail to capture the structure of these languages no matter which of their more general interpretations we adopt. As a result each has found it necessary to introduce new structure.

We will argue from a close look at Barai that the confusion surrounding the internal organization of such chains stems from a limited view of the internal structure of the clause itself and the variety of juncture possibilities that substantiate that structure. We will also demonstrate that internal structure is 'layered' yielding a range of internal levels where juncture may obtain at any level.

4.3 Serialization

We begin our discussion by considering an important phenomenon related to Papuan clause chaining that has become known as the serial verb construction. Serial verb constructions have received considerable attention in literature on African languages, particularly of the Kwa family, and various Sino-Tibetan languages. We offer here examples from Mandarin, Akan, Yoruba, and Barai to illustrate the kind of phenomenon to which we are referring.

Mandarin (Li and Thompson 1973):

- (22) Zhāng-sān qí jiǎotāchē zǒu le
 Zhangsan ride bike leave aspect

'Zhangsan left riding his bike.'

Akan (Schachter 1974):

- (23) Kofi kɔɔe baae
 Kofi came went

'Kofi went and came back.'

Yoruba (Stahlke 1970):

(24) mò ń mú ìwé bò
 1sg prog take book come

'I am bringing a book.'

Barai:

(25) fu va bara abe mesiri una rua-ke
 3sg go woman get take do.again come-fut

'He will go, get a wife, take her, and return.'

4.3.1 Loose Serialization

Typically, the identifying characteristics of serial verb constructions of this kind are said to be that the reduced clauses are simply juxtaposed without any conjunctive elements, that the actor noun phrase occurs only once prior to all the predicates, that each predicate optionally takes other noun phrases as complements, and that there must be an identity of tense/aspect over the entire string.

So in each example from the four languages above, the conjoined elements are simply juxtaposed with no use of conjunctive markers. There is only one possible candidate for actor in each instance and it only occurs once prior to all the predicates of the string. In Mandarin, Yoruba, and Barai, the examples give other noun phrases between the predicates of the string. And in no case is there a shift of tense/aspect between the various predicates. Mandarin

specifies tense/aspect once, at the end; Yoruba once, at the beginning. Akan allows tense/aspect to be specified on each predicate of the series but still requires an identity of tense/aspect over the series. No particular predicate may exhibit any unique tense/aspect that is not common to the series. Barai marks tense/aspect only on the final predicate of such a series.

Analyses of such serial verb constructions frequently derive them from some 'multi-sentential' source by means of conjunction reduction. Each conjunct of the series is taken to be derived from fully specified clauses that have deleted common elements like the actor and tense/aspect from all but one member. Examples (22)-(25) would then be derived from (26)-(29) respectively.

- (26) *Zhāng-sān qí le jiǎotāchē Zhāng-sān
 Zhangsan ride asp bike Zhangsan
zǒu le
 leave asp

['Zhangsan rode his bike; Zhangsan left.']

- (27) *Kofi kǎo Kofi bāo
 Kofi came Kofi left

['Kofi came; Kofi left.']

- (28) *mò ń mú ìwé mò ń bò
 lsg prog take book lsg prog come
 ['I am taking a book; I am coming.']

- (29) *fu va-ke fu bara abe-ke fu
 3sg go-fut 3sg woman get-fut 3sg
mesiri-ke fu una-ke fu rua-ke
 take-fut 3sg do.again-fut 3sg come-fut
 ['He will go; he will get a woman; he will take
 (her); he will do (it) again, he will come.']

In each case, the actor is repeated in the multi-sentential source along with any tense/aspect and then deleted where appropriate to yield the overt surface forms. Our examples here include only a minimal number of sentential constituents, but for sentences with various peripheral adjuncts, these too must be deleted for each predicate.

However, Paul Schachter in an article entitled "A Non-transformational Account of Serial Verbs" takes exception. He proposes that 'the underlying structure of serial verb constructions is in all cases essentially identical to what seems to be the surface structure; a subject noun phrase and a sequence of concatenated verb phrases' (Schachter 1974:256). He goes on to give a number of arguments to support his view of phrasal concatenation as opposed to conjunction reduction. He argues that the absence of noninitial 'subjects', the lack of any independent choice for tense/aspect, and the lack of any markers typical of conjunction between fully specified

clauses, all support phrasal concatenation. While we accept his position that serial verb constructions can and should be analyzed without recourse to conjunction reduction, his conclusion regarding phrasal concatenation does not necessarily follow from these arguments.

Consider first the constraint against any independent choice for tense/aspect. Clearly, all serial verb constructions follow this constraint. The implication then is that conjunction between fully specified clauses allows such an independent choice of tense/aspect. Very often this is the case. Junctures marked by -ro in Larai, for example, allow tense distinctions between the two conjuncts.

- (30) fu isuname va-e ro na
 3sg yesterday go-past but 1sg
- nituage va-ke
 day.after.tomorrow go-fut

But some clause junctures with overt linkage devices also constrain tense/aspect options. One of these is the conjunctive marker -na in Barai that encodes either a sequential or causal relation between the two conjuncts¹,

¹We will be using the term conjunct to refer to either of two members joined by a linking device without any implication as to the kind of juncture involved, be it coordinate, subordinate, or whatever.

depending on the particular context. The fact relevant to our discussion here however is that tense is constrained with -na just as it is with juxtaposed conjuncts in serial constructions like (25).

- (31) no ire i-na ame ruor-ia $\begin{cases} \text{-ke} \\ \text{-e} \end{cases}$
 lpl food eat-conj child wash-3pl-tns
- 'We will eat food and then wash the children.'/
 'We ate food and then washed the children.'

The predicate i 'eat' in the initial conjunct may not be marked for tense but rather takes its tense orientation from that of the final predicate. Presumably (31) could still be interpreted as verb phrase concatenation, since no 'subject' occurs in the second conjunct. Even more convincing then are conjunctive markers like -ko which encode a simultaneous relation but require different 'subjects' in the two conjuncts.

- (32) fu koe vaj-ia-ko bu dua
 3sg sugar.cane give-3pl-conj 3pl song/dance
- ua $\begin{cases} \text{-ke} \\ \text{-i} \end{cases}$
 sing/dance-tns

'We will give them sugarcane and at the same time they will dance.'/
 'We gave them sugarcane and at the same time they danced.'

With distinct 'subjects' in the two conjuncts, phrasal concatenation is simply out of the question. Still, tense is

constrained just as it is in the serial constructions. Clearly, the constraint against the independent choice of tense/aspect with the predicates in serial constructions is not convincing evidence for verb phrase concatenation.

A similar argument can be constructed to show that the absence of noninitial 'subjects' does not necessarily indicate verb phrase concatenation either. Again, it is certainly the case that serial verb constructions, at least in languages like Mandarin, Akan, and Yoruba, restrict 'subjects' from occurring more than once in the series. However, it is also the case that many languages block the occurrence of such a 'subject' noun phrase after other kinds of clause junctures if the referent of the 'subject' in the subsequent conjunct is the same referent as that of the prior conjunct. This was the case in (31) above where the conjunctive marker -na not only requires an identity between the 'subjects' of the two conjuncts but also any realization of that 'subject', even in pronominalized form in the second conjunct. This kind of zero anaphora for the 'subject' does not require that underlying structure be deleted in any formal sense. Rather, it may simply mean that the absence of a 'subject' is to be interpreted functionally as equivalent to pronominalization. Again, -na could presumably be interpreted as joining verb phrases as well. But if serial constructions could be shown to allow the realization of these 'subjects' under special circumstances, it is likely that their absence in other instances is due to this zero pronominalization and not to phrasal concatenation.

In fact, there are languages that have serial constructions constrained in every other way like those above, but which do allow a limited surfacing of 'subjects'. The most common encodes a causal relation between the two conjuncts where the 'subject' of the subsequent conjunct is coreferential, not with any 'subject' of the prior conjunct, but with a nonactor patient or goal.

Luo (Creider 1974):

- (33) əm̩ɣɔ ɔnt̩ɔŋgo orɪŋgo
 lsg-gave-3sg Onyango 3sg-ran
 'I made Onyango run.'

Lango (Noonan 1979):

- (34) ɪcɔ ɔdɪá àcégó dògólé
 man 3sg-press-lsg lsg-close door
 'The man forced me to close the door.'

Thus, in (33), ɔnt̩ɔŋgo 'Onyango' is the subject of the predicate orɪŋgo 'run' in the subsequent conjunct and it is coreferential with the goal of əm̩ɣɔ 'lsg-gave-3sg' in the prior conjunct, but the 'subjects' of the two conjuncts are clearly distinct referents. The same is true for Lango in (34). A first person singular referent is both the 'subject' of àcégó 'lsg-close' in the subsequent conjunct and the patient of ɔdɪá '3sg-press-lsg' in the initial conjunct. So while a noninitial 'subject' is allowed in Luo and Lango, the

circumstances are highly constrained. It is used only when coding a causal relation and only when the referent of the noninitial 'subject' has been a nuclear noun phrase of a previous predicate. Under other circumstances, noninitial 'subjects' do not occur. Barai allows a similar construction.

- (35) na k-ia bu va-e
 lsg say-3pl 3pl go-past

'I made them go' or 'I spoke to them; (causing) they went.'

- (36) na kan-ia bu va-e
 lsg hit-3pl 3pl go-past

'I hit them; (causing) they went.'

It is the nonactor noun phrase with the predicates of the prior conjuncts that are coreferential with the 'subjects' of the subsequent conjuncts and, again, a causal implication is encoded as well. So, as with Luo and Lango, the occurrence of a noninitial 'subject' is highly constrained. But it is certainly not blocked altogether, as would have to be the case if phrasal concatenation of the kind Schachter is talking about were to be the preferred analysis for these serial verb constructions.

Still other languages allow a coreferential 'subject' of a noninitial conjunct to surface as a pronoun in constructions that in all other respects are clearly serial

constructions. Kasem, another West African language, has such a construction.

Kasem (Hewer 1976):

(37) nɔ̄na mā dùri bā bà
 men then run 3pl come

'Then, the men ran up.'

(38) ba dìl̄ni lùs̄tsē bà vè yāga
 3pl mount bicycles 3pl go marker

'They go to market by bicycles.'

Note that there is no variation of tense or aspect here which for Kasem would be ungrammatical. The juncture is simply marked by juxtaposition, a combination that is characteristic of serial constructions, and yet a noninitial 'subject' is allowed, even though it is coreferential with the 'subject' of the preceding conjunct. This again suggests that the 'subject' is, in fact, an element of each of the conjuncts that are strung together in serial verb constructions. Its absence in other languages is simply due to zero anaphora, which is a well attested phenomenon for various kinds of clause junctures. It seems conclusive then that the lack of 'subjects' with noninitial predicates fails to support the phrasal concatenation theory for serial verb constructions. The lack of noninitial 'subjects' then needs to be reassessed as an identifying criterion for serial verb

constructions. We will return to this question shortly.

First, however, we must briefly address ourselves to the question of juxtaposition. Schachter argues that the total absence from serial constructions of the usual features of either sentence conjunction or sentence embedding means that a conjunction-reduction hypothesis would have to posit the deletion of a conjunction as well as all the elements lost due to identity. This complication is unnecessary in his phrasal concatenation view; so he prefers the latter. This assumes that juxtaposition is not a viable means of juncture in any language for fully specified clauses. But such a position cannot even be defended for English, as our discussion of (1)-(3) above indicates. Juxtaposition is so well attested cross-linguistically, that we will not labour the point here.

It seems apparent then that none of Schachter's three arguments that we have considered here establish phrasal conjunction. However, our discussion has pointed out the need to clarify the identifying criteria for serial verb constructions. From among the criteria Schachter proposes, the constraint on tense/aspect and the lack of overt conjunctive elements seem to hold. Mood is similarly constrained, but the blocking of noninitial 'subjects' (clearly actors in these constructions) is common to only a restricted set of the languages which exhibit serial verb constructions. This is really a reflection of a somewhat weaker constraint on actors, which limits them to referents that are nuclear noun

phrases of a prior predicate in the series. There are still other important properties that are common to all the serial constructions we have considered so far that have not been mentioned.

One such feature is that they block any change of thematic topic between the various conjuncts of the string. This is to be expected, perhaps, but it is important to point out that it is more than tense/aspect that is restricted from occurring independently with each conjunct of a serial construction.

Also, significant is the fact that peripheral noun phrases do not occur independently with single conjuncts of the string, but are specified only once for the entire construction. While most junctures which are marked with some overt conjunctive element will allow a change of temporal or locative setting, serial constructions never do.

- (39) fu fi-na mufuo fase isoe-ke
 3sg sit-conj late.afternoon letter write-fut
 'He will sit and then late in the afternoon will write a letter.'

- (40) *fu fi mufuo fase isoe-ke

- (41) na buki abe-na ae guove ij-ia
 lsg book take-conj house inside def-L
fata nuja-e
 table put-past

'I took a book and put it on the table inside the house.'

- (42) *na buki abe ae guove ijia fata nijae

In (39) a change of temporal setting occurs following the conjunctive affix -na and is quite acceptable, but such a time noun phrase is not possible with any noninitial conjunct of a serial construction as in (48). The same is true of the locative in (41). Such a change of spatial setting is quite appropriate following conjunctive elements but not between the juxtaposed conjuncts of serial constructions as in (42).

There are then quite a number of important aspects of the clause that are highly constrained in serial constructions. These include tense/aspect, mood, new-referent actors, thematic topic, and peripheral noun phrases as well as the absence of overt conjunctive markers.

4.3.2 Tight Serialization

So far, we have not made any distinction between serial constructions that allow intervening noun phrases and those

that do not. There are important differences here as well. Some languages have one of these constructions or the other, but quite a number make use of both. Barai is one such language. Note the difference between (43) and (44).

(43) fu fi fase isoe
3sg sit letter write

'He sat (down) and wrote a letter.'

(44) fu fase fi isoe
3sg letter sit write

'He sat writing a letter.'

The English gloss is problematic here since English does not have the same contrast in structure, but notice how the two predicates are separated by the noun phrase fase 'letter' in (43) but not in (44). In (44) both adjuncts occur prior to the predicates which here are simply juxtaposed. This is consistently the case with this second serialization pattern. In fact, not only are noun phrases blocked from occurring between the concatenated predicates, but adverbials and negatives are similarly blocked. Adverbials are permitted independently with any conjunct in the looser serial constructions that allow intervening noun phrases, but may not occur between the predicates of the tighter series.

(45) na isema fi fase isoe
1sg wrongly sit letter write

'I sat wrongly and wrote a letter.'

(46) na fi fase isema isoe

'I sat and wrote (the) letter wrongly.'

(47) na fase isema fi isoe

'I wrongly sat writing a letter.'

(48) *na fase fi isema isoe

So in (45) and (46) an adverb may occur in either conjunct of the series. But with a juxtaposed series of predicates such as those of (47), adverbs can only precede the series. They cannot interrupt it as in (48).

There is a similar constraint on the negative. Barai has two negative morphemes, naebe and ba. The form naebe simply negates the predicate and must occur prior to it, but ba negates the entire clause. Consequently, it is the only element that ever follows the predicate which is normally final. As with the adverbs, the negative naebe may occur independently with any conjunct in the standard serial construction.

(49) na naebe fi fase isoe
lsg neg sit letter write

'I did not sit (down) and (I did) write a letter.'

(50) na fi fase naebe isoe

'I sat (down) and did not write a letter.'

In the initial-conjunct of (49), the scope of naebe is limited to the predicate fi 'sit'. It also occurs in the subsequent conjunct of (50) negating the predicate isoe 'write'. But with the more tightly knit strings of serial verbs, naebe must precede the entire string. It may not apply to any one of the predicates independently.

(51) na fase naebe fi isoe
lsg letter neg sit write

'I did not sit writing a letter.'

(52) *na fase fi naebe isoe

On the other hand, ba can do neither. It cannot occur between the member predicates of the tighter serial constructions, but neither can it occur between the juxtaposed conjuncts of the standard serial constructions.

(53) na fi fase isoe-vo ba
lsg sit letter write-pres neg

'It is not the case that I am sitting and writing a letter.'

(54) *na fi ba fase isoe-vo

(55) *na fase fi ba isoe-vo

(56) na fase fi isoe-vo ba

'It is not the case that I am sitting writing a letter.'

With the standard serial construction the scope of the ba negative is the entire construction as in (53). It is not limited, like naebe, to just one of the member conjuncts and in fact cannot occur between them as in (54). Similarly, with the tighter sequence of serial verbs, its scope will always be the entire construction, encompassing the whole series of predicates.

Another important difference between the two kinds of serial verb constructions has to do with intonation. We noted earlier that both grammatical and phonological features coincide to mark the boundaries between sentences in Barai (and Papuan languages generally) and that the significant phonological feature was an overall intonation pattern superimposed over the entire clause chain. This intonation pattern begins with an immediate increase in intensity and a sharp rise in the general pitch level, coming to an early peak over the first high stressed syllable. There is then a gradual descrescendo over the remainder of the contour accompanied by a gradual drift of pitch. The final syllable drops sharply in pitch. This, in general terms, characterizes the overall sentence intonation contour. However, the

decrecendo and gradual drift of pitch over the bulk of the sentence is not necessarily uniform. With complex sentences, various units within the complex maintain their own mini-contours. The phonological sentence often contains a string of what we might call phonological phrases over which the sentential pattern is superimposed. This phrasal pattern is much like the sentential one. The contour begins with an increase in pitch and intensity which reaches a peak over the first high stressed syllable, followed by a gradual decrecendo and drop in pitch. In actual fact then, the overall decrecendo of the sentential pattern is interrupted with the peaks of the phrasal contours. The relevant fact for our consideration here is that the standard serial construction requires the phrasal contour over each conjunct of its series. The more tightly knit string of juxtaposed predicates collectively takes just a single phrasal contour.

(57) na fi fase isoe-vo



(58) na fase fi isoe-vo



In (57), the gradual decrescendo and drop in pitch of the sentential intonation contour is interrupted by a secondary phrasal contour that begins at the juncture between the two conjuncts. Each of these consists of a predicate preceded by a noun phrase. In (58), however, where the predicates are juxtaposed, the gradual decrescendo and drop in pitch prevails over the entire construction with no interruption at the juncture between the predicates for a new phrasal contour. This difference of intonation pattern together with the grammatical differences outlined above make it clear that two quite distinct processes are involved here.

Similar phenomena are well attested cross-linguistically. We refer the reader to Healey (1966) on Telefol and Hewer (1976) on Kasem. The following are taken from these sources.

Telefol

- (59) tákáá kwééb unále
 seize get-her he-went
 'He seized her and went away.'

- (60) kwééb nóo kub-a'silib
 get-her go they-buried-her
 'They took her and buried her.'

Kasem

- (61) ō vù kē pě pěga
 he go do chief greeting
 'He greeted the chief.'

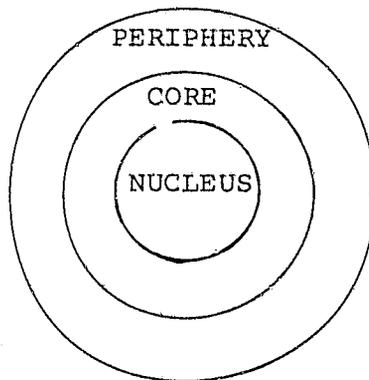
(62) ō bà jèní Pàga nē tó
 he come sit Paga at sub

'When he ruled over Paga...'

4.4 The Layered Structure of the Clause

We would like to propose an analysis that will account, not only for the difference between the conjunction of fully specified clauses and the standard serial constructions that Schachter attempted to cover with his verb phrase concatenation, but also for the difference between these tightly knit series of juxtaposed predicates and the standard serial construction that allows intervening noun phrases. Our proposal entails a view of the clause that is layered in structure, one we might represent schematically by (63).

(63)



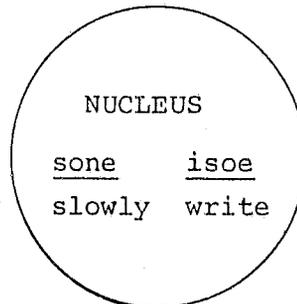
We will refer to the heart of the clause as its nucleus. The nucleus consists of one or more lexical predicates, and any adverbial modifiers. In (64) then, sone isoe 'slowly

write' constitutes the nucleus of the clause.

(64)

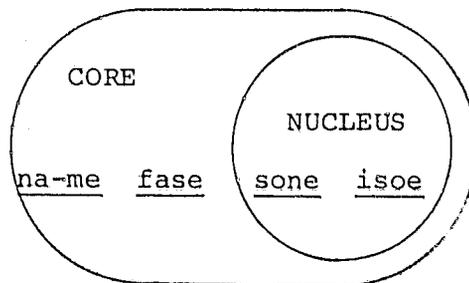
<u>isuname</u>	<u>muge</u>	<u>ij-ia</u>	<u>na-me</u>	<u>fase</u>	<u>sone</u>	<u>isoe</u>
yesterday	night	def-T	lsg-cas	letter	slowly	write

'Last night I just slowly wrote a letter.'



The core of the clause consists of the nucleus plus all the nuclear noun phrases that are ^edefinitive to the state of affairs that core encodes. Mode is also an aspect of the core of the clause. The core of (64) then includes the nuclear noun phrases na 'lsg' and fase 'letter' as in (65).

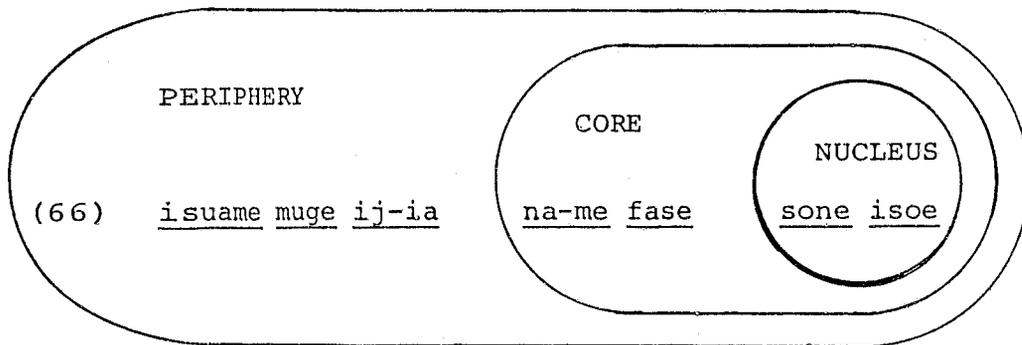
(65) isuname muge ij-ia na-me fase sone isoe



'Last night, I just slowly wrote a letter.'

Finally, the outer layer of the clause we will call the periphery. Together, the three layers constitute a fully specified clause. This outer peripheral layer adds the peripheral noun phrases to the clause. These are noun phrases that function in roles that provide additional information to the state of affairs defined by the core of the clause. In

addition, other adverbials whose scope is not just a simple (or even complex) predicate but rather the whole core of the clause, are aspects of this outer level. Example (66) illustrates all three levels.

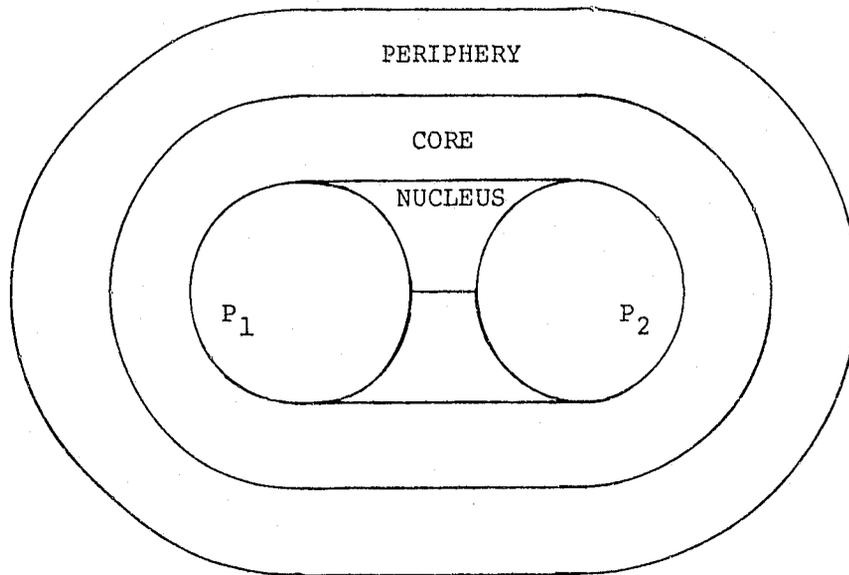


'Last night, I just slowly wrote a letter.'

These various levels are established by the different possibilities of juncture within the clause and their respective constraints. So juncture may apply not only to fully specified clauses that allow aspects of all layers to occur independently in the various conjuncts, but also to layers internal to the clause at either the nuclear or core levels. It is the two different kinds of serial verb constructions that exhibit the juncture possibilities of these inner levels.

