Participant Reference in Arop-Lokep

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List of abbreviations

ADJ	–	adjective
AN	–	alienable noun
CAUS	–	causative
DEM	–	demonstrative
DEF	–	definite determiner
DET	–	determiner
DIR	–	directional
DIST	–	distal
DL	–	dual
EX	–	exclusive
FOC	–	focus
IN	–	inclusive
InN	–	inalienable noun
IRR	–	irrealis
MED	–	medial
N	–	non-subject
NP	–	noun phrase
O	–	object grammatical role
OBL	–	oblique grammatical role
p	–	plural
PN	–	pronoun
POS	–	possessive
POSR	–	possessor grammatical role
PROX	–	proximal
Q1	–	quantifier *atu* ‘one’
QUANT	–	quantifier
RD	–	referential distance
s	–	singular
S	–	subject grammatical role
sp	–	species
TOP	–	topic
VAL	–	valence
VIP	–	very important participant
1	–	first person
2	–	second person
3	–	third person

1 Introduction

The purpose of this paper is to provide an account of referential forms and participant reference patterns in the Arop-Lokep language of Papua New Guinea. Arop-Lokep is an Austronesian language spoken by approximately 3000 inhabitants living on three islands of the Siassi chain in the Vitiaz Strait. The Ethnologue (2000) places it in the Korap sub-family of the Vitiaz family of languages. The Arop dialect is spoken on Long Island in Madang Province; the Lokep dialect is spoken on Tolokiwa Island and the northernmost tip of Umboi Island in Morobe Province.

Typologically, Arop-Lokep exhibits SVO word order and nominative-accusative case. Verbs are inflected with a set of subject-indexing prefixes which identify person and number. Nouns are alienable or inalienable, and inalienable nouns are obligatorily inflected with a set of possessor-indexing suffixes. The typical order of constituents in the noun phrase is as follows (adapted from D'Jernes 2002:255):

(POSR) (PLURAL) **HEAD** (NOUN) (NOUN) (ADJ) (ADJ) (QUANT) (POSR) (DET) (DEM)

Participant reference is an important aspect of the discourse level grammatical analysis of a language. It is the study of how that language introduces, reintroduces and maintains references to the participants in a discourse or narrative. Participants are the people, animals and things involved in the story, and languages usually have a wide range of referential forms available to refer to them. The choice of one form or another on a particular occasion depends on a variety of different factors, including the prominence of the participant in the story, the context in which the participant occurs, the length of time since the participant was last mentioned, and the importance the speaker intends to give to the participant in the subsequent discourse (i.e. for how long the participant will continue to be mentioned). Issues such as potential ambiguity or interference from other participants, changes in time or place, and discontinuity in the event line of the narrative, may also influence which referential form is chosen at a certain point.

Since the early 1980s a variety of practical approaches to the analysis of participant reference have been developed. Different methods place different emphases on the features of discourse that are most relevant to participant reference, and much discussion has arisen regarding the relative virtues of each of these approaches (e.g. Clark 2000). In this paper I have been more concerned with describing and accounting for the Arop-Lokep data than with assessing the benefits of one theory over another; therefore I have adopted a rather eclectic approach, taking from each method the features that seemed most useful to me for explaining participant reference patterns in Arop-Lokep. It should be noted that this study is based on a relatively small collection of 17 narrative texts produced by 11 native authors, and any conclusions drawn are thus tentative and open to further investigation. No claims are made about the behaviour of Arop-Lokep referential forms in conversational discourse; the study is restricted to their use in story-telling, which is an important part of Arop-Lokep culture and has strong conventions of its own.

Chapter 2 of this paper contains a brief description of several current theories relating to participant reference. In Chapter 3, the referential forms available to speakers of Arop-Lokep are described and exemplified. Chapter 4 explains the methodology used in the study of these texts and Chapter 5 presents an analysis of the results. In Chapter 6 it seemed appropriate to devote space to further discussion of the more marked forms, as many of the factors influencing their use could not be described by statistical data alone, and therefore an examination of a number of specific examples was deemed beneficial to providing a complete account of these forms.