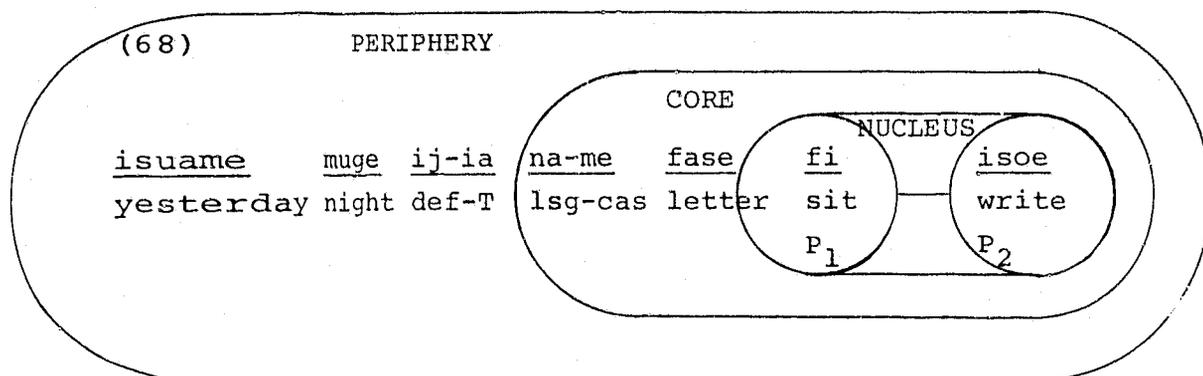
Schematically, we can represent juncture at the nuclear level as in (67).

(67)



For the sake of convenience we will often refer to the nucleus as the nuclear level of the clause, to the core as the core level of the clause, and to the periphery as the peripheral level of the clause, recognizing that by level we mean to include not only that particular layer but any that it encompasses as well.

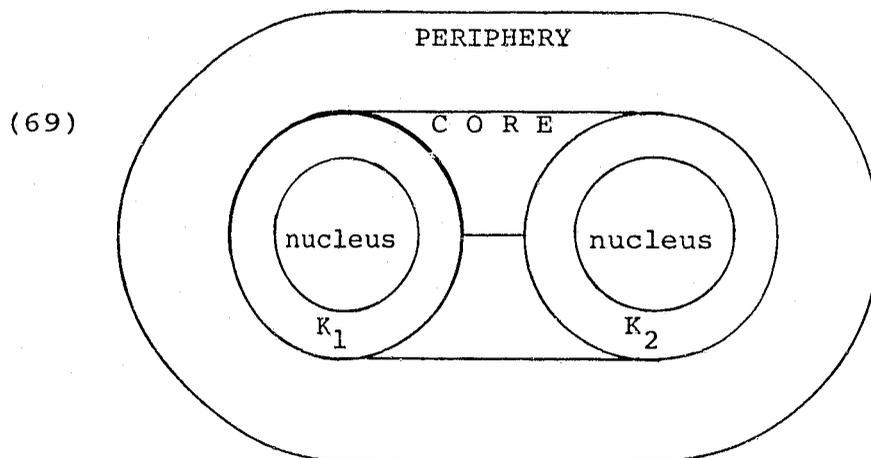
The nuclear level here is complex in that the nucleus of the clause consists of a sequence of lexical predicates (P_1 and P_2), a sequence that is functionally equivalent to the nucleus of the clause with only a single lexical predicate. The series fi isoe 'sit write' is such a complex in a clause like (68).



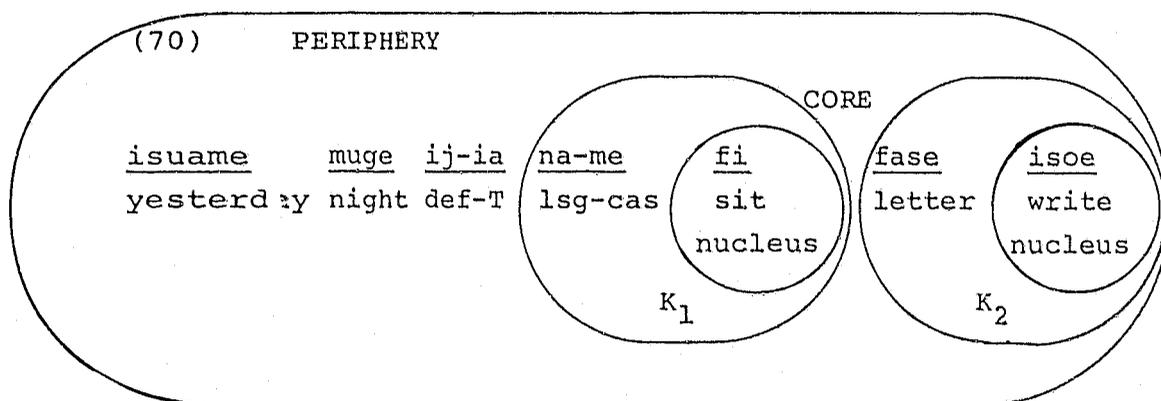
'Last night, I just sat writing a letter.'

The sequence of predicates functions as a unit, taking a specific set of nuclear noun phrases as the core level which in this instance are na 'lsg' and fase 'letter'. These comprise a core whose outer periphery is the time noun phrase, isuname muge ij-ia.

Such juncture at the nuclear level is to be distinguished from juncture at the core level. The closely knit serial verb constructions exhibit juncture at the nuclear level while the looser serial constructions, those that permit intervening noun phrases, manifest juncture at the core level. We can represent this level of juncture schematically as (69).

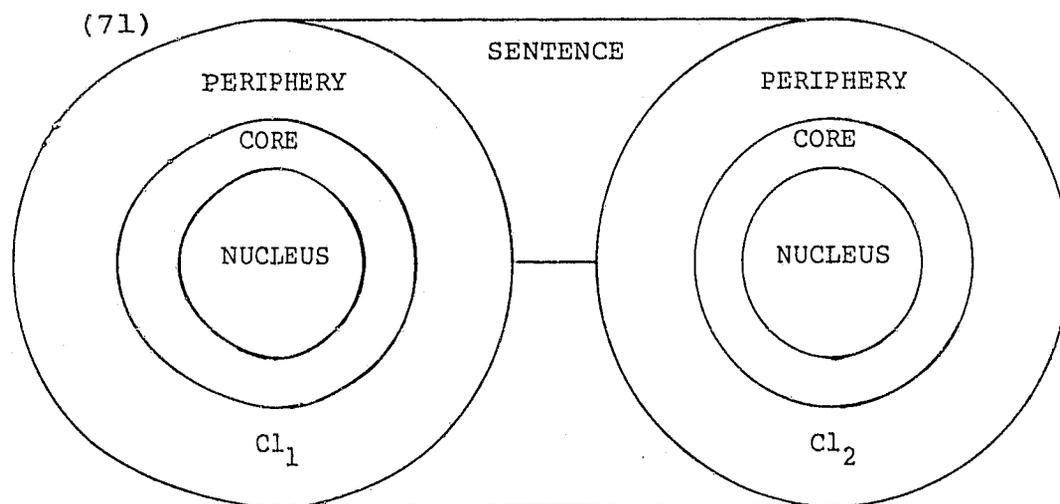


We will refer to the individual conjuncts at the core level as kernels (K). Nuclear level junctures join predicates whereas core level junctures join kernels. Each kernel has its own nucleus and associated set of nuclear noun phrases. The juncture of two such kernels constitutes a complex core that functions as a unit under a common periphery. The string fu fi fase isoe '3sg sit write letter' is then the core of (70).



The forms na-me fi 'lsg-cas sit' comprise the first conjunct of the series. Zero pronominalization accounts for the absence of na 'lsg' in the second conjunct which is then fase isoe 'letter write'. (The distribution of -me will be discussed in the following chapter.) Each conjunct is the kernel of a complex core of a clause whose periphery in this instance is exhibited by the time noun phrase isuame muge ij-ia.

There is yet another level of juncture, one we are calling the peripheral level of juncture which joins full clauses to form sentences. These clause strings correspond to the same unit that is bounded by the sentential intonation contour. Peripheral level junctures are schematically represented by (71).



in toto, of course. The level of juncture is just one parameter of that relationship, others of which we will discuss in subsequent chapters. Such core level junctures in Barai are highly exploited. They are just as common as peripheral level junctures. (73)-(77) further illustrate core level junctures.

- (73) fu fata ufe kofu uvia-vo
3sg platform put.together coffee dry-pres/hab

'He is putting together a platform to dry coffee beans.'

- (74) bara inokiro bu uri ikire ke
woman two 3pl arise bamboo get

'The two women arose to get bamboo.'

- (75) e ije fu sime abe burede ije ufu
person def 3sg knife take bread def cut

'The man used a knife to cut the bread.'

- (76) fu daokude e rere
3sg turn person look.for

'He turned and looked for a person.'

- (77) isume muge ij-ia fu vua ije abe
yesterday night def-T 3sg talk def take

e ije nijas-ia-e
person def show-3pl-past

'Last night he took the talk and showed (it) to the people.'

As with core level junctures, other relations between conjuncts of nuclear level junctures vary. These will be discussed in later chapters. (59) and (60) in Telefol, and (61) and (62) in Kasem as well as (44) in Barai all appear to be nuclear level junctures. In Barai, these nuclear level junctures are profuse. (78)-(82) further illustrate junctures at the nuclear level.

(78) fu na ire ifej-ie i
 3sg 1sg food help-1sg eat
 'He helped me eat (the) food.'

(79) fu burede ije sime abe ufu
 3sg bread def knife take cut
 'He cut the bread with a knife.'

(80) fu do ij-ia barone na
 3sg water def-L die lay
 'He lay dead in the water.'

(81) e ije fu a-nafa-fu-o kan-ia
 man def 3sg child-pl-3sg-poss kill-3pl
buvua i
 cut.up eat
 'The man killed, cut up, and ate his children.'

- (82) a na ine tua kore-j-ie
 2sg 1sg stick break.off throw-V-1sg
 'He broke off and threw a stick at me.'

(78)-(82) are all subject to the syntactic constraints we outlined above that distinguish the two kinds of serial verb constructions along with the difference of intonation contour.

Note however that a string of juxtaposed predicates does not necessarily indicate a nuclear level juncture. Compare (83) and (84) both of which exhibit core level junctures.

- (83) fu uri k-ia
 3sg arise say-3pl
 'He arose and said (to them).'

- (84) fu uri e ije k-ia
 3sg arise person def say-3pl
 'He arose and said to the people.'

In (83) the string uri k-ia is simply juxtaposed with no intervening noun phrase whereas in (84) the same lexical string of predicates occurs but with a noun phrase occurring between the predicates. But one of our language specific criteria for distinguishing the two levels is the intonation contour. We stated earlier that the conjuncts of nuclear level junctures fall within the scope of a single intonation

contour for which there are two with core level junctures. These contours are quite readily discernable when the conjuncts consist of a significant string of lexical items. But what of instances like (83) where several of the conjuncts in a string are single lexical items, sometimes even monosyllabic? The contour itself is not always immediately apparent in such cases, but there is a terminal feature of the contour that is. Recall that the terminus of the contour is marked by a significant drop of both pitch and intensity which rises sharply at the beginning of the contour. At just this transition point, between the falling and rising of pitch and intensity, the glottis is closed. This terminal feature of the intonation contour is important because it means that juxtaposed predicates like those in (78)-(82) are readily discernable from those like (83). If we use the symbol λ to designate this closure of the glottis, the string of predicates in (83), uri λ k-ia is to be distinguished from a string like that in (81) or (82), kania buvua i or tua korejie.

So we need not have elements from each relevant layer to encode a particular level of juncture. In fact, peripheral level junctures can be between conjuncts manifested only by predicates at the nuclear level. Zero anaphora accounts for the absence of an actor in the second conjuncts of (85) and (86) but other clausal elements are simply void.

(85) fu kofu abe-na va
 3sg coffee take-conj go
 'He took the coffee and went.'

(86) fu ki-kinu kuae
 3sg laugh-conj say
 'He was laughing and talking at the same time.'

In (85) the conjunction -na encodes a sequential relation, while -kinu in (86) encodes a simultaneous relation. Both -na and -kinu are peripheral level conjunctive markers encoding the relationship between the conjuncts where only the predicate is overtly expressed in the second conjunct. It is possible then to have all three levels of juncture with simple strings of lexical predicates, although Barai carefully distinguishes each of the three.

4.5 Variable Role Frames

There is another theoretically important consequence of this view of the structure of the clause which relates to the role frame of the predicate. We concluded in Chapter I after a discussion of valence increasing devices, that certain predicates will have more than one role frame. We mentioned that Fillmore's master case frames allowed for the suppression of certain nuclear roles, but that each lexical predicate encoded a situation where the referents whose roles were

specified in the case frame were implicitly part of that situation even if not overtly expressed. Thus, (87)-(90) all exhibit options of a single master role frame for the predicate open which is [(A),(I),P].

(87) The door (P) opened.

(88) John (A) opened the door (P).

(89) The key (I) opened the door (P).

(90) John (A) opened the door (P) with the key (I).

Both the agent and the instrument are optional noun phrases whereas the patient must be overtly specified. However, predicates with more than one valence option distinguish between two states of affairs, one of which inherently involves an additional noun phrase. The difference is not whether or not the noun phrase is overtly expressed but whether or not it is definitive to the state of affairs defined by the core in which it is used. Thus ki 'laugh' entails only one nuclear noun phrase in an agent-patient role, but ki-s- 'laugh at' entails both an agent-patient and a range participant. The range participant need not be overtly expressed but the presence of the valence increasing marker -s- shows that a range participant is

definitive to the state of affairs the speaker is referring to. Similarly, the predicate sak- 'bite, sting' refers to a state of affairs with two nuclear participants, an agent and a patient-goal. On the other hand, saki-r- 'sting with', though closely related, encodes a state of affairs involving three nuclear participants: an agent, a patient, and an instrument. We mentioned earlier other predicates whose role frames vary but do not involve an increase in valence. Predicates like tot- 'escape.memory' and riez- 'attract' each have the set [(F),P] and [AP,(R)]. Some predicates can be used to encode three different states of affairs. The predicates ise-(d)- 'be unhappy' and ma-(d)- 'be happy' with the role frames [P], [(F),P], or [AP,(R)] are two of these.

This fact that some predicates require more than one role frame of nuclear noun phrases has a bearing on our claim that the core level functions in relation to the entire nucleus, not to one aspect of it. When the nucleus is complex, as is the case with any kind of nuclear juncture, the role frame is a function of the entire nucleus, not of any one of the predicates involved. We repeat here (78) and (79) as (91) and (92) to illustrate the point.

(91) fu na ire ifej-ie i
 3sg 1sg food help-1sg eat

'He helped me eat food.'

(92) fu burede ije sime abe ufu
 3sg bread def knife take cut

'He cut the bread with a knife.'

In (91), the nucleus of the clause is a complex of two predicates: ifej- 'help' which when used independently has a role frame [A,(B)], and i 'eat' which has a role frame [A,(P)]. But the complex nucleus has a role frame involving not two, but three nuclear noun phrases, [A,(B),(P)]. We are suggesting that the three nuclear noun phrases have role relationships to a complex nucleus rather than to either predicate independently. Example (92) is similar in that the nucleus is again a complex of two predicates. They are abe 'take, get' which when used independently takes a role frame [A,(P)] and ufu which has a role frame [A,(P)]. The role frame for the complex nucleus here however is [A,(I),(P)]. The state of affairs encoded in (92) entails three participants: the agent, the instrument, and the patient. It is significant that the instrument is not common to either of the role frames of the individual predicates when they alone constitute the nucleus of the clause. This again bears out the fact that there is no necessarily isomorphic relationship between role frames and particular predicates. In many instances the nucleus of the clause is not complex so there is no apparent distinction between the role frame of the nucleus and what we have heretofore called the role frame of the predicate. Individual

The line before the first role frame of (95) and (96) indicates that this frame is used when the predicate is the sole predicate element of a clause nucleus. The notation v_{t-1} following the line indicates that this role frame is required whenever the predicate is used with any of a particular subclass of transitive predicates to jointly constitute the nucleus of the clause. The valence increasing markers in (95) and (96) constrain the choice of role frame in a similar manner. Of course i 'eat' and ufu 'cut' will also require more than one role frame.

We have proposed a view of the clause that is capable of handling the complex 'clause' chains of Papuan languages. The frustrations of earlier analysts such as Healey, Scott, and Geary that led them to attempt revisions of the grammatical hierarchy, point to the inadequacy of the traditional view of the clause. Once we recognize the layered structure of the clause, however, the intermediate structures are no longer a problem. So the nucleus of the clause may minimally exhibit but one predicate or it may exhibit a string of such predicates. Similarly, the core of the clause may minimally be manifested by only a single kernel, or alternatively, by several such kernels. And finally, the sentence itself may minimally be manifested by only a single clause or it too may be manifested by a string of such clauses. Each level of juncture produces chaining within the sentence, but of radically different kinds that correspond to the internal levels of the clause.

Nothing precludes strings of each type from cooccurring within the same sentence and in fact this is frequently the case. The sentence (97), for example, incorporates all three levels of juncture.

- (97) fu do ij-ia ari / va-ko-ga /// fu
 3sg water def-L go.down go-conj-cong 3sg
ajia // gafia keke // bubuare suri
 go.up up.there arrive hornbill skin
dabe / abiese-na /// rade e ije
 pick.up put.on-conj later person def
nuve-na /// vame ij-ia ruo-mama /// are
 follow-conj trail def-L come-conj place
Itokama ij-ia ae kabuane ije kunae
 Itokama def-L house ridge pole def grasp

'While he went down to the river, he (different referent) went up, arrived there, picked up and put on the hornbill's skin and then later followed this person, coming along the trail until he grasped the ridgepole of a house at the village Itokama.'

The single slash (/) indicates a nuclear level juncture, a double slash (//) a core level juncture, and a triple slash (///) a peripheral level juncture.

The system of levels means that we do not have to claim that peripheral and core elements are deleted for every predicate of a complex nucleus. Nor do we have to claim that peripheral elements are deleted for each kernel of a complex core. This is a considerable improvement over standard

conjunction reduction that would require a full complement of all peripheral and core level elements to be deleted for each predicate of any series. This does not eliminate the need for zero anaphora in the grammar, but radically restricts its functional load. It is also most significant that the distinction between nuclear and peripheral noun phrases outlined in Chapter I to account for the internal structure of the clause is also necessary in accounting for the varieties of juncture that occur between 'clauses'. Finally, the system neatly accounts for the variety of constraints that occur on the constituent elements of each kind of series.

CHAPTER FIVE

THE NEXI OF JUNCTURES5.1 The Traditional Dichotomy

The simple dichotomy between coordination and subordination is another area of syntactic theory where fundamental concepts have evaded rigorous definition. Basic texts typically distinguish coordinate and subordinate structures in terms of 'dependency' where a subordinate clause might be said to be one that cannot 'be repeated in isolation as an idiomatic statement (forming a complete sentence in itself)' (Gerson 1969:16). But we have already noted the indeterminacy of such notions as 'dependent' and 'complete' in our discussion early in Chapter IV. In most cases, where a more rigorous definition of either of these concepts has been attempted, one or the other is given serious attention, but not both.

Simon Dik (1968) undertakes a thorough examination of coordination but does not consider subordination. He reaches a definition of coordination that focuses on an equivalence relation between the conjoined elements. 'A coordination is a construction consisting of two or more members which are equivalent as to grammatical function and bound together at the same level of the structural hierarchy by means of a

a linking device' (Dik 1968:25).

Conversely, Thompson and Longacre (1978) consider subordination in a wide cross section of languages but give only passing comment to coordination. They posit a syntactic definition of subordination where a subordinate clause is simply a sentential expansion of a nominal adjectival, or adverbial slot in a main clause (Thompson and Longacre 1978:2). The relationship between the conjoined elements here is quite different from that of coordinate junctures mentioned above. Rather than an equivalence relation, one of the conjuncts is actually a member constituent of the other, a kind of part-whole relation.

So while neither study gives a comprehensive coverage of the ways in which clauses can be joined, each provides significant facts about an important subset of juncture possibilities. Let us refer to the ways in which conjuncts are joined together as the kind of nexus between them. A coordinate nexus, then, encodes an equivalence relation between the relevant conjuncts, whereas a subordinate nexus encodes a part-whole relation between conjuncts. Clearly there is an important contrast here. The result of a subordinate nexus that encodes a part-whole relation is still a single unit though internally complex, whereas the result of a coordinate nexus that encodes an equivalence relation is a sequence of such units, a sequence of wholes. There is

an important constraint on the member conjuncts of such junctures that points to their composite unity in subordinate relationships as opposed to a sequence of such units in coordinate relationships. This constraint relates to what Thompson and Longacre offer as a semantic definition of subordination which asserts that 'a subordinate clause, being presupposed, ...cannot of itself make an assertion, ask a question, give a command, or express a wish, threat, or promise' (Thompson and Longacre 1978:2). This means that a subordinate clause will never be independently marked for mood. Thompson and Longacre illustrate with the following English sentences.

(1) I'm ready to toss the salad, so please get out the dressing.

(2) *I'm ready to toss the salad, in order to

	because	}
	although	
	when	
	since	
	while	
	rather than	
	as if	

(3) We expected her to be nervous, but why does she keep looking at her watch?

- (4) *We expected her to be nervous, in order to
 because
 although
 when
 since
 while
 rather than
 as if

...why does she keep looking at her watch?

The switch in mood in the conjuncts of (1) and (3) reflects the relative distinctiveness of the two conjuncts. (2) and (4) on the other hand, block any independent specification of mood between the two conjuncts. This constraint on mood reflects the composite nature of the nexus between the two conjuncts. The subordinate nexus encodes a part-whole relation which results in a 'whole' of which there are two with coordinate nexus.

There are similar parallels in Barai. Certain junctures allow independent specification of mood in either conjunct, while others do not.

- (5) a keke-i ro fu be va-e
 2sg arrive-past conj 3sg interr go-past
 'You arrived but did he go?'

- (6) a keke-ema ij-ia fu be va-e
 2sg arrive-past conj-conj 3sg interr go-past
 'When you arrived, did he go?'

- (7) *a be keke-ema ij-ia fu vae

The relationship between the two conjuncts of (5) allow independent specification of mood in either conjunct just as in the English examples (1) and (3). However, a juncture such as that in (6) restricts an independent specification of mood to the second conjunct so that (6) is quite acceptable but (7) is definitely not. We might conclude then that (5) exhibits a coordinate nexus in Barai while (6) exhibits a subordinate one. This is a reasonable assumption since the initial conjunct of (6) functions just like a time noun phrase in the periphery of the other matrix clause. We then have the part-whole relation as well as the constraint against independent specification of mood as identifying features of subordinate nexus. The interesting fact here about Barai and indeed of many Papuan languages is that there are junctures that maintain the equivalence relation that we have said is definitive of a coordinate nexus, but still constrain any independent specification of mood between the conjuncts. This constraint we have said is indicative of subordinate nexus. The suffix -mo marks such a juncture in Barai.

- (8) a be keke-mo fu va-e
 2sg interr arrive-conj 3sg go-past

'Is it the case that you arrived and then he left?'

- (9) *a keke-mo fu be va-e

With junctures marked by -mo, mood can only be specified in the initial conjunct and its scope crosses the juncture to include both conjuncts. The gloss for (8) attempts to capture this scope of the interrogative although there is no structural clefting in Barai parallel to the English gloss. (9) is blocked because it is not possible to independently specify mood for just one of the conjuncts with junctures such as that marked by -mo. At the same time, there is no evidence that any kind of part-whole relation exists between such conjuncts. No one of them functions as an adjunct of the other so that there is no convincing argument for establishing either of them as a matrix 'sentence'. Functionally then, the two conjuncts bear an equivalence rather than a part-whole relation with respect to each other. This is typically the case with many junctures of the medial-final chains in Papuan languages and it is this kind of juncture that defies any neat coordination-subordination dichotomy. The confusion is apparent in the

literature where some analysts label these junctures coordinate while others call them subordinate.

5.2 Cosubordination

If there is more than a neat dichotomy in the ways that clauses combine, what other option is there? C.E. Bazell (1953) posits three types of nexus operations which he calls 'functional relations'. For Bazell, coordinated elements are those in which either element can occur within the same syntactic environment. Subordination joins elements in such a way that only one of the two may occur independently in the same environment as the combination does. Finally, a third nexus option called interordination joins elements in such a way that neither element can occur independently in the same environment. He illustrates with junctures internal to the clause where such tests can easily be employed. But it is not at all clear how such tests could be applied to clause junctures. However, even if the substitutability test fails to be pertinent for interclausal junctures, there may still be three (or more) possible kinds of nexus operations. Bazell's discussion of nexus here is brief and he does not address himself to how these 'functional relations' might apply to interclausal relations.

Elton Lytle (1974) also argues against a simple dichotomy for joining operations and he too proposes three types of nexus rather than the usual two. In addition to coordination, or conjunction, he proposes both adjunction and subjunction. He says very little about adjunction but characterizes it as the relationship between subjects and predicates, and between predicates and objects in the sentence. (Thus, it is somewhat parallel to Bazell's interordination. What Lytle does focus on is subjunction which is typified by relativization, but which he generalizes to cover a wide range of typically subordinate clauses. The major problem in terms of distinguishing among the three kinds of nexus is that he says so little about adjunction. In fact, as with Bazell, there is no reference to adjunction as a possible type of nexus between clauses. No explanation is given for the fact that although there are three basic nexus operations, still only two of them are operative at clause junctures.

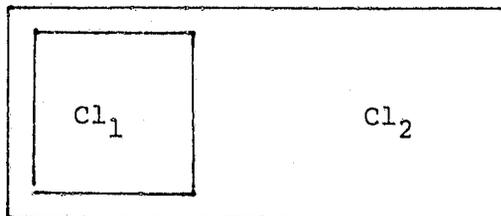
Simon Dik (1968) recognizes the possibility of multiple nexus operations, but does not attempt to explicate them, choosing, as we mentioned earlier, to limit his study to coordination only.

I have already noted that my positive definition of coordination does not imply anything about the nature of other types of constructions. Guided by a predilection for neat dichotomies, some linguists have defended the view that any construction in any language should be either subordinative or coordinative. The terms coordination and subordination

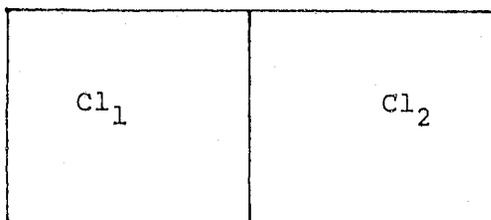
refer to mutually exclusive subclasses of constructions, but do not subdivide the full set of possible constructions in any language. (Dik 1968:58)

There is support then for more nexus options than just coordination and subordination, although it appears that no one has considered more than the two basic types for interclausal relations. We are proposing here a third nexus option to account for constructions like (8) where the conjuncts combine in a part-whole relation like subordinate structures, and yet the parts bear an equivalence relation to each other like the coordinate structures. We will call this nexus option cosubordination. (10)-(12) schematically represent the differences between the three nexus options.

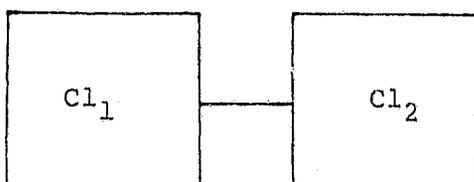
- (10) Subordination: a part-whole nonequivalence relation where one conjunct is embedded as a constituent of the other.



- (11) Cosubordination: a part-whole equivalence relation where conjuncts of comparable status constitute the whole.



- (12) Coordination: a whole-whole equivalence relation where the conjuncts are of comparable status.

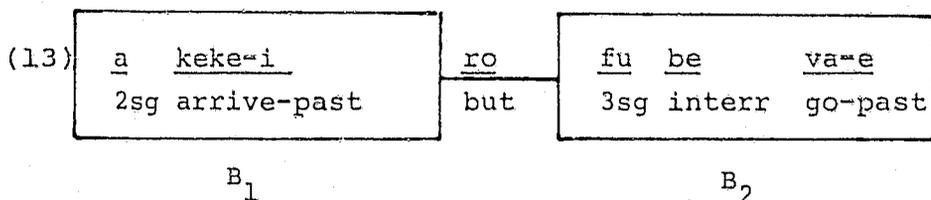


Equivalence is used here in opposition to embedding. An embedding relation is one where one of the conjuncts functions as a member constituent of the other. While equivalence stands in opposition to any embedding between the conjuncts, such equivalents may still function together as a unit as is the case with cosubordinate juncture. Alternatively they may remain distinct entities linked solely by some semantic relation like those we discuss in the following chapter.

This is the case with coordinate junctures.

5.3 Operators Over the Base

The notion of a composite unit as opposed to distinct units is of vital importance. If both coordinate and cosubordinate nexus encode an equivalence relation between their conjuncts, they are distinguished only by the composite or noncomposite nature of the resulting unit. What are the features of such a composite unit? We noted above that mood is an operator over such a composite unit. This composite unit will be called the base which may then be simple or complex in terms of the number of constituent clauses it encompasses. Coordinate nexus, such as that in (5), which we repeat here as (13), yields a sequence of bases with independent mood options where the two clauses are not embedded one within another.



'You arrived but did he go?'

Then cosubordinate nexus such as (8), which we repeat here as (14), yields a single base with only a single mood option for the combined unit although again the clauses are not embedded one within another.

(14)	<u>a</u>	<u>be</u>	<u>keke-mo</u>		<u>fu</u>	<u>va-e</u>
	2sg	interr	arrive	- conj	3sg	go-past

B₁

'Is it the case that you arrived and he left?'

Finally subordinate nexus, such as that in (6), which we repeat here as (15), again yields a single base where mood is only specified once, but where there is an embedding relation between the conjuncts such that one is a member constituent of the other.

(15)	<u>a</u>	<u>keke-ema</u>	<u>ij-ia</u>	<u>fu</u>	<u>be</u>	<u>va-e</u>
	2sg	arrive-past	conj-conj	3sg	interr	go-past

B₁

'When you arrived, did he go?'

So it is only coordinate nexus that yields a sequence of bases. Mood is not the only feature that identifies the base however. There are two other important features of the base. These are absolute tense and thematic topic.

We distinguish here between absolute tense which references time relative to the speaker's utterance and relative tense which references time relative to some other event. Variations of absolute tense only occur at junctures with coordinate nexus. Both cosubordinate and subordinate junctures encode tense but it is always relative to another event, not necessarily to the speaker's utterance. (16) and (17) illustrate variation of absolute tense over clauses joined by coordinate nexus. Time is referenced relative to the utterance itself.

- (16) fu-te isuame ije-re-i o fu-te
 3sg-dub day.away 3sg-do-past conj 3sg-dub
isuame ije-re-ke
 day.away 3sg-do-fut

'Maybe he did it yesterday or maybe he will do it tomorrow.'

- (17) fu iviama va-ko ro na nituage
 3sg now go-immed.fut conj 1sg day.after.tomorrow
va-ke
 go-fut

'He is about to go now but I will go the day after tomorrow.'

In (16) the conjunction o encodes an alternative relation while ro in (17) encodes an adversative relation. Both markers encode coordinate nexus that allows independent specification of absolute tense as well as mood. But cosubordinate nexus where tense is relative, can only specify tense relative to the following conjunct. Thus the glosses of (18)-(20) are ambiguous in English as to absolute tense in relation to the speaker, since Barai encodes relative tense at junctures with cosubordinate nexus.

(18) fu ruo-mama iqia keke-ke
 3sg come-conj here arrive-fut

'He is coming and will continue coming until he arrives here.'

'He will come and continue coming until he arrives here.'

The conjuncture affix -ma(ma) encodes a temporal span that takes its tense orientation from the absolute tense marker that occurs only on the final predicate. This means that the point at which the third singular referent initiated his coming is ambiguous with reference to the speaker. The conjunctive marker that marks the juncture indicates a span that will culminate at some future time but may have been initiated either prior to or subsequent to the speaking of the utterance. (19) and (20) are similar

- (19) fu va-ekiro isuame una rua-ke
 3sg go-conj tomorrow do.again come-fut
 'He left and will come back tomorrow.'
 'He will leave and come back tomorrow.'

- (20) fu ire i-na sone va-ke
 3sg food eat-conj later go-fut
 'He will eat and go later.'
 'He is eating and will go later.'

In (19) the conjunctive affix -ekiro encodes a delayed sequence in which two events are sequential but with a time lag between them. The prior event may have occurred either before or after the utterance but culminates in the future (relative to the speaker). In (20), the conjunctive affix -na also encodes a sequential relation but without the delay. The event in the second clause must be in the future (relative to the speaker) and that of the first clause must be sequentially prior to the event of the second clause, which again leaves the tense of the first clause ambiguous in absolute terms. No independent specification of absolute tense is possible with these junctures. And these junctures are also those to which the constraint against independent mood applies, so that (18)-(20) block any independent specification of mood over one of the conjuncts as in (21)-(23).

- (21) *fu ruo-mama be igia keke-ke
 3sg come-conj interr here arrive-fut
- (22) *fu va-ekiro be isuame una rua-ke
 3sg go-conj interr tomorrow do.again come-fut
- (23) *fu ire i-na be sone va-ke
 3sg food eat-conj interr later go-fut

Both mood and absolute tense, then, are operators over the base. Clauses joined by cosubordinate nexus constitute a single base whereas clauses joined by coordinate nexus remain distinct bases with independent options for mood and tense.

Tense is relative with subordinate nexus as well. However, junctures that encode subordinate nexus are unlike those that encode cosubordinate nexus in that each of the conjuncts may independently take its own tense marker. We will see in Chapter VI that tense distinctions are fewer at junctures with subordinate nexus and that the actual morphemes are not entirely parallel. However, tense in the embedded clause is relative rather than absolute. Consider (24) and (25).

- (24) bu dua uru-vo ij-ia no
 3pl dance/song dance/sing-pres conj-conj 1pl
suke ije bu vaj-ia-ke
 refreshments def 3pl give-3pl-fut

'When they dance we will give them the refreshments.'

In (24), the definite article with its case marker, which typically encodes the function of a noun phrase in a time or location peripheral role, here encodes subordinate nexus for an embedded clause. The article then functions like a complementizer with these subordinate junctures at the peripheral level. But note that the present tense marker on the embedded clause is not tense in relation to the speaker's utterance, but in relation to the future tense of the final predicate. The refreshments are to be given at the time of the dancing, both of which are at some future point.

- (25) na moni ije m-a-eva ij-afuo
 lsg money def give-3sg-past conj-conj
- na-be kamaj-a-ke
 lsg-fut.neg take.back-3sg-fut

'Since I gave him the money, I will not take it back from him.' or...

'Since I will have given him the money, I will not take it back from him.'

In (25), another subordinate juncture that uses the definite article with its case marker as a complementizer, embeds a clause with a distinctive past tense marker encoding tense relative to the following predicate. This means that the past tense of the event in the embedded clause must be prior to the future point in time when the event of the matrix clause takes place, but may be either prior to or following the speaker's utterance.

If absolute tense is an operator over the base, it then becomes clear why tense is constrained in serial constructions. The restriction against tense variation was one of Schachter's defining features for such constructions that we noted above in Chapter IV. Minimally the base is coterminous with a fully specified clause and maximally it is coterminous with a sequence of such clauses bound by cosubordinate nexus. However, any core level or nuclear level junctures are always internal to some particular base. That is, it is inconceivable for the various conjuncts of either a core level or nuclear level juncture to be associated with distinct bases. So if tense is an operator over the base, as we have suggested, the core internal to that base has to be uniform in terms of absolute tense despite any complexity of its own.

There is still another operator over the base that is important in explicating the difference between the three kinds of nexus between clauses, that being the scope of the thematic topic. The scope of the thematic topic parallels that of mood and absolute tense in the sense that only bases may independently specify unique thematic topics. So junctures that encode a coordinate nexus may be followed by a new thematic topic but junctures that encode either a cosubordinate or a subordinate nexus necessarily block the

introduction of a new thematic topic since such junctures are always internal to a particular base.

Of course, the fact that junctures that encode coordinate nexus are the minimal bounds for the scope of the thematic topic does not mean that each base with the appropriate coordinate nexus has an independent thematic topic. A new thematic topic is introduced only when it is to be contrasted with an existing thematic topic or it may be reiterated when the speaker assumes the thematic topic has become ambiguous or may have been forgotten. So a change of thematic topic will be the exception rather than the norm even at junctures that encode coordinate nexus.

Consider the constraints on new thematic topics with the various nexus possibilities.

- (26) bu dua uru-vo-ga suke
 3pl dance/song dance/sing-conj-conj refreshments
ije, no bu vaj-ia
 def 1pl 3pl give-3pl

'They danced dances and then, concerning the refreshments, we gave (them) to them.'

In (26), the fronting rule that is used for thematic topicalization of noun phrases functioning in nuclear roles has topicalized the patient suke ije 'refreshments def' in

the subsequent clause. This thematic topic contrasts with that of the initial clause, which is most likely the actor, bu '3pl', unless, of course, some unspecified thematic topic is apparent to both speaker and hearer from the situational context. Such a change of thematic topic is not possible, however, if we drop the -ga. This is because -vo-ga is a juncture that encodes coordinate nexus while -vo on its own, encodes cosubordinate nexus.

- (27) *bu dua uru-vo suke
 3pl dance/song dance/sing-conj refreshments
ije, no bu vaj-ia
 def 1pl 3pl give-3pl

(27) is ungrammatical because the scope of a thematic topic must be the entire base and since cosubordinate junctures are internal to the base, a change of thematic topic at such junctures is ungrammatical. The only means of making suke ije 'refreshments def' the thematic topic of its base is to front it over the entire unit as in (28).

- (28) suke ije, bu dua uru-vo
 refreshments def 3pl dance/song dance/sing-conj
no bu vaj-ia
 1pl 3pl give-3pl

'As for the refreshments, they danced dances and then we gave (them) to them.'

This overlap of the same conjunctive marker with more than one kind of nexus is not extraordinary. For example, Thompson and Longacre (1978) point out that in some languages the same morpheme can be used for both coordination and subordination. Gaelic is such a language using the morphemes ach and ogus for both functions (Boyle 1973).

The same constraint applies to clause sequences joined by subordinate nexus. The embedded clause cannot independently specify its own thematic topic. Again, a new thematic topic occurs initial to the base, that is, prior to either of the clauses. If it should be a referent that functions in some nuclear role of the subsequent matrix clause, it is fronted over the embedded clause to the base initial position.

(29) suke ije, bu dua uru-iva
 refreshments def 3pl dance/song dance/sing-past

ij-ia no bu vaj-ia-e
 conj-conj 1pl 3pl give-3pl-past

'As for the refreshments, when they danced dances
 we gave (them) to them.'

(30) dua ije, bu uru-iva ij-ia
 dance/song def 3pl dance/sing-past conj-conj

no suke ije bu vaj-ia-e
 lpl refreshments def 3pl give-3pl-past

'As for the dance, when they danced it, we gave them the refreshments.'

- (31) *dua ije, bu uru-iva ij-ia
 dance/song def 3pl dance/sing-past def-T
- suke ije no bu vaj-ia-e
 refreshments def lpl 3pl give-3pl-past

In (29) the patient in the subsequent matrix clause has been fronted for thematic topicalization. In (30) it is the range noun phrase of the initial embedded clause that undergoes thematic topicalization, again by fronting. (31), where both of these noun phrases undergo thematic topicalization for their respective clauses, is ungrammatical. The fact that we want to emphasize here is that thematic topic is an operator over the base, not the clause, and not the sentence. Mood, absolute tense, and thematic topic are all operators over the base which is then a vital and fundamental unit to the organization of the sentence. This base unit is easily overlooked in the study of languages where less distinctions are marked at clause junctures and where the clause is generally coterminous with the base. But Papuan languages like Barai with their plethora of fine morphological distinctions for interclausal relations provide a paradigm for viewing such

variables as the nexi of junctures. In these languages, it becomes clear that the base need not be coterminous with the clause.

5.4 Operators Over the Situation

Up to this point, our discussion of nexus has been limited to peripheral level junctures. All of the data from (5) to (31) have involved junctures that allow fully specified clauses in either of the conjuncts. This means that noun phrases functioning in peripheral roles such as time or location are possible after each of these junctures though in practice they often do not occur. We turn now to core level junctures, junctures which block independent specification of noun phrases functioning in peripheral roles. These junctures join kernels, which we defined as the nucleus of a clause plus the noun phrases in nuclear roles that constitute the role frame of that nucleus.

For distinguishing between nexus types at the core level, we derive important evidence from constraints on the distribution of the mode particles. We discussed in Chapter I that these mode particles occur phonologically bound to a pronoun which functions as the pragmatic peak of the clause. The relevant constraint is illustrated in (32)-(35).

(32) na e ije k-ia, bu-me va-e
 lsg person def say-3pl 3pl-cas go-past
 'I spoke to the people and they just went.'

(33) na-ka k-ia e ije va-e
 lsg-intens say-3pl person def go-past
 'I really made the people go.'

(34) *na-ka e ije k-ia bu va-e
 ['I really made the people go.']

(35) *na k-ia e ije bu-me va-e

The mode particle in (32) occurs in the second kernel demonstrating that at such junctures mode can be specified independently for each kernel. But an important parallel factor is that the coreferential noun phrases which function as nonactor in the first kernel but actor in the second are each overtly specified in their respective clauses. This is not the case in (33) however. Zero cataphora necessarily applies to the nonactor noun phrase in the prior kernel. Any such realization of the coreferential element in this prior kernel is ungrammatical. Mode occurs only in the first kernel of (33) bound to the actor noun phrase. As in (35), this construction blocks any independent specification of mode in the subsequent kernel. (32) encodes coordinate

nexus at the core level and (33) cosubordinate nexus at the same level.

Example (35) is ungrammatical where the pronominal copy occurs in the subsequent conjunct following a cosubordinate nexus. This is because the pragmatic peak also operates over the entire unit when kernels like these are joined via cosubordinate nexus. The constraints are the same for the pragmatic peak as they are for the mode particles. There is no restriction on multiple pragmatic peaks at the core level as long as the nexus between the conjuncts is coordinate. With cosubordinate nexus, however, such a pragmatic peak is blocked in any but the initial conjunct.

There is a parallel here between the constraints on mood, absolute tense, and thematic topic with clauses at the peripheral level and the constraints on mode particles and the pragmatic peak with kernels at the core level. At the peripheral level, mood, absolute tense, and thematic topic are operators over the base which may be simple or complex in terms of its constituent clauses. Here at the core level, mode particles and the pragmatic peak are operators over what we will call the situation, which like the base, may be simple or complex depending on the kind of juncture

encoded between its constituent kernels. With coordinate nexus as in (34)² each kernel is simultaneously a situation so that independent operators are possible in each conjunct. In (35)³ however, where cosubordinate nexus obtains the two kernels constitute a single situation where the scope of the operators must be the combined unit. This explains why the mode particle and the pronominal copy were blocked in the second conjunct of (35). (36)-(39) illustrate the same constraints with different predicates.

(36) no e ije biesir-ia, bu-me kari
 lpl person def fool-3pl 3pl-cas stay
 'We fooled the people and they just stayed.'

(37) no-me biesir-ia e ije kari
 lpl-cas fool-3pl person def stay
 'We just fooled them into staying.'

(38) *no-me e ije biesiria bu kari
 ['We just fooled them into staying.']

(39) *no biesiria e ije bu-me kari

In (36) the two kernels each encode a unique situation, where mode is independently marked in the subsequent conjunct and, as before, each kernel may overtly specify the coreferential element, here the nonactor with biesiria 'fool' and the actor with kari 'sit'. But in (37) zero pronominal-

ization is obligatory for that coreferential element in the first kernel and mode can be specified only once for the whole construction. And the pronominal copy that marks the pragmatic peak is blocked with cosubordinate nexus as in (39). Situations then are minimally a single kernel but may be a combination of kernels depending on the kind of nexus involved. Their validity is established by the constraints on their operators which here at the core level are the mode particles and the pragmatic peak.

Our examples so far have been with kernels that manifested noncoreferential pragmatic peaks. However, this is by no means an essential feature of the cosubordinate nexus. A number of important cosubordinate junctures of this level involve predicates for 'take' and 'carry' in the initial kernel.

- (40) e ije fu sime abe burede ije ufu
 person def 3sg knife take bread def cut
 'The man used a knife to cut the bread.'

- (41) e ije fu bara fu-one mesiri
 person def 3sg woman 3sg-poss take.along
juare va
 garden go

'The man took his wife to go to (the) garden.'

- (42) e ije fu ame ije dabe asoe fu-one
 person def 3sg child def carry father 3sg-poss
m-a-e
 give-3sg-past

'The man carried the child to give (him) to his father.'

In (40)-(42), the two kernels require coreferential pragmatic peaks. This in itself however does not establish co-subordinate nexus, as coordinate nexus at the core level also yields constructions that allow zero anaphora for coreferential pragmatic peaks.

- (43) Vito fu ij-ia keke, e ije/ifej-ia
 Vito 3sg def-L arrive person def help-3pl
bu
3pl
- 'Vito arrived there and helped the people.'

- (44) Vito fu ij-ia keke, e ije ifej-a
 Vito 3sg def-L arrive person def help-3sg
- 'Vito arrived there and they helped the man.'

On the surface (40)-(42) and (43)-(44) exhibit the same structure, but if we apply the modal test, mode is blocked in (40)-(42) but not in (43)-(44).

- (45) *fu sime · abe, ka-burede ije ufu
 3sg knife take intens-bread def cut

['He took the knife and really cut the bread.']

- (46) fu ij-ia keke, ka-e ifej-ia
 3sg def-L arrive intens-person help-3pl

'He arrived there and really helped the people.'

In (45) with cosubordinate nexus the occurrence of the mode particle is blocked but (46) allows such a mode particle in the subsequent conjunct indicating the juncture is no longer cosubordinate but coordinate. We stated earlier that the phonologically bound mode particles normally occur suffixed to the pragmatic peak, but if that pragmatic peak is not overtly realized, the mode particle is prefixed to the following morpheme regardless of its form class. These junctures with coordinate nexus at the core level with coreferential pragmatic peaks provide just the kind of context where mode prefixing occurs. Another context is the opening clause of the clause chains typical of these languages which, as we discussed earlier, are a reiteration of the final clause of the previous chain and contain no new information but function to mark the opening of a new chain.

- (47) ...fu-ka e ije ifej-ia. ka-e
 3sg-intens person def help-3pl intens-person

ije ifej-ia-mo-ga...

def help-3pl-conj-conj

'...and he really helped the people. (He) really helped the people and then...'

So sentence boundaries like that of (47) and coordinate core level junctures create the narrow range of contexts where a mode particle occurs that is not bound to a pragmatic peak. This possibility of mode occurring in the subsequent kernel at core level junctures then provides a grammatical test for distinguishing coordinate and cosubordinate nexus. However, the most obvious distinguishing feature is phonological. A significant pause occurs between core level conjuncts which are joined by coordinate nexus which is absent with cosubordinate nexus. In fact, Barai who are literate in English but just beginning to write in the vernacular frequently respond to this pause by using a semicolon at just these core level coordinate junctures.

Ambiguity seldom arises in any case since the lexical predicates involved create to a large extent a predisposition for the kind of nexus being encoded. The important fact here is that cosubordinate nexus combines two units to function together like one of the units joined by coordinate nexus. This unit is the situation and its reality is attested by the scope and hence distribution of its operators: the

mode particles and the pragmatic peak.

I arai, subordinate structures at the core level embed a full sentence or a clause core to function as a noun phrase in a nuclear role of a kernel. There is no equivalence relation between the conjuncts joined by subordinate nexus, so there is no reason to presuppose that the embedded element need also be a core level structure. Presumably, sentences, cores, or nuclei are all structures that a language could embed with subordinate nexus. Different languages capitalize on these options in different ways. Barai embeds both full sentences and clause cores as core level constituents.

- (48) juare ij-ia a ni ije g-a-ne
 garden def-L 2sg imp 3sg look-3sg-imp
 'Look at it (there) in the garden.'

- (49) juare ij-ia a ni mave n-one
 garden def-L 2sg imp pig 1sg-pos.
sak-a-mo g-a-ne
 bite-2sg-pres/hab look-3sg-imp
 'In the garden, look out for: my pig bites.'

In (48) the range participant with g- 'see, look, look out' is a simple noun phrase whereas in (49) it is an embedded core. With these junctures it is ungrammatical for a peri-

pheral time or location noun phrase to refer to the embedded conjunct independently. This is because it is a core level constituent. This embedding of cores to function as nuclear noun phrases in the core of other clauses seems to be limited to specific lexical predicates. A somewhat wider range of lexical predicates allows the embedding of full clauses as nuclear noun phrases.

- (50) vua fu k-ie-ema ije na-me tot-ie
 talk 3sg say-lsg-past 3sg lsg-cas escape.memory-lsg
 'The talk he said to me, it just escaped my memory.'

- (51) a fu rua-ema k-ie
 2sg 3sg come-past say-lsg
 'You told me that he came.'

Unlike the embedding of kernels, the embedding of clauses allows for independent specification of peripheral noun phrases such as time and location in the embedded conjunct. The embedded clause has its own intonation contour which helps to identify the unit.

- (52) vua fu isuame k-ie-ema ije na-me
 talk 3sg yesterday say-lsg-past 3sg lsg-cas

tot-ie

escape.memory-lsg

'The talk he said to me yesterday, it just
escaped my memory.'

(53) a fu isuame rua-ema k-ie
2sg 3rd yesterday come-past say-lsg

'You told me that he came yesterday.'

In both (52) and (53), the time noun phrase isuame 'yesterday' provides the setting only for the conjunct which occurs embedded in the matrix clause. So subordinate junctures at the core level in Barai embed both full sentences and clause cores. Notice that neither the mode particles nor the reiterated pronouns that mark the pragmatic peak occur in the embedded conjunct. This is again a consequence of their being operators over the situation which need not be coterminous with the kernel. Rather, the situation may be either simple or complex in terms of its constituent kernels.

There is no evidence of simple predicates being embedded to function like noun phrases in nuclear roles in Barai.

5.5 Operators Over the Event

Let us turn our attention now to nuclear level junctures.

We will discuss three different types of constructions that entail nuclear level junctures. In the first of these we simply have a series of phonologically independent lexical predicates. All of the Barai examples of nuclear level junctures in Chapter IV are of this type. We repeat (78)-(82) of Chapter IV here as (54)-(58) to illustrate this kind of nuclear juncture

(54) fu na ire ifej-ie i
3sg 1sg food help-1sg eat

'He helped me eat the food.'

(55) fu burede ije sime abe ufu
3sg bread def knife take cut

'He cut the bread with the knife.'

(56) fu do ij-ia barone na
3sg river def-L die lay

'He lay dead in the water.'

(57) e ije fu a-nafa-fu-o kan-ia
person def 3sg child-pl-3sg-poss kill-3pl

buvua i
cut.up eat

'The man killed, cut up, (and) ate his children.'

- (58) a na ine tua kore-j-ie
 2sg lsg stick break throw-V-lsg
 'You broke off (and) threw a stick at me.'

In each case of the above, the predicate morphemes are phonologically independent words. They are productive in the sense that several combinations are possible with any given predicate. So, for example, ifej- 'help' occurs with a number of other lexical predicates.

- (59) are ifej-ie sa
 house help-lsg build
 'help (me) build a house'

- (60) garasi ifej-ie ufu
 grass help-lsg cut
 'help (me) cut grass'

- (61) kofu ifej-ie ruor-ia
 coffee help-lsg wash-3pl
 'help (me) wash coffee'

Stance predicates are another class of predicates that typically enter into this kind of juncture. (68) of Chapter IV which we repeat here as (62) is such a juncture.

- (62) isuame muge na fase fi isoe
 yesterday night lsg letter sit write
 'Last night, I sat writing a letter.'

Stance predicates are also productive as (63)-(68) indicate with fi 'sit' and mani 'stand'.

- (63) siare fi ume
 betelnut sit chew
 'sit chewing betelnut'
- (64) jukiae fi ufe
 armband sit weave
 'sit weaving an armband'
- (65) kuku fi isu
 tobacco sit smoke
 'sit smoking tobacco'
- (66) mani fie
 stand listen
 'stand listening'
- (67) ire mani i
 food stand eat
 'stand eating food'

- (68) vua mani kua
 talk stand say
 'stand talking'

Another class of predicates that commonly participate in nuclear junctures of this type are motion predicates.

(69)-(77) are the most common of a larger set of such motion predicates.

- (69) aru va = enter + motion away from speaker/hearer
- (70) ajia va = ascend + motion away from speaker/hearer
- (71) ari va = descend + motion away from speaker/hearer
- (72) aru ro = enter + motion toward speaker
- (73) ajia ro = ascend + motion toward speaker
- (74) ari ro = descend + motion toward speaker
- (75) aru vua = enter + motion toward hearer
- (76) ajia vua = ascend + motion toward hearer
- (77) ari vua = descend + motion toward hearer

These motion predicates, like the others above, are phonologically independent words and enter productively into a number of combinations. All of the predicates that enter into nuclear junctures of this type occur elsewhere as full predicates in their own right with the normal options for tense and aspect. And in each case, the meaning of the combination is readily determined from the meaning associated with each stem when used outside of such combinations. It is clear then that what we have here is a productive syntactic phenomenon of nuclear juncture and not a lexical compounding process. For further discussion of the constraints on such nuclear coordinate junctures crosslinguistically see Foley and Olson (1981).

There is a second group of what we are arguing are nuclear junctures which seem more akin to lexical compounding. This is because the resulting combination of predicate stems form a single phonological word. One or the other of the predicates entering into the combination loses its pitch-stress. The sequence fāre 'touch' with high pitch-stress on the first syllable and fīe 'sense', hear, or understand' with low pitch-stress on the first syllable becomes fārefie 'feel' with only a single high pitch-stress on the initial syllable. But notice that combinations with fīe are productive wherever selectional restrictions allow.

- (78) í-fie 'eat' + 'sense' = 'taste'
- (79) isuã-fie 'urinate' + 'sense' = 'need to urinate'
- (80) kumê-fie 'call' + 'listen' = 'call out for'
- (81) ninãe-fie 'sleep' + 'sense' = 'be.sleepy'

Again the set of predicates that enter into junctures of this kind is limited, but despite the loss of stress, the construction is productive with one or both stems occurring with a variety of other predicates. (82)-(87) are further examples of this kind of juncture.

- (82) sâmua-ga 'wait' + 'see/know' = 'wait to see'
- (83) í-ga 'eat' + 'see/know' = 'eat to find out'
- (84) kumê-ga 'call' + 'see/know' = 'call out to see'
- (85) bi-m-íe 'take' + 'give (me)'
- (86) bi-ró 'take' + 'come'
- (87) bi-í 'take' + 'eat'

These predicates may each occur independently in other contexts, a range of tense and aspect options. The meaning

of the combined unit is readily derivable from the meaning of the stems when used individually. The evidence, then, is against a compounding process despite their phonological affinity because they are productive and no idiosyncratic meaning is involved.

However, a third group of apparent junctures at the nuclear level does not appear to be a juncture between predicates at all. It is a fusion that results in an idiosyncratic interpretation which is not readily derivable from the meanings associated with the individual predicates when used in isolation.

(88) kanā + afuì = kanāfui
hit gather pack up

(89) nakāe + kuāe = nakāekuae
cover speak dream

(90) sauí + va = sauivá
be.lost go hunt

(91) arōe + karā = arōekara
praise light.up brag

It is only for this latter category that we would require separate lexical entries for the combined predicates.

The question remains as to whether the other two groups of nuclear level junctures that we have described above can be distinguished from one another in terms of the kind of nexus involved. In order to establish the nexus distinctions at this level, we must be able to show that predicates joined by cosubordinate nexus combine to function as a single unit in a way that those conjoined by coordinate nexus do not. For a subordinate nexus we must be able to demonstrate that one predicate embeds within the other. We will argue that subordinate nexus does not occur at the nuclear level, a fact that is not surprising since the nucleus is the very heart of the clause and as such lacks constituents in which to embed.

However, there are different constraints on the distribution of certain aspectuals for each of the two groups of nuclear junctures above. With the phonologically independent stems, the individual predicates may each take independent aspectuals (whenever semantically appropriate). With stems that are phonologically bound, however, these aspectuals may not intervene although they may occur following the combination. This is convincing evidence that the aspectuals are operators over a unit that may be simple or complex in terms of constituent predicates. We will call this unit the event.¹ The event may be simple or complex in terms of constituent

¹Our use of the term event does not exclude any class of predicates. Stative predicates are included here as well.

predicates, just as the situation may be simple or complex in terms of constituent kernels, and the base in terms of constituent clauses. (54)-(77) exhibit coordinate nexus where each conjunct is coterminous with an event while (78)-(87) exhibit cosubordinate nexus where the combination constitutes a single event, the difference being manifested by constraints on the scope of aspectuals as operators over the event.

(92)-(100) exhibit aspectual uses of furi 'finish', va 'go, continue', and arè 'cease'.

- (92) í furi 'finish eating'
 (93) isoè furi 'finish writing'
 (94) ufí furi 'finish cutting'
 (95) kàri vâ 'continue living, live one'
 (96) imè vâ 'continue working, work on'
 (97) bièsiri vâ 'continue fooling'
 (98) kuà arè 'stop talking'
 (99) nimé arè 'stop crying'
 (100) kufuimé arè 'stop lying'

(101) demonstrates a coordinate juncture with the aspectual predicate intervening.

- (101) fu vazai ufu furi numu akoe
 3sg kunai.grass cut finish pile throw.away
 'He finished cutting, piled, and threw away the grass.'

The scope of the aspectual furi 'finish' is only the first of the string of conjoined predicates. With the second group of nuclear junctures (78)-(87) however, the aspectual predicate cannot occur between the predicates but can only follow the combination.

- (102) a ni ire ije i-fie are-ne
 2sg imp food def eat-sense stop-imp
 'Stop tasting the food.'

- (103) fu kai fu-one kume-fie va
 3sg friend 3sg-poss call-listen continue
 'He continued calling and listening for his friend.'

- (104) *fu kai fuone kume-va-fie

(104) is not possible even though the intervening aspectual, va 'continue', seems feasible semantically. Similarly, are 'stop' and furi 'finish' are blocked from occur-

ring at these junctures.

These aspectuals are operators over events, events that may be simple or complex in terms of their constituent predicates. At junctures with coordinate nexus the scope of the aspectual will only be a single predicate. However, following a cosubordinate nexus, the scope of the aspectual is the combination of predicates as in (102) and (103), the same combination that constitutes the event.

5.6 Three Levels of Clause Chaining

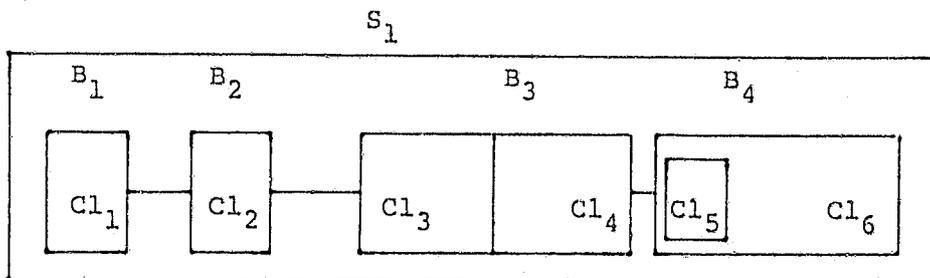
Any cosubordinate nexus encodes a part-whole equivalence relation where the conjoined conjuncts constitute a 'whole' just as they do at each level of juncture. The equivalence relation at the nuclear level is between predicates, the whole being the event, the entity over which aspect is the operator. It is contrastive with coordinate nexus which also encodes an equivalence relation but between distinct events which may be independently marked for aspect.

At the core level, cosubordinate nexus encodes an equivalence relation between kernels where the whole is the situation, the entity over which mode and pragmatic topic are operators. Coordinate nexus joins kernels as distinct situations each of which may take independent operators. Subordination embeds some clause level unit into a constituent of the kernel. Then at the peripheral level, cosubordinate

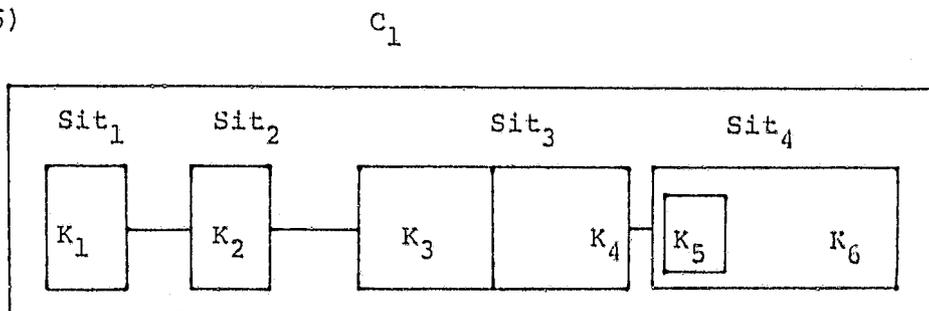
nexus encodes an equivalence relation between clauses, the whole being the base which is the entity over which absolute tense, mood, and thematic topic are operators. Coordinate junctures, on the other hand, allow these operators to occur independently with each clause. Both the level of juncture and the type of nexus involved are crucial parameters of interclausal relations.

We can schematically represent the structural possibilities at the various levels as below where (105) depicts structure at the peripheral level, (106) at the core level, and (107) at the nuclear level.

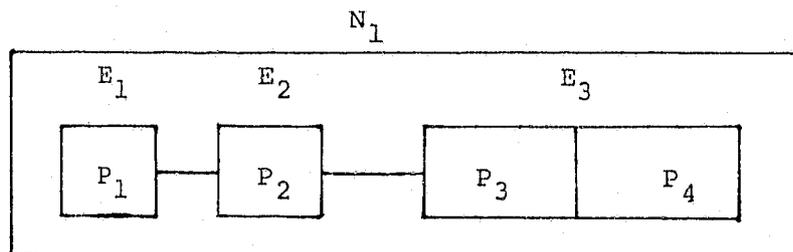
(105)



(106)



(107)



Chaining may occur at each level, but the links of the chain are defined by the operators for that level. It is bases, then, that chain at the peripheral level in (10⁵) to form the sentence (S_1). Mood, thematic topic, and absolute tense are the operators that define bases. At the core level in (10⁶), it is situations that chain to form the core (C_1), where mode and pragmatic peak are the operators that define the situation. And it is events that chain at the nuclear level to form the nucleus (N_1) where aspectuals are the operators that define the event.

In our discussion of the clause chains of Papuan languages in Chapter IV we pointed out in very general terms that analysts frequently distinguish between 'medial' and 'final' verbs. We noted earlier Longacre's claim that 'there is a grand structural division between the distinctive verb of the main clause which is often called the independent or final verb, and the verbs of the other clauses which are sometimes referred to as dependent or medial verbs' (Longacre 1972:2). This is somewhat of an overstatement since

most analysts would not consider all nonfinal verbs 'medial'. Rather, the medial verbs are generally held to be those that not only take different affixes but tend to encode certain particular kinds of relationships. These relationships generally include temporal relationships of sequence, delayed sequence, simultaneity, continuous with no overlap, and continuous with overlap. It is precisely this set of relations that exhibit cosubordinate nexus at the peripheral level in Barai.

These junctures have been considered dependent or subordinate heretofore by most analysts, although a distinction is often made between two kinds of subordinate clause. A. Loving and H. McKaughan (1964), for example, distinguish between two kinds of dependent verbs in their treatment of the internal structure of dependent verbs in Awa. Franklin (1971) also comments on the tendency to classify this subset of junctures as subordinate. He states that 'generally speaking in New Guinea languages such time relationships have not been described as coordinate clauses' (Franklin 1971:103). He then argues against this position because he sees the critical fact to be what he calls the interdependence of the two clauses. He concludes that these medial verbs mark junctures that are more like coordinate structures than subordinate ones.

Claims that medial verbs mark subordinate junctures probably stem from at least an intuitive recognition of the constraints against independent specification of mood, absolute tense, and thematic topic which are normally associated with subordinate clauses. However, Franklin is responding to an equally viable factor in his notion of interdependence. There is no embedding of one clause within the other, so there is an equivalence relation between the clauses despite the dependencies. It is this factor that makes the 'chaining' of such clauses possible, a feat impossible to a subordinate relation where one clause is embedded in the other. It is understandable then that Papuan studies have focused on either the composite or the equivalence aspect of these junctures, since both elements are there. But there is no reason to assume that the two must be mutually exclusive. They come together in cosubordinate nexus which not only accounts for these medial verb constructions but also for similar distinctions in serial constructions at both the core and nuclear levels.

Finally, ^{and Syder} Pawley (1977:1) has written an important article on how speakers construct discourse one 'clause' at a time. Interestingly, his evidence is relevant to our concept of cosubordinate nexus. He concludes as follows:

A distinction must be drawn between 'novel' and 'memorized' constructions in spontaneous discourse. In the encoding of novel constructions,

each morpheme or word is retrieved independently from the long term memory and combined according to grammatical rule. In the encoding of memorized constructions, morpheme sequences are retrieved as wholes, or by automatic chaining.

^{They are}
~~Pawley~~ is not only discussing serial constructions here but ^{their} ~~his~~ distinction illuminates the difference between coordinate and cosubordinate constructions, particularly at the lower levels. In cosubordinate constructions, chains of predicates and chains of kernels function together as wholes, that is, as single predicates or single kernels. It is easy to see how related events or related situations can come to be generalized as one complex event or one complex situation rather than discrete events or discrete situations. However, when they do, it seems necessary, as Pawley postulates, that the speaker retrieve the complex event as a unit just as he does the discrete event, and that he construct the complex situation just as he does the discrete one. The 'clause' of Pawley's one-clause-at-a-time hypothesis probably corresponds to the clause as we have described it as well. This means that his evidence would not relate to the higher level peripheral junctures. But at the nuclear and core levels, the parallels between cosubordinate constructions and 'memorized' strings and between coordinate constructions and 'novel' strings is striking. Frequent association of the

member conjuncts of a particular string is undoubtedly a prerequisite for cosubordination of both predicates and kernels, so that it is quite reasonable that such strings should be referred to as 'memorized'.

CHAPTER SIX

THE SEMANTIC RELATIONS OF JUNCTURES

In our discussion of levels of juncture and types of nexus, we have been concerned with grammatical meaning or grammatical relations. In this chapter, however, we will sketch briefly various kinds of semantic relations which Barai encodes at clause junctures. There are four major fields of such semantic relations which we will discuss here. They are temporal, causal, contrastive, and hypothetical. These semantic relations combine with each other, with switch-reference relations, and with the levels of juncture and types of nexus in a variety of ways. As we shall see in the following chapter, there are important constraints on the various combinations that are operative at any particular juncture. In this chapter, however, we will concentrate on the kinds of semantic relations that Barai encodes at clause junctures. Our purpose will be to demonstrate that these semantic relations are not predictable from the grammatical relations of levels and nexus, but constitute still another intersecting parameter of interclausal relations which are superimposed over the grammatical relations.

6.1 Temporal Relations

A simultaneous relation requires some degree of temporal overlap between the events of the conjuncts being joined. They need not be coterminous as to inception and termination but they are at least viewed by the speaker as taking place in roughly the same temporal frame. The conjunctive markers -ko and -kinu encode a simultaneous relation with cosubordinate nexus at the peripheral level.

- (1) bu ire i-ko no vua kuae
 3pl food eat-conj 1pl talk say

'They were eating food and at the same time we were talking.'

- (2) bu ire i-kinu vua kuae
 3pl food eat-conj talk say

'They were eating and at the same time they were talking.'

In (1) the conjunctive marker -ko encodes a change of pragmatic peaks as well. -kinu in (2) further encodes the coreferentiality of pragmatic peaks between the two conjuncts. We discuss this coding of same versus different pragmatic peaks in more detail below. Here we are focusing our attention on the simultaneous temporal relation that is common to both of these conjunctive particles.

The same temporal relation can be encoded for coordinate nexus at the peripheral level by the addition of the affix -ga. This marker encodes same or different thematic topic as well as the grammatical information of coordinate nexus at the peripheral level. However, the coding of same or different pragmatic peak is lost with coordinate nexus, neutralizing the contrast between -ko and -kinu so that only -ko-ga results, not *-kinu-ga.

- (3) na kofu mubu-ko-ga Vito fu are
 lsg coffee pick-conj-conj Vito 3sg place
Umuate ij-ia va
 Umuate def-L go

'I was picking coffee and at the same time Vito was going to Umuate village.'

The blocking of -kinu-ga seems reasonable. A coordinate nexus between two bases with the same pragmatic peak and occurring at the same time seems unlikely. If one pragmatically prominent referent participates in more than one state of affairs in roughly the same temporal frame, it is more than likely that the two related clauses are viewed by the speaker as interrelated aspects of a single base which means that cosubordinate nexus will mark the juncture.

A simultaneous temporal relation may also be encoded via subordinate nexus at the peripheral level. The juncture is marked by the definite article functioning as a complementizer and uses a tense marker which is interpreted as relative on the predicate of the embedded clause.

(4) na ro-ve ij-ia na m-a-e
 lsg come-pres conj-conj lsg give-2sg-past

'At the time I came, I gave (it) to you.' or
 'When I came, I gave it to you.'

It is important to note that this construction is distinct from the relative clause construction that requires a nominal head to precede the relative clause itself. The relative tense means that the temporal orientation of the embedded clause is present with respect to that of the matrix clause, that is, the two are simultaneous.

Certain of the nuclear level junctures also encode a simultaneous relation. There is no overt marker at the nuclear level, but the simultaneous relation is predictable from the particular predicates involved.

Juxtaposition presents an interesting problem. We have outlined a system of junctures which exhibit a variety of different relations marked by juxtaposition. Can we demonstrate that these are distinct junctures and that they do indeed encode different kinds of relations? The semantics of conjunctive elements are often dependent on some

linguistic context (Dik 1968). Since conjunctive elements in particular encode relationships between other linguistic tokens, their meaning is often dependent on those tokens. There is no reason then why a single conjunctive device cannot carry certain information when relating one set of linguistic tokens and quite different information when used with another. This is in fact well attested with overt conjunctive elements as we pointed out above in Chapter V, but it is equally true of juxtaposition as a conjunctive mechanism. It is thus possible to ascribe different relations to conjuncts joined by juxtaposition according to the kind of conjuncts involved. Core level junctures will encode different relations than nuclear level junctures, though both are juxtaposed. The same would apply to different nexus options at the same level, or even where particular classes of predicates are involved in the conjuncts being joined.

At coordinate junctures of the nuclear level, stance predicates and motion predicates in the prior conjunct entail a simultaneous relation. We repeat (63)-(65) and (75)-(77) of Chapter V here as (5)-(10).

- (5) siare fi ume
 betelnut sit chew
 'sit chewing betelnut'

- (6) jukiae fi ufe
 armband sit weave
 'sit weaving an armband'
- (7) kuku fi isu
 tobacco sit smoke
 'sit smoking tobacco'
- (8) aru vua 'enter + motion toward hearer'
- (9) ajia vua 'ascend + motion toward hearer'
- (10) ari vua 'descend + motion toward hearer'

For both sets of predicates only a simultaneous relation may be encoded.

Finally, certain classes of predicates joined by cosubordinate nexus, again at the nuclear level, also encode a simultaneous relation.

(78)-(80) of Chapter V are examples of such junctures. We repeat them here as (11).

- (11) i-fie 'eat' + 'sense' = 'taste'
isua-fie 'urinate' + 'sense' = 'need to urinate'
kume-fie 'call' + 'listen' = 'call out for'

Both events in nuclear junctures like those in (11) necessarily occur in the same temporal frame. Thus we have the simultaneous temporal relation encoded at junctures of all three kinds of nexus as well as two of the three levels. Clearly, this semantic relation is not tied to any particular level or nexus of juncture, but functions as an independent variable.

The second temporal relation we will discuss is sequential. A sequential relation encodes a succession of events. Like the simultaneous relation, sequential relations of various types are encoded with different nexus types and at different levels of juncture. We will begin again with junctures of cosubordinate nexus at the peripheral level which has the greatest number of sequential distinctions. -na encodes a sequential relation which further requires coreferential pragmatic peaks between the two conjuncts being linked.

(12) bu ire i-na vua kuae
 3pl food eat-conj talk say

'They ate food and then told stories.'

-mo also encodes a sequential relation but one which further requires noncoreferential pragmatic peaks in each of the relevant conjuncts. A plural actor in the initial conjunct takes -yo to mark the same relation.

- (13) a isuame mad-i-mo fu
 2sg yesterday be.angry-3sg-conj 3sg
imagi i
 derris.root eat

'Yesterday you were angry at him and then he ate the derris root.'

- (14) bu isuame madi-i-vo fu
 3pl yesterday 'be.angry-3sg-conj 3sg
imagi i
 derris.root eat

'Yesterday they were angry at him and then he ate the derris root.'

-mo (or -vo) is constrained so that absolute tense on the predicate in the subsequent clause must be non-future. If it is future, the conjunctive particle is -kuma, although a plural actor in the initial conjunct will require -kuva.

- (15) a fu g-a-kuma are fu-one
 2sg 3sg see-3sg-conj place 3sg-poss
ij-ia va-ke
 def-L go-fut

'You will see him and then you will go to his house.'

(16) bu fu g-a-kuma are fu-one ij-ia
 3pl 3sg see-3sg-conj place 3sg-poss def-L
 va-ke
 go-fut

'They will see him and then they will go to his house.'

It is quite common, both in studies of Papuan languages and elsewhere, for claims to be made regarding a merging of sequential and causative readings with the same particle. For example, R. Lakoff comments that 'it would be useful ... to discuss the relationship between temporal and causal priority since they share so many syntactic properties as well as use much the same vocabulary (when, after, then, and since may all refer either to time cause)' (Lakoff 1971:127). She then suggests in a footnote drawing on G. Lakoff (1970) that temporal-causal interpenetration may be due to the fact that temporal and causal priority share certain axioms. Thompson and Longacre note the same overlap.

In some languages which simply use a subordinating morpheme like when for time clauses, this morpheme may signal cause as well. It is easy to see why two events which are mentioned together as being simultaneous or adjacent in time are often inferred to be causally related. (Thompson and Longacre 1978:19)

They offer the following examples from English and Wappo of California.

(17) When he told me how much money he lost, I had
a fit.

(18) te šawo pa?-ta-wen ah
he/acc bread eat-past.when/because I/Nom

nale?iš-khi?
angry-nonfuture

'When/because he ate the bread, I got angry.'

The same applies in Barai, especially for the relation encoded by -mo. Junctures marked by -na and -kuma do not seem to share the same degree of interpenetration of sequential and causal readings. Two further examples of -mo junctures are (19) and (20).

(19) ve da-mo bu subi
rain fall-conj 3pl run.away

'Rain fell and so they ran away.'
?'Rain fell and then they ran away.'

(20) a Eroni-do fase isoe-mo fu
2sg Eroni-poss letter write-conj 3sg

rua-e
come-past

'You wrote Eroni a letter and then he came.'
?'You wrote Eroni a letter and so he came.'

(19) occurred in a context where the causal relation was unmistakable but where no sequential relation was

reasonable. In (20), on the other hand, only the sequential relation is applicable in the context where Eroni arrived just as the addressee completed the writing of a letter so that the writing of the letter had nothing to do with Eroni's arrival. It would appear then that either relation or even both may be encoded by the use of -mo.

Another sequential relation at the peripheral level with cosubordinate nexus is one commonly referred to in Papuan studies as the delayed sequence relation. Here one event terminates after which there is a time lapse before the next event commences. The marker for this sequential relation is -ema when the tense of the subsequent clause is nonfuture, and -ekiro when the tense of the subsequent clause is future.

- (21) na va-ekiro isuame una rua-ke
 1st go-conj tomorrow do.again come-fut

'I will go and then (after an interval) will return tomorrow.'

- (22) na nae-ema suke una rua-e
 1sg sleep-conj morning do.again come-past

'I slept and then (after an interval) I came back.'

The past sequence relation is another relation whose marker is conditioned by the number of the actor in the

initial conjunct. A plural actor takes -eva as the conjunctive marker.

- (23) bu nao-eva suke una rua-e
 3pl sleep-conj morning do.again come-past
 'They slept and then (after an interval) they came back.'

Still another sequential relation encoding the same grammatical information is the span. With a span, one activity is prolonged over a period of time until the inception of another. The span relation is encoded in Barai with the morpheme -ma which may be reduplicated indeterminately to emphasize the length of the duration of the span.

- (24) fu zuo-mama ij-ia keke
 3sg come-conj det-L arrive
 'He kept coming until he arrived there.'

As with the simultaneous relations (see page 250 above), one of the markers that encodes a sequential relation with cosubordinate nexus can be used to encode the same temporal relation with coordinate nexus simply by the addition of -ga. This conjunctive marker is -mo.

- (25) ve da-mo-ga bu subi
rain fall-conj-conj 3pl run.away

'The rain fell and then they ran away.'

A sequential temporal relation can also be encoded at a peripheral juncture with subordinate nexus where a clause is embedded in the peripheral margin of another matrix clause. This is the juncture where the definite article and its case marker function as complementizers, and the predicate of the embedded clause takes a tense that is to be interpreted relatively.

- (26) na rua-eva ij-ia na m-a-e
lsg come-past conj-conj lsg give-2sg-past

'After I came, I gave it to you.'

With coordinate nexus at the core level, the juncture encodes a sequential temporal relation. We repeat (32) of Chapter V here as (27).

- (27) na e ije k-ia, bu-me va-e
lsg person def say-3pl 3pl-cas go-past

'I spoke to the people (and then) they just went.'

With cosubordinate nexus at this level, however, junctures between kernels with coreferential actors encode sequential or causal relations. However, junctures between

kernels with noncoreferential actors encode only causal relations as in (35) below. We illustrate the sequential relation here with (42) of Chapter V as (28).

(28) fu ame ije dabe asoe fu-one
 3sg child def carry father 3sg-poss

m-a-e
 give-3sg-past

'He carried the child (and then) gave (him) to his father.'

At the nuclear level, the temporal relation encoded between predicates is determined by the class of predicates involved. We noted above certain classes of predicates such as stance and motion predicates that encode a simultaneous temporal relation at these junctures. Statistically, these are few. The majority of such predicate classes entail a sequential relation. We repeat here (57) and (58) of Chapter V.

(29) e ije fu a-nafa-fuo kan-ia
 person def 3sg child-pl-3sg-poss kill-3pl

buvua i
 cut.up eat

'The man killed, (then) cut up, (and then) ate his children.'

(30) a na ine tua kore-j-ie
 2sg 1sg stick break throw-V-1sg

'You broke off (and then) threw a stick at me.'

As with the simultaneous relation, the sequential relation occurs with a variety of nexus types and at different levels of juncture.

6.2 Causal Relations

Another important category of semantic relations we have already discussed to some degree because of their frequent overlap with temporal relations. These are the causal relations. Like temporal relations, causal relations are encoded with a variety of different kinds of junctures.

Natural languages typically distinguish between two types of causal relations. Longacre (1972) captures the most common difference with his distinction between efficient cause and final cause¹. However, there are languages that use the same marker to encode both relations. Jean Shand (1976) describes how the Philippine language, Ilianen Manobo, uses the particle su for both relations.

¹Efficient and final cause are often referred to as reason and purpose respectively.

- (28) kenà edlaus sikandin su ke anak din
 not proceed he conj the child his
ne edredetan
 who fevered

'He will not go ahead because it is his child who is ill.'

- (29) lùlù ke en su emu ka mekekoan
 rinse you now because so you eat
en
 now

'Rinse your hands so that you can eat now.'

Thompson^y and Longacre point out both the unity and the contrast encoded in this distinction.

The semantic explanation for the fact that one morpheme can serve these two functions is that both purpose and reason clauses can be seen as providing explanations for the occurrence of a given state or action. They differ in that purpose clauses express a motivating event which is unrealized at the time of the main event, while reason clauses express a motivating event which realized at the time of the main clause event. (Thompson and Longacre 1978:24)

Thompson and Longacre restrict their discussion to subordinate clauses in accordance with their definition outlined in Chapter V. Hence their distinction between clauses that are main clause events and those that are not. Their criteria apply equally well however to causal relations at any type of juncture.

In Barai there is the causal relation encoded by -mo as discussed above with (19) and (20). This is a peripheral level juncture with cosubordinate nexus. We have also noted that the same marker occurs along with -ga which alters the grammatical meaning from one that encodes cosubordinate nexus to one that encodes coordinate nexus. This causal relation is clearly efficient cause in that the antecedent event motivates the consequent event and is realized at the time of the consequent event. We are not distinguishing here between main and subordinate clauses, but between antecedent and consequent conjuncts of equivalent status. There is no evidence of any embedding of one within the other.

However, efficient cause may be encoded by means of subordinate nexus at the peripheral level as well. Like temporal relations encoded at these junctures, conjunctive complementizers are used. Again, the complementizers are the definite article with its case marker which in this instance is -afuo. Again, the predicate of the embedded clause takes a tense marker is interpreted relatively.

- (30) fireni j-one fu samua-mo ij-afuo
 plane 2pl-poss 3sg wait-pres conj-conj
- na ig-ia iri
 1sg def(here)-L stop

'Because your plane is waiting, I am stopping here.'

- (31) bu fu kan-a-ema fu ij-afuo
 3pl 3sg hit-3sg past 3sg conj-conj
ko-e
 run.away-past
 'Because they hit her, she ran away.'

Notice that the complementizers, ij-afuo, need not occur right at the point of the juncture but may occur following the first word of the subsequent matrix clause.

A clause may be embedded in the peripheral layer of another clause where the semantic relation between the two is causal, just as was the case with temporal relations. Here the relation is efficient cause as the antecedent clause motivates the consequent clause where neither is unrealized or hypothetical.

We have also discussed the encoding of a causal relation at the core level with cosubordinate nexus. This is the construction that requires coreferentiality between the actor of the subsequent kernel and a nonactor nuclear noun phrase in the prior kernel where zero cataphora is required for the coreferential element in the prior clause.

- (32) na k-ia e ije va-e
 lsg say-3pl person def go-past

'I made the people go' or 'I spoke (to them) causing the people to go.'

Again the antecedent conjunct motivates the consequent conjunct and neither is hypothetical. Efficient cause is then encoded with various kinds of nexus and at different levels of juncture.

With final cause, on the other hand, the consequent event is hypothetical. Thompson and Longacre (1978) express final cause or purpose in terms of a 'subordinate' event and a 'main' event such that the motivating (subordinate) event is unrealized at the time of the main event. But in more general terms, final cause is an explanatory relation between an antecedent event and a consequent event where the consequent event is unrealized at the time of the antecedent event. We will discuss still another causal relation below where the unrealized or hypothetical event may be the antecedent rather than the consequent event.

Final cause may be encoded in Barai by means of cosubordinate nexus at the peripheral level, the core level, or the nuclear level.

(33) na Efera totini ij-ia Fofoda
 lsg April thirteen def-T Popondetta
rua-kiro Sira ij-ia fireni samua
 come-conj Sila def-L plane wait-for
fi-jo
 stay-pres

'I am staying and waiting for the plane at Sila in order to go to Popondetta on April 13.'

- (34) na fata ufe kofu uvia-vo
 1sg platform build coffee dry-pres/hab
 'I am building a platform to dry coffee.'

In both (33) at the peripheral level and (34) at the core level the consequent conjunct is unrealized at the time of the antecedent conjunct.

At the nuclear level, final cause is encoded between specific sets of predicates. One of these sets which uses ga 'see/know' in the final conjunct, we repeat here as (35)-(37).

- (35) sámua-ga 'wait' + 'see/know' = 'wait to see'
 (36) í-ga 'eat' + 'see/know' = 'eat to find out'
 (37) kumé-ga 'call' + 'see/know' = 'call out to see'

There is a further causal relation in Barai that does not appear to fit Longacre's typology of causal relations. The relation is marked by the conjunctive particle -do which occurs bound to a predicate that takes a tense marker, interpreted relatively, which occurs in the embedded clause. (40)-(42) illustrate junctures with -do.

- (38) fu e ireobo-do fu sumo
 3sg person adult/large-conj 3sg loin.cloth

kasa
 wear

'He wears a loin cloth as (if) he were an adult.'

- (39) fu fari-do fu aeke
 3sg boy-conj 3sg play

'He plays as (if) he were a boy.'

- (40) bu ime-iva-do bu aem-ia
 3pl work-past-conj 3pl be.tired-3pl

'They are tired as (if) they had worked.'

- (41) bu mad-ia-eva-do bu-be rua-ke
 3pl be.cross-3pl-past-conj 3pl-neg come-fut

'They will not come as (if) they had been cross.'

- (42) na idua-d-ie-do do ije na
 1sg be.cold-V-1sg-conj water def 1sg

ise-d-ie
 displease-V-1sg

'The water displeases me as (if) I were cold.'

We have used the English terms 'as (if)' to try to capture a relation which is first of all a causal relation since the antecedent clause provides an explanation for the consequent clause. However, the feature we want

to point out that distinguishes this from the other causal relations is that the event in the clause marked by -do need not be realized. It is hypothetical in that the semantic relation encodes no implication regarding the factuality of the -do clause. Thus, (38) or (39) may be said of either a child or an adult. The factuality of the event will be derived from the context. This seems to counter Longacre's claim that in causal relationships 'the antecedent is factual, or is at least assumed to be so for the sake of the argument' (Longacre 1976:124). We will refer to this causal relation as hypothetical cause.

The hypothetical cause relation marked by -do is another causal relation of subordinate nexus at the peripheral level. The fact that this juncture takes the special set of tense markers that accompany only subordinate junctures is the strongest evidence for this. However, unlike other subordinate junctures at this level, there is no accompanying definite article functioning as a complementizer. Instead there is a bound conjunctive particle. There are two bits of evidence which explain this exception. The first is that nonfactuality and definiteness are incongruous semantically so that it seems reasonable that no definite article is involved in marking the juncture.

The second is that -do and -afuo encode similar relations elsewhere in the grammar, so that it is plausible that they both encode causal relations for embedded clauses

here as well. For example, -do is used as a possessive marker with proper nouns and -afuo is used after the article with common nouns for the same relation.

(43) Vito-do sime
 Vito-poss knife
 'Vito's knife'

(44) e ij-afuo sime
 man def-poss knife
 'the man's knife'

There are then two causal relations encoded at the peripheral level with subordinate nexus. The hypothetical causal relation is encoded only at this juncture. Final cause is encoded at all three levels of juncture with cosubordinate nexus. Efficient cause is encoded with all three nexus types and at two different levels. Thus causal relations, like temporal relations, are not specific to any given level or nexus type, but are among the possible semantic relations encoded at a variety of junctures.

6.3 Contrastive Relations

In addition to temporal and causal relations, contrastive relations may be encoded at clause junctures.

There are three conjunctive particles in Barai that encode some contrastive relation. They are -ro, bite and -o. Each marks a coordinate juncture at the peripheral level.

The conjunction -ro encodes an adversative contrast similar to that encoded by the English conjunction but. Dik (1968) characterizes this relation as a conjunction between clauses where one is in some way contrary to the other, or to an implication of the other, or where one would not be expected relative to the other or to an implication of it. The constant semantic value is always an opposition, but not necessarily between paired elements, one of which is taken from each of the conjoined clauses.

On the other hand, Longacre (1976) requires at least two opposed pairs of lexical items for contrastive relations such as the but of English. For Longacre one opposition may be based on either a negative-positive use of the same predicate or on the use of a pair of antonyms (used in a fairly broad sense) including temporal or spatial oppositions. Then he requires some further pair of antonyms (including positive/negative contrasts) or simply a difference of participants. He illustrates with the following.

(45) I don't like hamburgers but my wife does.

(46) I abhor hamburgers but my wife loves them.

- (47) He's naive about some things but not naive about others.

(45) exhibits a positive/negative contrast and a difference of participants. (47) uses a pair of antonyms along with a difference of participants which shows up with noun phrases functioning in peripheral rather than nuclear roles.

Clearly such oppositions are within the domain of the adversative relation in both Barai and English, but we would claim that the semantic opposition here need not be between lexical pairs of the two conjoined clauses.

- (48) na rua-e ro na ninae-i
 lsg come-past conj lsg sleep-past
 'I came but I slept.'

In (48), the opposition is between an implication associated with 'come' and the predicate 'sleep' in the subsequent clause, not between the two predicates as such. 'Sleeping' may then be in contrast to 'dancing' which is derived from the contextual situation.

Note also that Longacre includes a simple difference of noun phrases as a possible option for what he sees as the second necessary opposition of a contrastive relation. Presumably then, the noun phrases need not be in opposition in any sense, but simply distinct in reference.

Barai encodes such a difference but quite independently from the contrastive ro above in (48). This is by means of conjunctive markers discussed above which encode a switch-reference relation which may occur either independently or in conjunction with ro. Their function of monitoring the coreferentiality of certain key noun phrases is entirely divorced from that of the adversative ro in Barai. Barai may combine them, however, as with -ga-ro, paralleling the use of but in English which entails at least two types of contrast.

- (49) na fata o-one ij-ia fi-ga-ro a
 1st chair 2sg-poss def-L sit-conj-conj 2sg
ume ij-ia fi
 ground def-L sit

'I sat on your chair but you sat on the ground.'

-bite and o also encode a contrastive relation but one which is combined with a hypothetical relation which we take up next.

6.4 Hypothetical Relations

Longacre uses the term hypothetical to specify the relation between the antecedent or ^{protasis} ~~apodosis~~ and the consequent or ^{apodosis} ~~protasis~~ of conditions.

Hypotheticality...expresses a condition that expresses nothing about the factuality of either member of the condition, but simply states a relation between an antecedent and a consequent, i.e., the consequent does not follow unless the condition stated in the antecedent also holds... (Longacre 1972:65)

Clearly hypotheticality is frequently a relation between an antecedent and a consequent clause. However, we would argue that hypotheticality is concerned with conditions related to factuality if we consider a wider range of junctures than simply those of conditionals. We are suggesting that there are a number of such hypothetical relations, just as there are variations of temporal and causal relations, each of which are concerned with the factuality of conjoined clauses at particular junctures. There are at least four such hypothetical relations encoded in Barai. These we will distinguish as antifactual, postfactual, nonfactual and ambifactual.

(50) antifactual:	+fact	±fact
postfactual:	±fact	+fact
nonfactual:	±fact	±fact
ambifactual:	±fact	∓fact

The antifactual relation occurs at a juncture where the prior conjunct is to be interpreted as factual but the subsequent conjunct implies nothing as to its factuality. Note that the opposition is not between

coding fact versus nonfact. Rather the opposition is between factuality and ambiguity, or noncommitment as regards factuality. The conjunctive marker -kiro marks a cosubordinate nexus at the peripheral level that encodes this hypothetical relation together with final cause.

- (51) na bu-ina fi-kiro rua-e
 lsg 3pl-accom stay-conj come-past
 'I came to stay with them.'

The postfactual hypothetical relation is encoded with subordinate nexus at the peripheral level where the juncture implies nothing as to the factuality of the initial embedded clause but the matrix clause must be interpreted as factual. Such a hypothetical relation is encoded by the conjunctive marker -do whose causal relation we discussed above.

- (52) fu e ireobo-do fu sumo
 3sg person adult/large-conj 3sg loincloth
kasa
 wear
 'He wears a loincloth, as (if) he were an
 adult.'

-do in (52) encodes a postfactual hypothetical relation. The relation encoded by this conjunctive marker

gives no clue as to whether e 'person' is, in fact, an adult or a child.

What we are calling the nonfactual hypothetical relation is the relation encoded by conditions in which no inference is made about the factuality of either member of a conjoined pair of clauses. Barai forms its conditionals by adding -ne to the markers which encode a sequential/clausal relation. This marker -ne encodes the nonfactual relation. Thus the conjunctive particle -mo encodes a causal/sequential relation within a nonfuture time frame but includes no hypothetical relation. However, -ne combines with -mo creating the nonfuture conditional -mo-ne. The juncture is a cosubordinate nexus at the peripheral level.

- (53) a dua uru-mo-ne e
 2sg song/dance sing/dance-conj-conj person
- ije bu orore
 def 3pl cheer
- 'If ever you danced, the people cheered.'

- (54) no a kuar-a-mo-ne a na
 1sg 2sg speak-2sg-conj-conj 2sg 1sg
- faememare
 ignore
- 'If ever I talked to you, you ignored me.'

In both (53) and (54), a causal relation is combined with a nonfactual hypothetical relation to create the condition. No assumption is encoded about the factuality of either clause.

The same can be said for -kuma which encodes a causal/sequential relation within a future time frame but no hypothetical relation. Combined with -ne which encodes a nonfactual hypothetical relation, however, they create the future conditional -kuma-ne.

- (55) bu oe-kuva-ne no mako ru-ke
 3pl die-conj-conj lpl hole dig-fut
 'When/If they die, we will dig a hole.'

- (56) no ise-d-uo-kuva-ne no ame
 lpl displease-V-lpl-conj-conj lpl boy
 que sinisere-ke
 others change.with-fut
 'When/If we are displeased we will change with
 the other boys.'

The future conditionals are parallel to the nonfuture conditionals. In (55), no assumption is made about the factuality of people dying or the digging of a hole. The same relation is encoded in (56) where no assumption is being made about either of the key participants being displeased or about their changing with the other boys.

The hypothetical relation is superimposed on the causal/sequential relation by the addition of the particle -ne.

-bite is a conjunctive particle which encodes a nonfactual hypothetical relation by means of subordinate nexus at the peripheral level. It combines an efficient causal relation, a hypothetical relation, and a positive/negative reversal to form the contrafactual condition. Again no assumption is made about the factuality of either of the conjoined clauses.

- (57) fu rua-eva-bitie a g-a-ke
 3sg come-past-conj 2sg see-3sg-fut

'If he had come, you would have seen (him).'

- (58) ivia suke ve ma-re-bitie na
 today morning weather fine-be-conj 1sg
rua-ke
 come-fut

'If the weather had been fine this morning,
 I would have come.'

Neither conjunct of either (57) or (58) is to be interpreted as factual. Along with the causal relation, the juncture encodes a positive-negative reversal such that both conjuncts are interpreted negatively even though no negative marker occurs.

There are two sets of alternative conjunctive markers which encode hypothetical relations as well. These are o and the disjunctive pair (bite)...bite. Here the hypothetical relation is not linked with any causal relation at all. Rather, it concurs with a contrastive relation. Like the adversative conjunctive marker ro, the contrast may result from any kind of semantic opposition including negative/positive values of the predicate and situational or contextual oppositions.

We will consider first of all the conjunctive particle o. It encodes an ambifactual hypothetical relation along with its contrastive relation. Here the ambifactual hypothetical relation presupposes the factuality of one of the conjuncts but not of the other(s).

- (59) a be vua o a ba
 2sg interr come conj 2sg neg
 'Are you coming or are you nog?'

Here, o encodes not only a semantic contrast, in this case a positive/negative contrast of predicates, but also an ambifactual hypothetical relation in that it allows only one clause to be factual but does not specify which it is.

- (60) fu iro abare o iro sisime
 3sg yam abare conj yam sisime
 'It is either an abare yam or a sisime yam.'

The same applies in (60). The yam is either an abare yam or a sisime yam, one or the other. One is factual and the other is not, but the hypothetical relation does not indicate which it is.

Contrast this with the alternative conjunctive, (bite)...bite which also encodes a hypothetical relation along with a semantic contrast. This time the hypothetical relation is nonfactual. The relation expresses nothing about the factuality of either member of the conjunction.

(61) bite fu rua bite ig-ia fi
 conj 3sg come conj def(here)-L stay
bite Vito-ki va
 conj Vito-accom go

'He might come or he might stay here or he might go with Vito.'

In (61) then, the hypothetical relation at each juncture is nonfactual, so that fu '3sg' may or may not come, may or may not stay, and may or may not go with Vito. No claim is made about the factuality of any conjunct in the string.

With hypothetical relations we have reviewed four main fields of semantic relations which maybe encoded at various junctures. There are certainly others such as the positive/negative reversal of the contrafactual marker, -bitie. However three of these four serve particularly

well our purpose of demonstrating that there is no necessary isomorphic relationship between nexus type or level of juncture and specific semantic relations. The one exception is the contrastive relation which only occurs with coordinate nexus at the peripheral level. A contrastive relation can only hold between 'wholes' or bases that can be placed in opposition to one another, not between 'parts' or clauses of the same base. The other semantic relations however are distributed over a variety of levels and types of nexus and as such constitute another important variable of interclausal relations.

CHAPTER SEVEN

THE SWITCH-REFERENCE RELATIONS OF JUNCTURES

Still another important relation marked at clause junctures is that which has been called switch-referencing since Jacobson's 1967 article on 'Switch-reference in Hokan-Coahuiltecan'. The phenomenon is common in both Amerindian and Papuan languages and is usually said to monitor the coreferentiality of 'subjects' in succeeding clauses. Healey, for example, calls the relevant affixes subject preview markers and says they 'indicate whether the subject of the following clause is homopersonal - the same as the present clause - or heteropersonal - different from that of the present clause' (Healey 1966:14). Longacre describes the phenomenon as a distinctive feature of chaining in Papuan languages that is preoccupied 'with the matter of whether the following clause has the same subject or a different subject from that of the preceding clause. As a result, a preceding clause has some device for marking whether the oncoming clause will have the same or different subject' (Longacre 1972:2). Such characterizations of switch-reference presuppose a fairly transparent notion of 'subject'. However, a number of recent studies (e.g., Schachter 1976; Foley and Van Valin 1977; and Olson 1976) have shown the 'subject' relation to be problematic in that 'subjects' result from a variable convergence between

the coding of role information and pragmatic information. So the properties normally associated with 'subjects' in languages such as the Indo-European languages where a traditional 'subject' notion is transparent, may well be distributed to more than one noun phrase in other languages. Schachter demonstrates this distribution between 'actor' and 'topic' categories in Tagalog. An even more complex situation arises in Barai. We have discussed four categories in Barai, each with specific syntactic reflexes, which have properties which have been associated with 'subjects'. Thus when we consider a switch-reference relation for any conjunctive marker in Barai, it is imperative to ascertain which category is being monitored.

Many analysts, particularly in Papuan linguistics, describe their switch-reference systems in terms of monitoring actors (e.g., Staalsen 1972) or they may simply presuppose an identity between actors and subjects. Consequently, Geary (1977) is able to describe the Kunimaipa switch-reference system without reference to the particular predicate of the subsequent conjunct. -puho indicates same subject and -na different subject. She illustrates this with (1) and (2).

- (1) ta-pane-na
do-3sg/imperfect-change
'When he does...'

- (2) ma-na-ha-puho
 3sg-give-3pl/perfect-same
 'They gave it to him and...'

Superficially Barai appears to operate in the same way. A survey of text material will demonstrate that a change of referent marker normally occurs at clause junctures where the actors of the two succeeding clauses are not coreferential. However, while this is normally the case, there are a number of significant exceptions which yield insight into the nature of the switch-reference relation in Barai.

Barai has three different sets of conjunctive particles that encode a switch of referents between key elements of the relevant conjuncts. We have already discussed the particles -mo, -na, -ko, and -kinu and their coding of temporal and/or causal relations together with cosubordinate nexus at the peripheral level. We have also discussed the conjunctive marker -ga as encoding coordinate nexus at the peripheral level and potentially combining with -mo and -ko, though not with -na or -kinu. In fact, -mo, -ko and -ga each encode a change of referents between key noun phrases of conjoined clauses while -na, -kinu, and yet another conjunctive marker -gana encode the coreferentiality of certain key referents.

Switch-reference Markers

		NO SWITCH	SWITCH
CO-SUBORDINATE NEXUS	sequence	- <u>na</u>	- <u>mo</u>
	simultaneous	- <u>kinu</u>	- <u>ko</u>
COORDINATE NEXUS	sequence	- <u>gana</u>	- <u>moga</u>
	simultaneous		- <u>koga</u>
	unspecified		- <u>ga</u>

We will discuss these markers in pairs beginning with -mo and -na which have a sequential relation in common. We will then follow on with -ko and -kinu which have a simultaneous relation in common and conclude with -ga and -gana which need not encode any temporal relation at all. -ga and -gana monitor thematic topics rather than pragmatic peaks and encode a kind of nexus that is different from the others.

7.1 Monitoring Pragmatic Peaks

First of all, with -mo and -na, it would seem from sentences like (3) and (4) that it is indeed the actor which is being monitored in the switch-reference relation.

- (3) fu juae me-na fae kira
 3sg garden make-conj fence tie

'He made a garden and then tied a fence.'

- (4) fu juae me-mo fu fae kira
 3sg garden make-conj 3sg fence tie

'He made a garden and then he tied a fence.'

In (3), the actor of the prior clause is coreferential with the actor of the subsequent clause. Part of the semantic information encoded by the conjunctive marker -na appears to be the encoding of this identity between actors. In (4) on the other hand with -mo the actor of the first clause is a referent distinct from the actor in the subsequent clause. (5) and (6) appear to lend even further support for this hypothesis. Here the actors in the initial clauses are not responsible actors but rather function in a force role without any implication of responsibility. Still, the switch-reference marker is -mo apparently for noncoreferential actors. The pragmatic peaks are coreferential and had they been monitored by switch-reference, we would have expected the -na marker.

- (5) ije no-ka ise-d-uo-mo no bu
 def lpl-intens displeas-V-lpl-conj lpl 3pl
kan-ia
 strike-3pl

'It really displeased us and then/and so we struck them.'

(6) ije bu-ka vasiao-r-ia-mo bu
 3sg 3pl-intens make.hungry-V-3pl-conj 3pl
va-e
 go-past

'This made them hungry and then/and so they went.'

ije '3sg' in (5) is the actor in the first clause functioning as force without responsibility while no '1pl' is the actor of the second clause. They are distinct referents and the change of referent marker -mo is used as we would expect if actors were being monitored by the switch-reference relation. Likewise in (6), ije '3sg' is the actor of the first clause and bu '3pl' is the actor of the second. They are noncoreferential and -mo, the change of referent marker, occurs. bu '3pl' is the pragmatic peak in the first clause as well as the second, but that coreferentiality does not trigger -na, which encodes the same referent relation, so we would assume that pragmatic peaks are not being monitored. The same reasoning applies to no '1pl' in both conjuncts of (5).

However, there are uses of -mo and -na in other contexts which demonstrate that the monitoring of coreferentiality between actors does not provide an adequate explanation for their variation. For example, -mo is sometimes used where the actors of the clauses being joined are coreferential.

- (7) na e-be kan-ie-mo fu ko
 lsg person-indef hit-lsg-conj 3sg run.away
 'Someone hit me and then/and so he ran away.'

- (8) kusare ije na tot-ie-mo fu
 flower def lsg escape.memory-lsg-conj 3sg
saere
 withered
 'The flower escaped my memory and so/and then it withered.'

In the first clause of (7) e-be 'person-indef/nonspec' is the actor and fu '3sg' in the second clause, the same referent, is again the actor. But despite their coreferentiality, the switch-reference marker is -mo for different referent. In (8) kusare ije 'flower def' is the actor in the first clause as well as the second, and again the marker -mo encodes a difference in the referents it is monitoring.

Similarly, -na is sometimes used where the actors of the conjoined clauses are not coreferential.

- (9) fu miane sak-i-na barone
 3sg firestick bite/burn-3sg-conj die
 '(A) firestick burned him and then (he) died.'
- (10) na ime-na ine bij-ie
 lsg work-conj stick spear-lsg
 'I was working and then (a) stick poked me.'

The actor of the first clause in (9) is miane 'fire-stick' which is clearly not coreferential with the '3sg' referent that is the actor of the second clause. And then in (10), na 'lsg' is the actor in the prior clause but ine 'stick' is the actor in the subsequent clause. The two actors are not coreferential and yet the switch-reference marker is -na, indicating that the referents it is monitoring are coreferential. For these examples, at least, switch-reference cannot be monitoring the coreferentiality of actors.

In the last four examples, (7)-(10), the coreferentiality of the pragmatic peaks is compatible with the predictions of the switch-reference relations.

In the first clause of (7) the predicate kan- 'hit' requires a responsible actor and so places its pragmatic peak in the prior position. na 'lsg' is then the pragmatic peak, though not the actor, and is not coreferential with fu '3sg' which is clearly the pragmatic peak in the second clause. The pragmatic peaks are not coreferential and the switch-reference marker is -mo, encoding a difference. In (8), the predicate tot- 'escape memory' requires a non-responsible actor and places its pragmatic peak in the subsequent position, so that na 'lsg' is the pragmatic peak of the first clause and it is not coreferential with the pragmatic peak of the second clause which must be fu '3sg'. Again the switch-reference marker is -mo, encoding the difference.

And -na in (9) and (10) is compatible with the coreferentiality of the pragmatic peaks of those clause sequences as well. With sak- 'bite, sting' the actor is responsible and the pragmatic peak must assume the initial position. fu '3sg' occupies that position in (9) and is coreferential with the pragmatic peak of barone 'die' and the conjunctive link is -na encoding the identity. In (10), again the pragmatic peak must assume the initial position, since bij- 'spear, poke' requires a responsible actor. In Chapter II we noted that an inanimate actor not coded for definiteness is always outranked by a definite, animate nuclear noun phrase. Thus, although zero anaphora obtains, the patient-goal of bij- 'spear, poke' must be the pragmatic peak. It is this referent which is coreferential with the indisputable pragmatic peak of the first clause, namely, na '1sg'. The pragmatic peaks are coreferential and the marker is -na, encoding their identity.

Therefore, there is an important parallel between access to the pragmatic peak position and the switch-reference relation. We repeat (9) here as (11) along with (12) to demonstrate the effect of the variation in access to pragmatic peak on the coding of switch-reference.

- (11) fu miane sak-i-na barone
 3sg firestick bite/burn-3sg-conj die
 ' (A) firestick burned him and then (he) died.'

(12) miane ije fu sak-i-mo fu barone
 firestick def 3sg bite/burn-3sg-conj 3sg die

'The firestick burned him and then he died.'

The change from an inanimate actor unmarked for definiteness as in (11), to one marked for definiteness as in (12) alters its accessibility to the initial pragmatic peak position. Unmarked for definiteness in (11), it cannot be the noun phrase monitored by switch-reference since it is not coreferential with the sole nuclear noun phrase in the subsequent clause, and yet the marker is -na, encoding same referent. In (12) where the inanimate actor is marked for definiteness and assumes the pragmatic peak position, the switch-reference marker becomes -mo, encoding a difference in the referents it is monitoring. The only other nuclear noun phrase is coreferential with the sole nuclear noun phrase in the following clause. So miane ije 'firestick def' is the noun phrase in the prior clause being monitored by switch-reference.

The same kind of variation occurs with animate noun phrases that are outranked due to indefiniteness. We repeat here (7) as (13) alongside of (14).

(13) na e-be kan-ie-mo fu ko
 lsg person-indef hit-lsg-conj 3sg run.away

'Someone hit me and then/and so he ran away.'

(14) e ije na kan-ie-na ko
 person def lsg hit-lsg-conj run.away

'The man hit me and then ran away.'

The actor noun phrase e 'person' is not monitored by switch-reference in (13) where it is indefinite and not the pragmatic peak, but it is monitored by switch-reference in (14) where it is marked for definiteness and assumes the pragmatic peak position.

There is an important alignment in Barai then between pragmatic peaks and the switch-reference relation. Even instances like (3) and (4), where actors are also pragmatic peaks, are then accounted for under a view of the pragmatic peak as the controller of switch-reference.

However we have still not accounted for (5) and (6) where the pragmatic peaks are indeed coreferential, but the switch-reference markers encode a difference. This is due to another important variable in the switch-reference relation in Barai which overrides the monitoring of pragmatic peaks. A switch from a clause whose fulcrum is a nonactor to one whose fulcrum is an actor will always take the switch of referent marker. This is in spite of any coreferentiality between pragmatic peaks. So both the fulcrum and the pragmatic peak are relevant in determining which participants are monitored by those switch-reference markers that also encode cosubordinate nexus at the peripheral level.

We noted above in (11) and (12) that changes in access to the pragmatic peak position related to the choice of switch-reference marker. But this too fails if the sequence is a clause whose fulcrum is a nonactor followed by one whose fulcrum is an actor.

- (15) ije na-ka visi-nam-ie-mo na-me
 3sg lsg-intens be.sick-V-lsg-conj lsg-cas
gire n-one ij-ia fi
 house lsg-poss def-L sit

'It really sickened me and I am just sitting in my house.'

- (16) na fu-ka visi-nam-ie-mo na-me
 lsg 3sg-intens be.sick-V-lsg-conj lsg-cas
gire n-one ij-ia fi
 house lsg-poss def-L sit

'It really sickened me and I am just sitting in my house.'

Recall from Chapter I that the fulcrum implicitly signals whether the actor is a responsible agent or not. A switch from a nonactor as fulcrum to an actor as fulcrum entails the introduction of a new responsible actor after a clause with a nonresponsible actor. There is a sense then in which Barai still retains a vestige of the monitoring of actors in this switch-reference system.

A variable of responsibility or control in the switch-reference relation has been attested elsewhere as well. Carol Slater (1977) documents a related phenomenon in Kwtsaan. (17) and (18) are her examples of a switch-reference device where an inadvertent action is marked by -m, the marker for switch of reference, despite the coreferentiality of 'subjects'.

- (17) tamah-k adaw-ta
 3.raise.up-same 3/3.get-tns
 'He raised it up (the cook pot lid) and got him.'

- (18) taman-m adaw-ta
 3.raise.up-diff 3/3.get-tns
 'He raised it up by accident and got him.'

Sally McLendon (1978) also discusses control and its relation to a complex switch-reference system in Eastern Pomo.

The switch-reference relation encoded by -ko and -kinu in Barai parallels that of -mo and -na. The difference is only in terms of the temporal relation they encode, that being simultaneous rather than sequential/causal.

Where the actors are also the pragmatic peaks, of course, there is no question about which noun phrases are being monitored for switch of referents. In (19), -ko encodes cosubordinate nexus at the peripheral level, a simultaneous temporal relation, and a switch of referents for pragmatic peaks.

(19) bu vua kuae-ko bu siare ume
 3pl talk say-conj 3pl betelnut chew

'They are talking (and at the same time) they
 (diff) are chewing betelnut.'

bu '3pl' is both the actor and the pragmatic peak in each clause but its referent is different for each use, as -ko marks the juncture. -kinu entails an identity of pragmatic peak referents and zero anaphora for the coreferential element in the subsequent clause, as in (20).

(20) bu vua kuae-kinu siare ume
 3pl talk say-conj betelnut chew

'They are talking (and at the same time) chewing
 betelnut.'

Again, bu '3pl' is both the actor and the pragmatic peak in each conjunct. But this time the referent is the same and the overt pronoun is not manifested in the subsequent clause.

When the actor and the pragmatic peak are different referents, however, it is the pragmatic peaks which are monitored by -ko and -kinu as was the case with -mo and -na. Consider (21) and (22) which have a nonactor pragmatic peak in the initial clause being monitored by the switch-reference marker.

(21) na e-be kan-ie-kinu kume
 lsg person-indef hit/strike-lsg-conj call.out
 'Someone was hitting me (and at the same time)
 I was calling out.'

(22) na e-be kan-ie-ko fu
 lsg person-indef hit/strike-lsg-conj 3sg
kume
 call.out
 'Someone was hitting me (and at the same time)
 he was calling out.'

The pragmatic peak assumes the initial position with the predicate kan- 'hit' and in the first clause of both (21) and (22) the indefinite actor is outranked by a definite patient-goal for the pragmatic peak position. It is this patient-goal in (21) that is coreferential with the sole nuclear noun phrase with kume. Here -kinu encodes that coreferentiality and requires zero anaphora in the second clause. In (22), it is the actor which is not the pragmatic peak, which is coreferential with the sole nuclear noun phrase in the subsequent clause. However this coreferentiality is ignored by the switch-reference device which is -ko, since it is monitoring the switch of pragmatic peaks between the two clauses. These are na 'lsg' in the prior clause and fu '3sg' in the subsequent clause.

Again with these switch-reference markers, a switch from a clause with a nonresponsible actor to one with a

responsible actor requires -ko, regardless of any coreferentiality among the respective pragmatic peaks.

(23) fu na-ka ise-d-ie-ko na ki
 3sg lsg-intens displease-V-lsg-conj lsg laugh

'He was really displeasing me (and at the same time) I was laughing.'

The pragmatic peak of the initial clause in (23) is na 'lsg', which is clearly coreferential with the sole nuclear noun phrase in the subsequent clause. However since the actor of ise-d- 'displease' is not a responsible actor, any switch to a responsible actor as with ki 'laugh' requires -ko.

So far, one of two relations are encoded by the switch-reference markers, each dependent on the immediate linguistic context: a switch from a nonactor fulcrum to an actor fulcrum or the identity or lack of identity of referents between pragmatic peaks.

The two are hierarchically ordered so that the marker will always monitor a switch from a nonactor fulcrum to an actor fulcrum, but will monitor the coreferentiality of pragmatic peaks whenever there is no such change of fulcrums.

7.2 Monitoring Thematic Topics

-ga and -gana are unlike the other switch-reference markers in several respects. They encode only a coordinate

nexus and they are neutral as regards any temporal relation. However, their distribution approximates that of -mo and -ko. We are left with a situation where identical clauses may be joined by -mo, -moga, or just -ga, or by -ko, -koga, or just -ga.

- (24) fu juae me $\left\{ \begin{array}{l} \text{-mo} \\ \text{-moga} \\ \text{-ga} \end{array} \right.$ fu fae kira
 3sg garden make conj 3sg fence tie
 'He made a garden (and) he tied a fence.'

- (25) bu vua kuae $\left\{ \begin{array}{l} \text{-ko} \\ \text{-koga} \\ \text{-ga} \end{array} \right.$ bu siare ume
 3pl talk say 3pl betelnut chew
 'They were talking (and) they were chewing betelnut.'

It is not unusual, then, for -ga to occur at junctures where there is a change of referents between the pragmatic peaks. However, the important clue to -ga's distinctive function comes from constraints on the distribution of the thematic topic between junctures which are marked by -ga vis-à-vis those marked by one of the other switch-reference markers. Junctures marked by -ga allow a change of thematic topic in the following clause where those marked simply by -mo or -ko do not.

- (26) fu vua kuae-ga siare ije, fu naebe
 3sg talk say-conj betelnut def 3sg neg
- ume
 chew

'He was talking and, as for the betelnut, he did not chew it.'

Unlike the other switch-reference markers which encode a change of pragmatic peaks, junctures marked by -ga may occur with coreferential pragmatic peaks as long as there is a switch of thematic topic as well. So in (26), the referent of fu '3sg' may be the same as that for the same element in the initial clause, depending on the context. The important difference lies in the change of thematic topic.

It is not surprising that there is such a large convergence, though not a total one, between pragmatic peaks and thematic topics if we are correct in our suggestion in Chapter III that the pragmatic peak is the unmarked choice for thematic topic. It is simply a consequence of the fact that in expressing any base within a discourse, the entity about which we are talking (the thematic topic) will most often be the element with the greatest pragmatic salience.

However, that statistical preponderance does not preclude a variation between the two, such as occurs in (26). The same variation is permitted with -moga and -koga, although it is blocked with just -mo or -ko alone.

-mo or -ko, as -ga does, or it may occur without them. However, any change of thematic topic at junctures marked by -gana is blocked.

- (29) fu barone-ko-gana bu Sakarina ij-ia va
 3sg die-conj-conj 3pl Sakarina def-L go

'He was dying (and at the same time) they were going to Sakarina.'

- (30) *fu barone-ko-gana muramura ije, bu
 3sg die-conj-conj medicine def 3pl

Sakarina ij-ia va
 Sakarina def-L go

*[He was dying (and at the same time), as for the medicine, they were going to Sakarina.]

In (29), -ko-gana encodes the coreferentiality of the thematic topic over the two clauses. The pragmatic peak of the initial clause, fu '3sg', is the most likely candidate for that thematic topic unless there is some mutually understood thematic topic apparent to both speaker and hearer from the linguistic or extralinguistic context. (30) is blocked because of the independent thematic topic in the subsequent clause. However, the correlation between -gana and same thematic topic is only convincing when examining larger chunks of discourse. We include here a portion of text where the thematic topic is held constant over five sentences. Junctures with -ga which encode a change of thematic topic

are very common statistically and often occur several times in one sentence, but are conspicuously absent through these five sentences which retain the same thematic topic.

- (31) sisime ije, bara besu fu inauri ije
 (yam.name) def woman one 3sg arise 3sg
- abe-na diva ij-ia nurie-na rua-e.
 take-conj bark.skirt def-L hide-conj come-past
- ruo-mama ig-ia keke-na abe-na va
 come-conj here-L arrive-conj take-conj go
- gaf-ia keke-na juare isekibe
 up.there-L arrive-conj garden small
- me-na are-gana iro ije dabe ij-ia
 plant-conj cease-conj yam def carry def-L
- me. me-gana sagu-mamama are-gana
 plant plant-conj climb.around-conj cease-conj
- game ije iro ije kiria-ema ije
 down.there def yam def bear.fruit-past def
- fu-ka boeje kiria-e. kiria-gana
 3sg-intens many bear-fruit-past bear.fruit-conj
- fu ru-mama are-gana una kuke juare
 3sg dig-conj cease-conj do.again again garden
- irevasia me-gana fu boeje-re-i.
 large plant-conj 3sg many-become-past

boeje-re-mogana fu uri-na iro ije
 many-become-conj 3sg arise-conj yam def

ru-na e ije ivajuo-nami-ma
 dig-conj person def share-recipr-conj

are-gana iro ije dabe me.
 cease-conj yam def carry plant

'As for the sisime yam, one woman arose and took it and hid it in her skirt and came. She came until she arrived here and took it and went and arrived up there and planted it there. She planted it and it climbed around until it stopped and the yam down there, the yam that bore fruit, it really bore a lot of fruit. It bore fruit and she dug until she stopped and she repeated it and she planted a large garden and it multiplied. It multiplied and she arose and dug the yams and shared them with the people until she stopped and she carried the yams and planted them.'

-gana marks junctures between conjuncts whose pragmatic peaks are coreferential as well as between conjuncts whose pragmatic peaks are not coreferential, but in every case the thematic topic remains the same throughout.

However, the very next sentence contrasts the discussion about the sisime yam with single clauses about each of the other yams that were brought. Here we find seven occurrences of -ga in the same sentence where each encodes a change of thematic topic for each variety of yam being introduced. No other formal marking of thematic topic is necessary as the linguistic context makes it apparent that the different varieties of yams are the contrastive topics throughout.

(32) e ij-are girege abe-ga e
 person def-new (yam.name) take-conj person

ij-are sisime abe-ga e ij-are
 def-new (yam.name) take-conj person def-new

suviari abe-ga e ij-are avuaki
 (yam.name) take-conj person def-new (yam.name)

abe-ga e ij-are kamubara abe-ga
 take-conj person def-new (yam.name) take-conj

e ij-are itiae abe-ga e
 person def-new (yam.name) take-conj person

ij-are nakane abe-ga koe ajue
 def-new (yam.name) take-conj sugar.cane banana

bu ijege besubesu farad-ia-na
 3pl in.like.manner each hold-3pl-conj

ruae.

come-past

'A certain person took a girege yam and a certain person took a sisime yam, and a certain person took a suviari yam, and a certain person took an avuaki yam, and a certain person took a kamubara yam, and a certain person took an itiae yam, and a certain person took a nakane yam and as for sugarcane and bananas, they held each one in like manner and came.'

The thematic topic is frequently not marked although Barai has strategies for doing so as we outlined in Chapter III. This is because the linguistic or extralinguistic

context often makes the thematic topic apparent. In addition, the monitoring of thematic topic by the switch-reference markers -ga and -gana means that occasions for ambiguity are even further reduced.

7.3 Monitoring Actors

There is also a kind of switch-reference relation encoded together with final cause at the core level with cosubordinate nexus. We repeat here (35) and (36) of Chapter IV as (33) and (34).

(33) na k-ia bu va-e
 1sg say-3pl 3pl go-past
 'I made them go.'

(34) na kan-ia bu va-e
 1sg hit-3pl 3pl go-past
 'I hit them, (causing) them to go.'

There is no overt marker for switch-reference here but the construction requires both a change of actors and an identity between the nonactor nuclear noun phrase of the initial conjunct and the actor noun phrase of the subsequent conjunct. In addition, zero cataphora is required between the latter two noun phrases so that no overt pronoun ever occurs for the nonactor noun phrase in the first clause

without changing both the meaning and the kind of nexus involved. This constraint together with the juxtaposition of the two kernels and the limited predicates involved encodes the switch-reference relation. It is worth noting, however, that every such cosubordinate core nexus in Barai is between kernels whose role frames include a responsible actor. No nonresponsible actors are ever involved and the level of juncture precludes any variation of pragmatic peak or thematic topic so this switch-reference relation can be stated simply in terms of actors.

There are then three fundamentally different kinds of switch-reference relations in Barai. In each case, the categories being monitored for identity of referents are different. In fact, each of the four major categories outlined in the early chapters of this study figure prominently in one or another of these switch-reference relations. One type monitors a switch of fulcrums or pragmatic peaks. Another monitors the identity of thematic topics. Still another encodes a switch of actor referents. Together these switch-reference relations figure prominently among the variables that intersect to yield the multiplicity of distinct interclausal relations overtly coded in Barai.

CHAPTER EIGHT

THE DEPENDENCY HIERARCHY

Despite the complexity of interclausal relations in Barai, the manifold distinctions among junctures can readily be ordered along a dependency hierarchy where the fundamental criterion for its arrangement is the degree of sententiality of the particular conjuncts involved. A significant corollary seems to be the inverse proportion between dependency in terms of sententiality and the complexity of the morphology marking the juncture.

We are using the term sententiality here in its contemporary sense where it refers to the least constrained specification of a clause as the most sentential. It is clearly distinct then from the notion sentence as we have defined it, although close indeed to our concept of the clause; in particular, a clause that is coterminous with its base. The properties of this most sentential unit then are the potential for nuclear, core, and peripheral elements, and the potential for a thematic topic, absolute tense, mood, pragmatic peak, mode, and aspect. These operators are superimposed over units of the various levels.

The relevance of the layered structure of the clause to the notion sententiality is transparent. The heart of any clause is its nucleus which we have represented as the innermost level of clause structure. It is the least sentential

of the three layers with only the predicate and certain adverbial modifiers as member constituents. The core layer of the clause is of a greater degree of sententiality as it adds to the nucleus a set of nuclear noun phrases plus other adverbial notions. Then the outer peripheral layer of the clause further increases its sententiality with the addition of the peripheral noun phrases and still further adverbial modifiers. So the levels of juncture are ordered in terms of sententiality as follows:

(1) LEVELS OF JUNCTURE: PERIPHERAL > CORE > NUCLEAR

Internal to each of the levels are the various nexus distinctions which also lend themselves to ordering in terms of degrees of sententiality because of the relationship between nexus type and the scope of operators at any given level. At the peripheral level, both mood and thematic topic are options for conjuncts joined by coordinate nexus but not for conjuncts joined by either subordinate or cosubordinate nexus. The range of tense options over the various nexus types further distinguishes subordinate from cosubordinate nexus. Relative tense markers in conjuncts embedded via subordinate nexus allow three distinctions.

- (2) -ema past
 -mo present
 -ko future

Where relative tense distinctions are encoded on conjuncts joined by cosubordinate nexus, there are only two distinctions. Consider the markers for sequential and delayed sequential temporal relations.

- (3) -kuma/-kuva future sequence
 -mo/-vo nonfuture sequence
 -ekiro future delayed sequence
 -ema/-eva nonfuture delayed sequence

The absolute tense distinctions of coordinate junctures allow a much fuller set of six distinctions:

- (4) -e past
 -me perfect
 -mo present/habitual
 -ko immediate future
 -ke future
 -kidufuo remote future

Thus, the least constrained are conjuncts joined by means of coordinate nexus that permit an independence of thematic

topic and mood as well as the greatest range of tense options. Conjuncts joined by subordinate nexus are more constrained, first of all, in that there is no independence of thematic topic and mood, and secondly, in the reduction of tense options. Conjuncts joined by cosubordinate nexus are even more constrained as is evident by the further reduced options for tense. Thus the type of nexus involved further orders junctures in terms of the sententiality of their conjuncts.

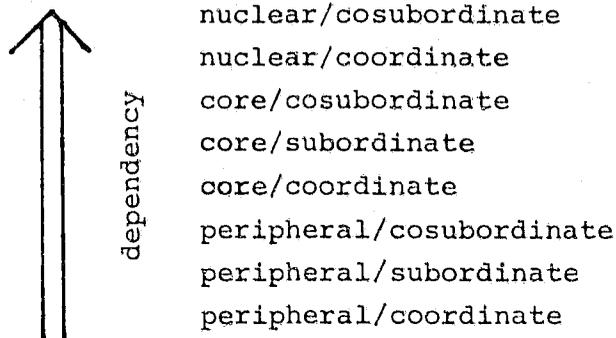
(5) NEXUS OF JUNCTURE: COORDINATE > SUBORDINATE > COSUBORDINATE

This ordering of nexus types is further corroborated at the core and nuclear levels as well. At the core level, mode and pragmatic peak are options to the conjuncts of coordinate nexus but blocked for subordinate and cosubordinate nexus. Cosubordinate nexus at this level always requires zero pronominalization of some nuclear noun phrase in one of the conjuncts, leaving some conjunct of cosubordinate nexus even less sentential. At the nuclear level only conjuncts joined by coordinate nexus allow an independence of aspect, while cosubordinate nexus does not. Thus coordinate nexus yields the greater sententiality of the two nexus options at the nuclear level. In fact, only cosubordinate nexus unites its conjuncts into one phonological word, further attesting the heavy dependency and minimal degree of sententiality for the conjuncts of this juncture. We see then that core and nuclear

junctures support the same ordering of nexus types relative to the sententiality of the conjoined elements as do peripheral junctures.

We may then combine the two variables to produce at least the following levels of a dependency hierarchy.

(6) The Dependency Hierarchy



Once we have so ordered the junctures of Barai, an important corollary to our sententiality principle becomes apparent. Morphological complexity is simplest where the degree of sententiality is least and gradually increases along the dependency hierarchy to where, at the lower end of the hierarchy, the greatest possible complexity occurs. Such an inverse proportion between 'dependency' and morphological complexity has been noted elsewhere. Foley (1976) deals with this in his discussion of relationships between elements of the noun phrase. Coordinate junctures at the peripheral level may use as many as three conjunctive markers to code a particular relation; subordinate and cosubordinate maximally utilize two. Core and nuclear junctures are simply juxtaposed.

More specifically, within the eight levels of the dependency hierarchy the maximum morphological complexity for junctures of a particular level increases only as you descend the hierarchy. There is then no juncture at any step of the hierarchy that is morphologically more complex than the most complex juncture of any lower level, with a spread of the possibilities shifting from zero or juxtaposition to a series of three conjuncture markers. Certainly there is no isomorphic relation between morphological complexity and specific levels of the hierarchy but there is a significant correlation between the two throughout the hierarchy.

It is on the strength of this correlation between the sententiality of the conjuncts and the complexity of the morphology used to mark the juncture that we have posited the dotted lines in the full dependency hierarchy given for Barai below.

(7) Interclausal Dependency Hierarchy

Step	Marker	Semantic Relations	S/R Relations	Nexus Type	Level of Juncture
1	JUXT by pred.class	causal hypothetical	—	cosubordinate	nuclear
	JUXT by pred.class	temporal	—	cosubordinate	nuclear

Step	Marker	Semantic Relations	S/R Relations	Nexus Type	Level of Juncture
2	JUXT by pred.class	causal	—	coordinate	nuclear
	JUXT by pred.class	temporal	—	coordinate	nuclear
3	JUXT by intonation	causal	actor	cosubordinate	core
	JUXT by intonation	temporal	actor	cosubordinate	core
4	JUXT by intonation	temporal	—	subordinate	core
5	JUXT by intonation	temporal	—	coordinate	core
6	<u>-kiro</u>	hypothetical causal	—	cosubordinate	peripheral
	<u>-ma (ma)</u>	temporal	—	cosubordinate	peripheral
	<u>-ema/</u> <u>-eva</u>	temporal	—	cosubordinate	peripheral
	<u>-ekiro</u>	temporal	—	cosubordinate	peripheral

Step	Marker	Semantic Relations	S/R Relations	Nexus Type	Level of Juncture
	<u>-kuma/</u> <u>-kuva</u>	temporal/ causal	—	cosubor- dinate	peripheral
	<u>-mo/</u> <u>-vo</u>	temporal/ causal	pr.pk./ fulcrum	cosubor- dinate	peripheral
	<u>-ko</u>	temporal	pr.pk./ fulcrum	cosubor- dinate	peripheral
	<u>-na</u>	temporal	pr.pk./ fulcrum	cosubor- dinate	peripheral
	<u>-kinu</u>	temporal	pr.pk./ fulcrum	cosubor- dinate	peripheral
7	<u>-kuma-ne/</u> <u>-kuva-ne</u>	hypothetical temporal/ causal	—	cosubor- dinate	peripheral
	<u>-mo-ne/</u> <u>-vo-ne</u>	hypothetical temporal/ causal	—	cosubor- dinate	peripheral
8	<u>-bitie</u>	hypothetical causal	—	subordin- ate	peripheral
	<u>-do</u>	hypothetical causal	—	subordin- ate	peripheral
	<u>-no</u>	causal	—	subordin- ate	peripheral

Step	Marker	Semantic Relations ,	S/R Relations	Nexus Type	Level of Juncture
9	<u>ij-afuo</u>	causal	—	subordinate	peripheral
	<u>ij-ia</u>	temporal	—	subordinate	peripheral
10	<u>bite</u>	hypothetical contrastive	—	coordinate	peripheral
	<u>o</u>	hypothetical contrastive	—	coordinate	peripheral
	<u>(-)ro</u>	contrastive	—	coordinate	peripheral
	<u>-gana</u>	—	topic	coordinate	peripheral
	<u>-ga</u>	—	topic	coordinate	peripheral
11	<u>-ko-ga</u>	temporal	topic	coordinate	peripheral
	<u>-mo-ga/</u> <u>-vo-ga</u>	temporal/ causal	topic	coordinate	peripheral
	<u>-ga-ro</u>	contrastive	topic	coordinate	peripheral
	<u>-ko-gana</u>	temporal	topic	coordinate	peripheral
	<u>-mo-gana/</u> <u>-vo-gana</u>	temporal/ causal	topic	coordinate	peripheral

Step	Marker	Semantic Relations	S/R Relations	Nexus Type	Level of Juncture
	<u>-gana-ro</u>	contrastive	topic	coordinate	peripheral
	<u>-mo-ga-ro/</u> <u>-vo-ga-ro</u>	contrastive temporal/ causal	topic	coordinate	peripheral
12	<u>-ko-ga-ro</u>	contrastive temporal	topic	coordinate	peripheral
	<u>-mo-gana-ro</u> <u>-vo-gana-ro</u>	contrastive temporal/ causal	topic	coordinate	peripheral
	<u>-ko-gana-ro</u>	contrastive temporal	topic	coordinate	peripheral

We note here several distinct parameters which play a role in distinguishing markings for clause junctures in Barai. The right hand column orders the junctures according to the particular level. The next column orders the junctures according to the type of nexus encoded. The third column indicates any switch-reference relation involved. The fourth column indicates certain general categories of semantic relations that are encoded at the juncture. Finally the left-most column imposes a further ordering according to the complexity of the mor-

phology used to mark the juncture. The result is a gradation of twelve levels of dependency for interclausal relations in Barai.

At the first step of the hierarchy are junctures which encode cosubordinate nexus at the nuclear level. These form the most dependent of all interclausal relations in Barai. Either a simultaneous or a causal semantic relation may be encoded at this level.

- (8) na ije i-fie-ke
lsg 3sg eat-sense-fut

'I will taste it.' ('I will eat-sense it.')

- (9) fu samua-g-a-ke
3sg wait.for-see-3sg-fut

'He will wait to see.'

(8) encodes a simultaneous relation and (9) encodes final cause combined with an antefactual hypothetical relation. No morphology is involved in marking the juncture, and the distinctions between the semantic relations involved are a function of the particular predicates so that the same predicate is never used to encode both relations.

The second step of the hierarchy consists of junctures which encode coordinate nexus, still at the nuclear level.

The semantic relation involved at this level may be simultaneous, sequential or causal.

- (10) isuname na fase fi isoe
 yesterday lsg letter 3sg write
 'Last night, I sat writing a letter.'

- (11) e ije fu a-nafa-fu-o kan-ia
 person def 3sg child-pl-3sg-poss hit-3pl
buvua i
 cut.up eat

'The man killed, cut up, (and) ate his children.'

- (12) fu na ire ifej-ie i-ke
 3sg lsg food help-lsg eat-fut
 'He will help me eat food.'

(10) encodes a simultaneous temporal relation, (11) encodes a sequential relation, and (12) encodes an efficient causal relation. There is still no morphology involved so that the type of juncture is again derived from the class of predicates involved.

At the third step of the hierarchy there is a shift from the nuclear to the core level of juncture. The semantic relations here may be either sequential or causal but the nexus

must be cosubordinate. A sequential semantic relation entails a same actor switch-reference relation while a causal semantic relation entails a different actor switch-reference relation. No pause occurs between the conjuncts.

- (13) fu ame ije dabe asoe fu-one m-a-e
 3sg child def carry father 3sg-poss give-3sg-past
 'He carried the child and gave (him) to his father.'

- (14) na-ka k-ia e ije va-e
 lsg-intens say-3pl person def go-past
 'I really made them go.'

The fourth step of the hierarchy has junctures again at the core level but with subordinate nexus. The semantic relation is temporal and may be either simultaneous or sequential depending on the relative tense marker of the embedded conjunct.

- (15) a fu rua-ema k-ie-i
 2sg 3sg come-past say-1sg-past
 'You told me that he came.'

In (15), the temporal relation is sequential since the relative tense marker is past, indicating that the event pre-

ceded that of the matrix conjunct. The juncture is easily identified by the independent intonation contour over the embedded conjunct.

At the fifth step of the hierarchy, there is a shift from subordinate to coordinate nexus and the semantic relation encoded is sequential.

- (16) Vito fu ij-ia keke, e ije ifej-ia
 Vito 3sg def-L arrive person def help-3pl
 'Vito arrived there (and) helped the people.'

Again, the two conjuncts here are simply juxtaposed. This juncture is easily distinguished from the others which are juxtaposed because of its obligatory pause.

Step six of the hierarchy involves a shift from coordinate nexus at the core level to cosubordinate nexus at the peripheral level. It is at this level that the greatest variety of semantic relations occur. These are characteristic of the so-called medial-verb phenomenon of Papuan languages and encode various temporal, causal, hypothetical and often switch-reference relations as well. All are marked with a single conjunctive affix.

- (17) fu ruo-ma ij-ia keke
 3sg come-conj def-L arrive
 'He kept coming until he arrived there.'

- (18) a fu g-a-kuma are fu-one ij-ia va-ke
 2sg 3sg see-3sg-conj place 3sg-poss def-L go-fut

'You will see him and then go to his house.'

- (19) na nae-ema suke una rua-e
 1sg sleep-conj morning do.again come-past

'I slept (and then after an interval) I came back in the morning.'

- (20) na va-ekiro isuame una rua-ke
 1sg go-conj tomorrow do.again come-fut

'I will go (and then after an interval) I will return tomorrow.'

- (21) bu ire i-kinu vua kuae
 3pl food eat-conj talk say

'They were eating (and at the same time) (they) were talking.'

- (22) bu ire i-na vua kuae
 3pl food eat-conj talk say

'They ate food and then talked.'

- (23) bu ire i-ko no vua kuae
 3pl food eat-conj lpl talk say

'They were eating (and at the same time) we were talking.'

(24) ve da-mo bu subi
 rain fell-conj 3pl run.away
 'Rain fell and so they ran away.'

(25) na bu-ina fi-kiro rua-e
 lsg 3pl-accom stay-conj come-past
 'I came to stay with them.'

(17)-(20) encode only a temporal relation. (17) encodes a span sequence. (18) encodes a sequence where the absolute tense of the final conjunct must be future. (19) encodes a delayed sequential relation where absolute tense must be nonfuture and (20) encodes the same relation where absolute tense must be future.

The junctures illustrated in (21)-(25) still use a single conjunctive marker but the relations they encode are more complex. (21) encodes a simultaneous temporal relation plus a switch-reference relation requiring coreferential pragmatic peaks. (22) encodes a sequential temporal relation and a switch-reference relation requiring coreferential pragmatic peaks. (23) encodes a simultaneous temporal relation and a switch-reference relation requiring noncoreferential pragmatic peaks. (24) encodes a sequential/causal relation where absolute tense must be nonfuture and a switch-reference relation which requires noncoreferential pragmatic peaks. (25) encodes both a causal and an antefactual hypo-

thetical relation.

The next step of the hierarchy, step seven, still encodes cosubordinate junctures at the peripheral level but these junctures encode different semantic relations and their morphology is more complex. The morphemes -kuma/-kuva and -mo/-vo encode a sequential/causal relation. But in this usage with -ne, which encodes a nonfactual hypothetical relation, -mo/-vo no longer encode any switch-reference relation.

- (26) bu oe-kuva-ne no mako ru-ke
 3pl die-conj-conj lpl hole dig-fut
 'If they die, we will dig a hole.'

- (27) a dua uru-mo-ne e
 2sg song/dance sing/dance-conj-conj person
ije bu orore
 def 3pl cheer
 'If ever you danced a dance, the people applauded.'

Each of these step seven junctures uses two conjunctive affixes.

Step eight of the hierarchy shifts from cosubordinate to subordinate nexus, still at the peripheral level. A single conjunctive marker is used to encode the juncture.

- (28) ije na ise-d-ie-mo-no are-ne
 3sg lsg unhappy-V-lsg-pres-conj stop-imp
 'Since it is displeasing me, (you) must stop (it).'
- (29) bu ime-eva-do (bu) aem-ia
 3pl work-past-conj 3pl be.tired-3pl
 'They are tired like they had worked.'
- (30) fu rua-ema-bitie a g-a-ke
 3sg come-past-conj 2sg see-3sg-fut
 'If he had come, you would have seen (him).'

The juncture marked by -no in (28) encodes a causal relation which requires an imperative consequent. -do in (29) encodes both a causal and a postfactual hypothetical relation. In (30), -bitie encodes a causal relation along with a nonfactual hypothetical relation which is combined with a positive/negative reversal.

Step nine is distinguished from step eight by the complexity of the morphology involved. The conjunctions here are derived from a combination of the definite article ije and case markers reanalyzed to encode subordinate peripheral junctures.

- (31) na rua-ema ij-ia na m-a-e
 lsg come-past conj-conj lsg give-2sg-past
 'After I came, I gave it to you.'

- (32) fireni j-one fu samua-mo ij-afuo
 plane 2pl-poss 3sg wait-pres conj-conj
na ij-ia iri
 lsg def-L stop

'Because your plane is waiting, I am stopping here.'

ij-ia in (31) encodes a temporal relation while ij-afuo in (32) encodes a causal relation.

Steps ten, eleven, and twelve of the hierarchy all encode junctures at the peripheral level with coordinate nexus. They vary in the complexity of their morphology and in the categories of semantic and switch-reference relations they encode.

Step ten of the hierarchy includes junctures which use only a single conjunctive marker.

- (33) fu vua kuae-ga siare ije, fu naebe ume
 3sg talk say-conj betelnut def 3sg neg chew

'He was talking and, as for the betelnut, he did not chew it.'

- (34) iro ije fu-ka boeje kiriae-gana fu ru
 yam def 3sg-intens many bear.fruit-conj 3sg dig

'The yam bore much fruit and he dug them.'

(35) na rua-e ro na ninae-i
 1sg come-past conj 1sg sleep-past
 'I came but I slept.'

(36) a be vua o a ba
 2sg interr come conj 2sg neg
 'Are you coming or are you not?'

(37) (bite) fu rua bite ij-ia fi bite Vito-ki va
 conj 3sg come conj def-L sit conj Vito-accom go
 'He might come or he might stay here or he might
 go with Vito.'

-ga in (33) encodes a switch-reference relation monitoring the noncoreferentiality of thematic topics. While -gana in (34) also encodes a switch-reference relation, this time it is the coreferentiality of thematic topics which is being monitored. In (35) the conjunctive marker ro encodes a contrastive semantic relation. In (36) o combines a contrastive relation and an ambifactual hypothetical relation and bite in (37) combines a contrastive relation with a nonfactual hypothetical relation.

At the eleventh step of the hierarchy, the juncture requires two conjunctive affixes and always entails a switch-reference relation along with some semantic relation.

- (38) bu vua kuae-ko-ga siare ije bu
 3pl talk say-conj-conj betelnut def 3pl
naebe ume
 neg chew

'They were talking and as for the betelnut, they were not chewing it.'

- (39) ve ije, fu barone-ko-gana bu Sakarina ij-ia va
 time def 3sg die-conj-conj 3pl Sakarina def-L go

'At the time, he was dying and (at-the-same-time) they were going to Sakarina.'

- (40) na ij-ia mani-ga-ro a ume ij-ia fi
 lsg def-L stand-conj-conj 2sg ground def-L sit

'I stood there but you sat there on the ground.'

-ko-ga in (38) encodes a simultaneous temporal relation along with a switch-reference relation which requires a switch of thematic topics. The juncture marked by -ko-gana in (39) is similar, except that the switch-reference relation requires an identity of thematic topics. With -ga-ro in (40), a contrastive relation combines with the switch-reference relation requiring different thematic topics.

We noted earlier that -ko and -mo, in combination with -ga or -gana, alter the nexus they encode. Without -ga/-gana, -ko and -mo encode a cosubordinate nexus; with either of them,

they encode coordinate nexus. We have also demonstrated how contrastive relations are only encoded at coordinate junctures. We should be able to predict then that a combination of -ko or -mo with -ro is inconceivable. This is in fact the case. A contrastive relation with -ko or -mo must include either -ga or -gana to insure a coordinate juncture. However -mo and -ko may co-occur with both -ga/-gana and ro. In this case the coordinate nexus and the switch-reference relation are encoded by the addition of -ga/-gana and the contrastive relation by the addition of -ro. This sequence of three conjunctive markers is typical of the twelfth step of the dependency hierarchy and exhibits the greatest morphological complexity of any juncture in Barai. We illustrate with (41).

- (41) asoe-no mave fu-one m-ie-mo-ga-ro
 father-lsg pig 3sg-poss give-lsg-conj-conj-conj
uvia-no be dua m-ie-i
 brother-lsg one also give-lsg-past
 'My father gave me his pig but then my brother
 gave me one too.'

-mo-ga-ro encodes a temporal relation, a switch-reference relation, and a contrastive relation in addition to its grammatical information of coordinate nexus at the peripheral level.

Much of the rationale for the graded steps of the dependency hierarchy derives from the structural organization of the clause. If, in fact, there are levels within levels within levels of structure, any of which may be conjoined, the simplest unit of the innermost layer which may be linked to another such unit is indeed in a heavily dependent position. It is dependent in terms of its relationships to all of the succeeding outer layers of that clausal unit of which it is a part, irrespective of the kind of nexus between the conjuncts themselves. But the type of nexus involved is also indicative of the level of dependency between conjuncts primarily because of the differing constraints on the scope of operators. We have demonstrated that there are manifold kinds of dependent junctures which vary in the degree of sententiality permitted in the relevant conjuncts and that this variation reflects important structure internal to the clause. This structure must be recognized if we are going to account for the morphological variation which is typical of interclausal relations in Papuan languages like Barai.

Switch-reference relations are a good example of where confusion abounds if we try to account for morphological variations in terms of traditional grammatical categories like clause and subject that have been left undefined. We have demonstrated at some length that thematic topics whose scope is the base, pragmatic peaks whose scope is the situation,

and both fulcrums and actors whose scope is the kernel all figure prominently in certain switch-reference relations. Reducing this complexity only results in obscuring what really motivates the variations.

The various levels (nuclear, core, and peripheral), the various nexi (coordinate, subordinate, and cosubordinate), and the various prominent noun phrases (actor, fulcrum, pragmatic peak, and thematic topic) are all vital to explicating inter-clausal relations in Barai.

APPENDIX I

PHONOLOGY

The transcriptions of the Barai illustrations in this study follow Olson (1969) from which the data below is taken.

The consonants include three prenasalized stops: b, d, and g.

<u>b</u>	<u>besu</u>	[^m bɛsu]	'one'
	<u>babere</u>	[^m ba ^m bɛrɛ]	'lose'
	<u>dabe</u>	[ⁿ dā ^m bɛ]	'take'
<u>d</u>	<u>sidove</u>	[si ⁿ dɔβɛ]	'village'
	<u>davane</u>	[ⁿ daβãɛ]	'gift'
	<u>ude</u>	[^u nɔɛ]	'before'
<u>g</u>	<u>guove</u>	[^ŋ guɔβɛ]	'inside'
	<u>fague</u>	[ɸa ^ŋ guɛ]	'part'
	<u>guge</u>	[^ŋ gu ^ŋ gɛ]	'chest'

There are two aspirated voiceless stops: t and k.

<u>t</u>	<u>ata</u>	[at ^h ã]	'chop'
	<u>tuase</u>	[t ^h uase]	'break in pieces'
	<u>venitue</u>	[βɛnit ^h ue]	'daybreak'

k a voiceless glottal stop fluctuates with the voiceless velar stop except word initial.

<u>kuku</u>	[k ^h uk ^h u]~	
	[k ^h ũʔu]	'tobacco'
<u>ivieke</u>	[iβiek ^h ɛ]~	
	[iβiɛʔɛ]	'walloby'

<u>keke</u>	[k ^h ɛk ^h ɛ]~	
	[k ^h ɛʔɛ]	'arrive'

d and t contrast as in the following examples.

<u>kudo</u>	[k ^h u ⁿ dɔ]	'rotten mat.'
<u>kuto</u>	[k ^h ut ^h ɔ]	'kiss'

g and k contrast as in the following examples.

<u>igo</u>	[i ⁿ go]	'honey'
<u>iko</u>	[ik ^h o]	'raw'

There are three fricatives: f, v, and s.

<u>f</u>	<u>fie</u>	[ɸiɛ]	'hear, sense'
	<u>vierafe</u>	[βiɛraɸɛ]	'think'
	<u>mafore</u>	[maɸɔrɛ]	'thumb'

<u>v</u>	<u>ave</u>	[ãβɛ]	'on top'
	<u>kavuane</u>	[k ^h apua ⁿ ɛ]	'blood'
	<u>vame</u>	[βãmɛ]	'trail'

<u>s</u>	<u>asoe</u>	[asɔɛ]	'father'
	<u>siroe</u>	[sirɔɛ]	'dog'
	<u>son</u>	[sɔnɛ]	'slowly'

b and v contrast as in the following examples.

<u>bare</u>	[^m βarɛ]	'cool'
<u>vare</u>	[βãrɛ]	'dry'

There are two affricates: z and j.

z a nasalized voiced alveolar fricative between low open unrounded vowels, but a nasalized voiced alveo-palatal affricate elsewhere.

<u>veze</u>	[βɛ ⁿ dʒɛ]	'when'
<u>maza</u>	[ma ⁿ zǎ]	'sun'
<u>azo</u>	[a ⁿ dʒɔ]	'peel'
<u>akoze</u>	[ak ^h ɔ ⁿ dʒɛ]	'throw'

j a palatalized voiced alveolar stop that alternates with a voiced alveo-palatal affricate.

<u>nija</u>	[niɟǎ]~ [nidʒǎ]	'put'
<u>boeje</u>	[^m bðɛɟɛ]~ [^m bðɛdʒɛ]	'many'
<u>jagado</u>	[ɟǎ ^ŋ ga ⁿ do]~ [dʒǎ ^ŋ ga ⁿ do]	'long'

z and j contrast as in the following examples.

<u>izia</u>	[i ⁿ dʒiǎ]	'where'
<u>ijia</u>	[iɟiǎ]~ [idʒiǎ]	'there'
<u>maza</u>	[ma ⁿ zǎ]	'sun'
<u>maja</u>	[maɟǎ]~ [madʒǎ]	'wind'

There are two nasals: m and n.

<u>m</u>	<u>mave</u>	[māβɛ]	'pig'
	<u>ame</u>	[āmɛ]	'child'
	<u>isuame</u>	[isūəm:]	'tomorrow'
<u>n</u>	<u>fanu</u>	[fanú]	'animal'
	<u>uruvana</u>	[úruβana]	'many'
	<u>ninae</u>	[nínaɛ]	'sleep'

There is a vibrant r which is a retroflexed voiced alveolar stop before high vowels but a voiced alveolar flapped vibrant elsewhere.

<u>r</u>	<u>tarae</u> bo	[t ^h arás ^m bo]	'bush'
	<u>roti</u> re	[rot ^h irɛ]	'underneath'
	<u>iri</u>	[iɖí]	'step'
	<u>ru</u>	[ɖù]	'dig'

r and d contrast as in the following examples.

<u>ri</u>	[ɖí]	'smell'
<u>di</u>	[ⁿ ɖí]	'run'

The vowels include a high close unrounded front vowel i.

<u>i</u>	<u>ise</u>	[isɛ̃]	'bad'
	<u>ivia</u>	[iβiá]	'today'
	<u>inieme</u>	[iniɛmɛ]	'steal'

e is a mid open unrounded front vowel.

<u>e</u>	<u>kufuime</u>	[k ^h uɸuimɛ̃]	'lie'
	<u>rere</u>	[rɛ̃rɛ̃]	'look for'
	<u>era</u>	[ɛrɔ́]	'who'

i and e contrast as in the following examples.

<u>ufi</u>	[uɸí]	'twist'
<u>ufe</u>	[uɸɛ̃]	'blow'

u is a high close rounded back vowel.

<u>u</u>	<u>isuve</u>	[isúβɛ̃]	'navel'
	<u>ume</u>	[ùmɛ̃]	'bird'
	<u>umuanomua</u>	[umuánomua]	'fly'

o is a high open rounded back vowel when stressed following a high back vowel except word finally and it is a mid close back vowel elsewhere.

<u>o</u>	<u>ruo</u>	[ruð]	'come'
	<u>saruone</u>	[saruðne]	'fat'
	<u>uoma</u>	[uðma]	'mustard'
	<u>mufuo</u>	[mufuo]	'late afternoon'

u and o contrast as in the following.

<u>ugune</u>	[u ^o gune]	'mosquito'
<u>ugone</u>	[u ^o gone]	'cloth'

a is a low close unrounded central vowel following a stressed high vowel and a low open unrounded central vowel elsewhere.

<u>a</u>	<u>sinuame</u>	[sinuame]	'belongings'
	<u>isua</u>	[isua]	'urinate'
	<u>suake</u>	[suak ^h e]	'morning'
	<u>kazuame</u>	[k ^h a ⁿ dzuame]	'eel'

a and e contrast as in the following examples.

<u>are</u>	[arɛ]	'stop'
<u>ara</u>	[ara]	'shout'

Stress occurs contrastively either as high pitch and increased intensity (˘) or as low pitch and length (˘). The functional load of minimal contrasts is light however.

<u>iko</u>	[ik ^h o]	'going to eat'
<u>iko</u>	[ik ^h o]	'raw'
<u>iri</u>	[iri]	'sharpen'
<u>iri</u>	[iri]	'stop'

APPENDIX III

SEMANTIC ROLES¹

Agent (A) - identifies who is responsible for an action.

'My wife (A) made the cake (P).'

'This screwdriver (A) fixed the engine (P).'

Instrument (I) - the tool used by an agent in performing an action.

'Fred (A) fixed the engine (P) with this screwdriver (I).'

¹We have followed Grimes' (1975) approach to semantic roles. He makes the following comment about the distinctiveness of his list from which we have taken the definitions and examples given here.

So far each linguist who has written on roles has come up with a different list of what the standard role relationships are. The list I give here differs slightly from every other one that I know of. What is significant, however, is not that linguists disagree on what roles there are; that is, on the exact specification of the small set of conventional relationships (quite likely a property of all languages) in terms of which a large portion of semantic structure is organized. The significant thing is that as studies of role systems continue there seems to be a convergence in the findings of different scholars. Given the application of the idea to more and more languages, and in greater and greater depth in some languages, there seems to be an empirical shaking down of the idea of roles or cases to within the limits that normally apply to two scholars ever agreeing on anything. (Grimes 75:119).

'The locomotive (A) cleared the track (P) with a snowplow (I).'

'Superman (A) broke the window (P) with the gangster (I).'

Force (F) - asserts a causal relation devoid of responsibility.

'The girl (P) died of malaria (F).'

'His presence (F) sickens me (P).'

Patient (P) - the relation between a thing that gets changed and the process that changes it with dynamic process predicates.

'The snowflake (P) melted.'

- the relation between a thing that is in some state and the state it is in with static predicates.

'The foundation (P) is cracked.'

- the one who feels or perceives in psychological processes of perception and feeling.

'I (P) saw it (R).'

'I (P) am dizzy.'

- the thing whose orientation to its physical environment is given by a predicate of motion or position.

'Water (P) flows downhill.'

'A statue (P) sits on a pedestal.'

Source (S)² - identifies the location of the object (patient) at the beginning of the motion, the initial boundary of the event with predicates of motion.

'The letter (P) fell from her hand (S).'

- identifies the state of something before it undergoes a process with dynamic process predicates,

'She (A) makes dresses (PG) from flour sacks (S).'

Goal (G)³ - identifies the location of the object at the end of the motion, the terminal boundary of the event with predicates of motion.

²Although Grimes finally labels this role Former we have chosen to retain the more traditional term Source.

³Grimes finally labels this role Latter and again we have chosen to retain the traditional term Goal.

'The letter (P) fell to the floor (G).'

- identifies the state of something after it undergoes a process with dynamic process predicates.

'She (A) makes flour sacks (PS) into dresses (G).'

Range (R) - indicates the path or area traversed with a motion predicate, a static location with a position predicate, and is the only role with certain ambient or meteorological predicates.

'The ball (P) rolled down the gutter (R).'

'His house (P) is situated on top of a hill (R).'

'Ithaca (R) is cold.'

- distinguishes the limitation of a process to a certain field or object from the actual application of a process to a patient;

'We (A) talked about politics (R).'

'This book (P) costs three dollars (R).'

- identifies the stimulus of a perception.

'I (AP) heard it (R).'

'I (AP) saw it (R).'

'I (AP) laughed at it (R).'

Vehicle (V) - refers to something that conveys the object
and moves along with it.

'The letter (P) came by plane.'

Benefactive (B) - is someone or something on which an
action has a secondary effect, good or ill.

'We (A) chased the cats (G) out of the
attic (S) for her (B).'

'The milk (P) turned sour on me (B).'

APPENDIX IV

ROLE FRAMES

(sample)

<u>abe</u>	----- (V ₁) [A, (P)]	'take'
	----- (V ₂) [A, (I), (P)]	"
<u>aem-</u>	----- [(F), P]	'be tired'
<u>barone</u>	----- (V ₃) [P]	'be dead'
<u>difuri</u>	----- (V ₄) [A]	'run'
	----- (V ₅) [A, (P)]	"
<u>fi</u>	----- [A]	'sit'
	----- (V ₆) [A, (P)]	"
<u>fie</u>	----- [AP, (R)]	'feel', 'hear', 'understand'
	V ₇ ----- [AP, (R)]	'sense'
<u>fura</u>	----- [(F), P]	'shatter (inadvertently)'
	----- [A, (P)]	'shatter'
<u>g-</u>	----- [AP, (R)]	'see', 'know'
	V ₇ ----- [AP, (R)]	'discover'
<u>i</u>	(V ₅)----- [A, (P)]	'eat'
	V ₈ ----- [A, (P), (B)]	"

<u>ifej-</u>	-----[A, (B)]	'help'
	-----V ₁ [A, (P), (B)]	"
<u>ise</u>	-----[P]	'be unhappy'
	----- <u>d</u> - [(F), P]	'displease (inadvertently)'
	----- <u>d</u> -[AP, (R)]	'dislike'
<u>isoe</u>	(V ₉)-----[A, (P)]	'write'
	----- <u>r</u> -[A, (G), (P)]	'write on'
	----- <u>j</u> -[A, (B), (P)]	'write with'
<u>k-</u>	-----[A, (P), (R)]	'say'
<u>ki</u>	-----[AP]	'laugh'
	----- <u>s</u> - [AP, (R)]	'laugh at'
<u>kira</u>	-----[A, (P)]	'prepare'
	----- <u>j</u> -[A, (B), (P)]	'prepare for'
<u>m-</u>	(V ₅)-----[AS, (P), (G)]	'give'
<u>ma</u>	-----[P]	'be happy, fine'
	----- <u>d</u> -[(F), P]	'please (inadvertently)'
	----- <u>d</u> -[AP, (R)]	'like'
<u>mani</u>	-----[A]	'stand'
	-----V ₆ [A, (P)]	"

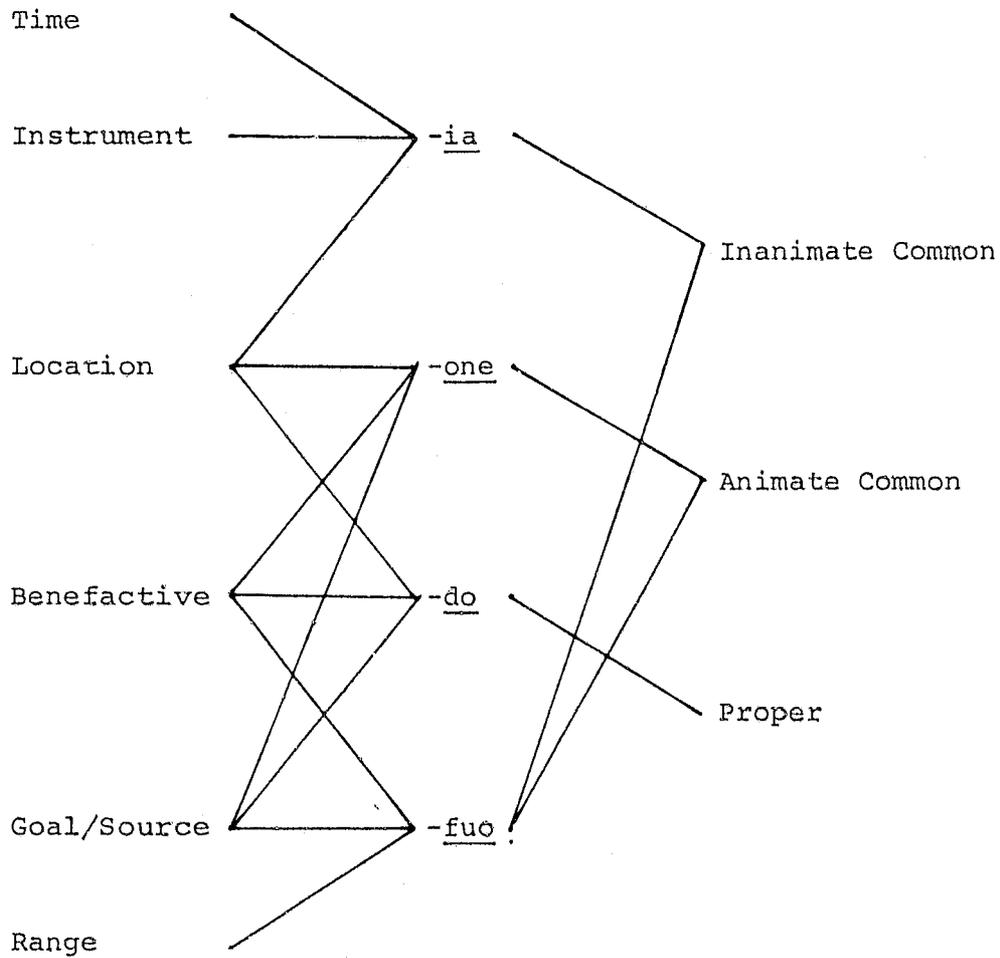
<u>na</u>	(V ₁₀)-----[P]	'lay'
	-----[A, (P)]	'put'
<u>naku</u>	-----[A, (P)]	'hang up'
	----- <u>r</u> -[A, (P), (B)]	'hang up for'
<u>riez-</u>	-----[(F), P]	'attract(inadvertently)'
	----- <u>e</u> [AP, (R)]	'desire'
<u>saere</u>	-----[P]	'wither'
<u>sak-</u>	-----[A, (PG)]	'bite, sting, burn'
	----- <u>r</u> -[A, (I), (PG)]	'sting with'
<u>samua</u>	----- (V ₉)[AP, (R)]	'wait for'
<u>tot-</u>	-----[(F), P]	'escape memory'
	----- <u>e</u> [AP, (R)]	'forget'
<u>tua</u>	-----[(F), P]	'break(inadvertently)'
	-----[A, (P)]	'break'
<u>ufi</u>	-----[P]	'spin'
	-----[(F), P]	'intoxicate'
<u>ufu</u>	-----[A, (P)]	'cut'
	V ₅ -----[A, (I), (P)]	'cut with'
<u>usia</u>	-----[(F), P]	'spill(inadvertently)'
	-----[A, (P)]	'spill'

visi -----[P] 'be sick'
 -----nam-[(F),P] 'sicken'

Where: V₁ must include i 'eat'
 V₂ must include ufu 'cut'
 V₃ must include na 'lay'
 V₄ must include ro 'come'
 V₅ must include abe 'take'
 V₆ must include isoe 'write'
 V₇ must include kume 'call'
 V₈ must include ifej- 'help'
 V₉ must include fi 'sit'
 V₁₀ must include barone 'die'

APPENDIX V

NOMINAL CASE MARKERS



APPENDIX VI

PSYCHOLOGICAL/PHYSICAL PREDICATES

(sample)

<u>adatuguae</u>	[P] 'be deaf'		
		<u>adatugua-r-</u>	[(F), P] 'deafen'
<u>arui</u>	[P] 'be puckered up'		
		<u>aru-b-</u>	[(F), P] 'make pucker up'
<u>doduae</u>	[P] 'be thirsty'		
		<u>dodua-d-</u>	[(F), P] 'make thirsty'
<u>feteuri</u>	[P] 'be feverish'		
		<u>feteuri-nam-</u>	[(F), P] 'make feverish'
<u>fiae</u>	[P] 'be painful'		
		<u>fia-d-</u>	[(F), P] 'hurt'
<u>fuae</u>	[P] 'be sweaty'		
		<u>fua-r-</u>	[(F), P] 'make sweaty'
<u>gare</u>	[P] 'be cool'		
		<u>gara-d-</u>	[(F), P] 'make cool'
<u>gire</u>	[P] 'be strong'		
		<u>gire-nam-ie</u>	[(F), P] 'strengthen'
<u>iduae</u>	[P] 'be cold'		
		<u>idua-d-</u>	[(F), P] 'make cold'
<u>ise</u>	[P] 'be unhappy'		
		<u>ise-d-</u>	[(F), P] 'displease'
<u>mae</u>	[P] 'be happy'		
		<u>ma-d-</u>	[(F), P] 'please'
<u>naere</u>	[P] 'be drowsy'		
		<u>naera-d-</u>	[(F), P] 'make drowsy'
<u>nibuai</u>	[P] 'be dizzy'		
		<u>nibua-r-</u>	[(F), P] 'make dizzy'
<u>oefiae</u>	[P] 'be sad'		
		<u>oefia-d-</u>	[(F), P] 'sadden'
<u>oerui</u>	[P] 'be breathless'		
		<u>oeru-b-</u>	[(F), P] 'make breathless'
<u>oesere</u>	[P] 'be excited'		
		<u>oesera-d-</u>	[(F), P] 'excite'
<u>safui</u>	[P] 'be shivering'		
		<u>safu-s-</u>	[(F), P] 'make shiver'
<u>ubaere</u>	[P] 'be grown'		
		<u>ubaera-d-</u>	[(F), P] 'make grow'
<u>vasiaoe</u>	[P] 'be hungry'		
		<u>vasiaoe-r-</u>	[(F), P] 'make hungry'
<u>visi</u>	[P] 'be sick'		
		<u>visi-nam-</u>	[(F), P] 'sicken'

APPENDIX VII

TEXT

The following text was recorded on tape in 1972 from Bidoeme Sako of Itokama village, Northern Province, Papua New Guinea. The notation used at clause junctures includes /, //, and /// for nuclear, core, and peripheral levels respectively as well as C, CS, and S for coordinate, cosubordinate, and subordinate nexus respectively. The boundaries of direct quotations are marked with Q.

1. ino uvia-ki ij-iebe bara ije davane
 pair brother-poss def-new woman def gift

vaj-a-e.

give-3sg-past

'A pair of brothers gave a gift to the woman.

2. davane vaj-a-na /// va // fanu kan-ia
 gift give-3sg-conj CS go CS animal kill/hit-3pl

// ro // bara ij-afuo o-rafa ije
 C come CS woman def-poss relative-pl def

vaj-ia-kinu /// va // iro mameki ru ^ // ro
 give-3pl-conj CS go CS yam big dig CS come

// vaj-ia-kinu /// ire mameki ke-na ///
 CS give-3pl-conj CS thing big take-conj CS

ro // vaj-ia-kinu /// ije-re-i.
 come CS give-3pl-conj CS 3sg-do-past

'He gave her the gift and then he went and killed animals and came and gave them to the woman's relatives, and went and dug yams and came and gave them to them, and took big things and came and gave them to them and so on.'

3. ije-re-ko-ga /// fanu boeje kan-ia, //
 3sg-do-conj-conj C animal many kill-3pl C

vaj-ia-noe-mama /// are-ga /// uvia-fuo
 give-3pl-dur-conj CS stop-conj C brother-poss

fu-re inauri // ku-a /// na . va //
 3sg-contr. arise CS say-3sg Q lsg go CS

kazuame be g-a-eva /// ro-no
 flying.fox indef/spec see-3sg-past CS come-conj

/// ni va // kazuame kan-ia-na ///
 S imp go CS flying.fox hit/kill-3pl-conj CS

una / ro // bara ije no davane
 do.again C come CS woman def lpl gift

vaj-a-eva ij-afuo asoe-rafa vaj-ia-no
 give-3sg-past def-poss father-pl give-3pl-conj

/// ku-a-e
 Q say-3sg-past

'While they were doing this they killed many animals and kept on giving them to them until they stopped

that and his brother arose and said, 'I was going and saw a certain flying fox and then later came, so you must go and kill flying fox and then return and give them to the fathers of the girl to whom we gave the gift', he said.'

4. fu ku-a-na /// mesir-i-na /// va-e
3sg say-3sg-conj CS take-3sg-conj CS go-past

'He said this and then he took him, and they went.'

5. va-mama /// ine zinume ij-ia usiae
go-conj CS tree trunk def-L arrive

'They went until they arrived at the stump.'

6. usiae-na /// ku-a /// na izege ari-na
arrive-conj CS say-3sg Q lsg how descend-conj

/// kuzuame ije kan-ia-ko-no ///
CS flying.fox def hit/kill-3pl-fut-conj Q

ku-a-e
say-3sg-past

'They arrived and he said, 'How will I descend and kill the flying fox?' he said.'

7. ku-a-mo-ga /// fu ku-a /// na
say-3sg-conj-conj C 3sg say-3sg Q lsg

siduo ru // rua-ko-ro /// siduo kira-na
vine pull CS come-fut-conj S vine tie-conj

/// ij-ia ari-na /// kazuame ije
CS def-L descend-conj CS flying.fox def

kan-ia-ko-no /// ku-a-e
hit/kill-3pl-fut-conj Q say-3sg-past

'He said this and then he said, 'Since I will pull a vine and come, you must tie the vine and descend and kill the flying fox,' he said.'

8. ku-a-mo-ga /// uvia-fuo fi-ko-ga
say-3sg-conj-conj C brother-poss stay-conj-conj

/// uvia-fuo fu va // gam-ia keke
C brother-poss 3sg go CS down.there-L arrive

// siduo jiamado meru-na /// ro // gaf-ia
CS vine long pull-conj CS come CS up.there.L

keke-mo /// fu dabe // ubine kira-mama
arrive-conj CS 3sg take CS end tie-conj

/// are-gana /// uvia-fuo fu kua /// na
CS stop-conj C brother-poss 3sg say Q lsg

ig-ia samua- / -mani-ko /// a ari /
here-L wait- CS-stand-conj CS 2sg descend C

va // kazuame kan-ia-ko-no /// ku-a-e
go C flying.fox hit/kill-3pl-fut-conj Q say-3sg-past

'He said this and then while his brother stayed, the (other) brother went and arrived down there and pulled a long vine and went and arrived up there and then he (the other brother) tied the end and kept tying until he stopped and his brother said, 'I will stand waiting here while you go down and kill the flying fox,' he said.'

9. ku-a-mo-ga /// fu ari / va-ko-gana
 say-3sg-conj-conj C 3sg descend C go-conj-conj

/// fu inauri // sime dabe // siduo ije
 C 3sg arise CS knife take CS vine def

kan-a- / -datura-e
 hit-3sg-CS-break.in.two-past

'He said this and then while he was going down, he
 (the other brother) arose and took a knife and cut
 the vine in two.'

10. kan-a- / -datura-mo-gana /// e ije
 hit-3sg-CS-break.in.two-conj-conj C person def

fu gam-ia ari
 3sg down.there-L go.down

'He cut it in two and then the man fell down there.'

11. ari-ko-ga /// boge fu una
 go.down-conj-conj C older.brother 3sg do.again

/ ro // gaf-ia keke-na /// bara
 C come CS up.there.L arrive-conj CS woman

ije abe-i
 ije marry-past

'He was falling down and at the same time the older
 brother came back and arrived up there and married
 the girl.'

12. abe-ko-ga /// iviene fu kazuame
 marry-conj-conj C younger.brother 3sg flying.fox

are ij-ia ari-i
 place def-L go.down-past

'He married her and at the same time the younger brother was falling down to the flying fox place.'

13. ij-ia ari-na /// vame rere-ga ///
 def-L go.down-conj CS trail look.for-conj C

fu isere-i
 3sg be.bad-past

'He fell down and then he looked for a trail and it was bad.'

14. isere-ga /// fu kazuame fie-gana ///
 be.bad-conj C 3sg flying.fox hear-conj C

fu aru-na /// ij-ia nuved-ia-na ///
 3sg go.in-conj CS def-L follow-3pl-conj CS

va-e
 go-past

'It was bad and he heard flying fox and he went in and followed them there and went.'

15. nuved-ia-na /// va // ajue bae g-ia-na
 follow-3pl-conj CS go CS banana ripe see-3pl-conj

/// bi- / -ikunu /// dubi fo
 CS take-CS-eat-conj CS dubi.tree fruit

bi- / -i- / -fie, // ije are-kinu /// ta
 take-CS-eat-CS-taste C 3sg stop-conj CS breadfruit

bae i-kinu /// ije-re-kinu /// va-e
 ripe eat-conj CS 3sg-do-conj CS go-past

'He followed them and he went and saw ripe bananas
 and took and ate them and took and tasted dubi fruit
 and stopped that and ate ripe breadfruit and so on
 as he was going.'

16. ije-re-na /// sakae guove gam-ia
 3sg-do-conj CS ground inside down.there-L

aru / va-mama /// vuavare gaf-ia nae-ema
 enter C go-conj CS light up.there-L shine-past

ije /// g-a-e
 def S see-3sg-past

'He did this and kept going down inside the ground
 there until he saw that a light was shining up there.'

17. ije g-a-na /// va-mama /// ij-ia keke-i
 3sg see-3sg-conj C go-conj CS def-L arrive-past

'He saw it and he went until he arrived there.'

18. keke-na /// va // do rue-mama ///
 arrive-conj CS go CS water wash-conj CS

are-gana /// una / ruo-mama /// ina
 stop-conj C do.again C come-conj CS tree

zinume ij-ia keke // g-a-ga /// uvia
trunk def-L arrive CS see-3sg-conj C brother

fu-one fu rua-e
3sg-poss 3sg come-past

'He arrived and went and kept washing with water until he stopped and he continued returning until he arrived at the stump and he looked and his brother had come.'

19. rua-e ro /// kamui fu-one ij-akina
come-past conj C string.bag 3sg-poss def-and

juvua fu-one ij-akina magu fu-one ij-ia
spear 3sg-poss def-and club 3sg-poss def-L

na-na /// fu vae
put-conj CS 3sg go-past

'He came and put his string bag and his spear and his club there and left.'

20. va-ga /// fu keke // juvuave abe //
go-conj C 3sg arrive CS spear take CS

rade nuve-na /// ruo-mama /// are
behind follow-conj CS come-conj CS place

gaf-ia keke-i
up.there-L arrive-past

'He went and he (the younger brother) arrived and took the spear and followed behind and came until he arrived up there at the village.'

21. keke ^ // g-a-ga /// bo fu-one
 arrive CS see.3sg-conj C elder.brother 3sg-poss

fu bara abe-na /// ij-ia fi
 3sg woman marry-conj CS def-L sat

'He arrived and looked and his elder brother had married the girl and sat there.'

22. fi-mo-gana /// fu keke-na /// bij-a-e
 sit-conj-conj C 3sg arrive-conj CS fight-3sg-past

'He sat there and he (his younger brother) arrived and fought him.'

23. bij-a-na /// kan-a-mama /// are-na
 fight-3sg-conj CS hit/kill-3sg-conj CS stop-conj

/// inauri // bara ije abe-i
 CS arise CS woman def marry-past

'He fought him and kept hitting him until he stopped and then he arose and married the woman.'

24. abe-na /// fanu kan-ia-na /// ju-rafa
 marry-conj CS animal kill-3pl-conj CS in.laws-pl

vaj-ia-e
 give-3pl-past

'He married her and he killed animals and gave them to the in-laws.'

25. ju-rafa vaj-ia-kinu /// o-rafa fu-one
 in.laws-pl give-3pl-conj CS relatives-pl 3sg-poss

vaj-ia-kinu /// ije-re-i
 give-3pl-conj CS 3sg-do-past

'He gave them to the in-laws and he gave them to his relatives and so on.'

26. ije-re-noe-mama /// are-mo-ga /// e
 3sg-do-dur-conj CS stop-conj-conj C person

Umazi ij-iebe ajia-na /// baru ije
 Umazi def-new(pl) ascend-conj CS man def

bij-a-e
 fight-3sg-past

'He kept on doing this until he stopped and then the Umazi people came up and fought this man.'

27. baru ije bij-a-na /// kan-a-ma ///
 man def fight-3sg-conj CS hit/kill-3sg-conj CS

ij-ia are-na /// bara ije mesiri-na ///
 def-L stop-conj CS woman def take-conj CS

are bu-one va-e
 place 3pl-poss go-past

'They fought this man and kept hitting him until they stopped there and took the woman and went to their place.'

28. fu furi
3sg finish

'It is finished.'

GLOSSARY

accusative type pattern - a pattern whereby some device of the grammar treats the actor of a multi-place predicate like the sole nuclear noun phrase of a one place predicate.

actor - that noun phrase which identifies the initiating stimulus of the state of affairs encoded by a multi-place predicate (nucleus) which is predictable from the role hierarchy 'A > F > no other' and which is marked by a specific set of grammatical devices.

base - a clause or chain of clauses joined by cosubordinate nexus which constitute the unit over which mood, thematic topic, and absolute tense operate.

clause - a tri-layered structure including nucleus, core, and periphery where the inner layers may be either simple or complex.

coordinate nexus - a 'whole-whole' equivalence relation where the conjuncts are of comparable status.

core - a unit composed of one or more kernels plus any core level operators all of which relate to a common periphery.

core level juncture - a juncture which joins kernels to form complex cores.

cosubordinate nexus - a 'part-whole' equivalence relation where conjuncts of comparable status constitute the whole.

definiteness - an indication that the speaker assumes the hearer can identify a particular referent regardless of whether or not it is assumed that the hearer is thinking about it at the time of the utterance.

ergative type pattern - a pattern whereby some device of the grammar treats a nonactor nuclear participant of a multi-place predicate like the sole nuclear noun phrase of a one place predicate.

event - a predicate or predicate complex with cosubordinate nexus which constitutes the unit over which aspect operates.

fulcrum - the indispensable noun phrase of the clause predictable from the role-animacy hierarchy 'A > anim P > anim F > other' which is marked by the relative position of a specific set of grammatical devices and indicates whether the actor of multi-place predicates is a responsible agent or not.

givenness - an indication that the speaker assumes a particular referent has already been activated in the hearer's consciousness.

kernel - a clause nucleus plus its associated nuclear noun phrases and any core level adverbials.

nucleus - a unit of one or more lexical predicates, their adverbial modifiers, and any nuclear level operators all of which relate to a common core.

nuclear level juncture - a juncture which joins predicates to form complex nuclei.

nuclear noun phrase - a noun phrase which is definitive to a particular state of affairs although it may be left unspecified under certain conditions. Nuclear level noun phrases are part of the core level of the clause but bear a semantic relation to the inner nucleus.

peripheral level juncture - a juncture that joins clauses to form sentences.

peripheral noun phrase - a noun phrase that does not function in the definition of some state of affairs but provides further background or 'setting' information pertaining to the state of affairs as a whole.

pragmatic peak - the pragmatically most salient noun phrase of the clause in terms of the intersection of features of both discourse and inherent topicality which is marked by a specific set of grammatical devices which occur immediately following this noun phrase.

role disambiguating devices - grammatical devices such as number agreement, cross-referencing on the predicate, and the distribution of particles which, in addition to some other primary function, also serve to disambiguate semantic role among the nuclear participants of the clause.

sentence - a clause chain bounded by a single intonation contour that in Barai terminates with a predicate of distinctive structure.

situation - a kernel or chain of kernels joined by cosubordinate nexus which constitute the unit over which mode and the pragmatic peak are operators.

subordinate nexus - a 'part-whole' nonequivalence relation where one conjunct is embedded as a constituent of the other.

thematic topic - that which the speaker is talking about, the point of departure for the clause (or more precisely, the base) as a message.

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