2 Theory

2.1 Recency/distance approach (Givón)

The first methodology for a quantitative analysis of participant reference (or 'topic continuity') was developed by Givón (1983), and has since been called the 'recency/distance approach' (Tomlin 1987:456). Givón's claim is that there is a direct relationship between the accessibility of a topic in the mental representation of the hearer (topic availability) and the choice of referential form that the speaker will make to activate, reactivate or maintain that topic. Givón (1983:9-10) begins with the binary distinction traditionally made by linguists between definite and indefinite; a definite topic is assumed by the speaker to be known to the hearer, whereas the use of an indefinite form is a signal to the hearer that this topic is unfamiliar and that a new 'file' must be opened in the register. The speaker may use his choice of referential form to indicate his 'topical intent' (p.14), i.e. whether he intends to continue talking about that topic or not, and thus whether the hearer needs to create a temporary or a permanent file in the memory. The choice will also be affected by the length of time since the topic was last mentioned; a recent topic will be readily available and easy to identify, whereas a definite topic being brought back into the discourse after a long gap is harder to process (p.11). This is summed up in Givón's 'Iconicity Principle' (p.15):

> *"The more disruptive, surprising, discontinuous or hard to process a topic is, the more* coding *material must be assigned to it."*

Givón proposes three measures of topic continuity: referential distance ('look-back') is a measure of the distance (counted in clauses) since the previous mention of the topic; persistence ('decay') measures the persistence of the topic in the subsequent discourse (i.e. for how many clauses it continues to be mentioned); and potential interference ('ambiguity') is a measure of the disruptive effect of other referents in the immediately preceding discourse on the identification of the correct topic. The first two of these measures were used in the present study. Some of the data presented in Chapter 6 (especially in 6.1.1) suggests that potential interference would also have some relevance for the choice of certain forms in Arop-Lokep, and this would be a valid area for further research.

2.2 Episode/paragraph model (Tomlin)

I found Givón's method to be a convenient way of making generalizations at an early stage in the analysis, and also of checking some of my hypotheses about specific referential forms later on. But, as Tomlin points out, *"while a recency/distance approach, does address well general characteristics of the syntax of reference, it does not account for the full range of use exhibited by individuals engaged in discourse production and comprehension"* (1987:456). Tomlin proposes a second approach, the episode/paragraph model, which *"considers the alternation between noun and pronoun to be a function of the limited capacity of working memory, which is manifested in the text artifact primarily through its paragraph, or episodic, organization"* (ibid.). Thus higher encoding is expected to be a means of reinstating reference across episode boundaries.

The weakness of this approach is, as Tomlin himself acknowledges (p.457), the difficulty firstly of defining the notions of episode and paragraph, and secondly of identifying episode boundaries within a text. Tomlin's study made use of a series of slide pictures about which subjects were asked to tell a story; thus episode boundaries could be established artificially. A repetition of this study in Arop-Lokep might be a worthwhile future project; however, a preliminary survey of existing Arop-Lokep texts (decisions about episode boundaries being based on changes in time, place and event-line of the story) suggested that although episode boundaries may have some part to play, they are not the main factor in determining participant reference patterns in this language. While there were some occasions where a change of time, in particular, triggered higher encoding, there were many where it did not. And in some instances higher encodings also occurred where there was no episode break. As the majority of the data could be accounted for using other methods, the episode/paragraph model was not used in this study.

2.3 Default/marked method (Levinsohn)

A third methodology for analyzing reference patterns is described by Levinsohn (2000, 2003). Levinsohn acknowledges that Givón's iconicity principle works up to a point, accurately predicting higher encoding when a participant returns after an absence, or as a means of highlighting a disruptive or surprising event. But he lists three factors that Givón's principle does not seem to take into account: participant status (two major participants interacting may be encoded differently from a major and a

minor participant), participant salience (encoding varies according to the prominence of a participant) and whether or not the reference to a participant follows reported speech (Levinsohn 2000:136).

The alternative proposed by Levinsohn (2000, 2003) is to analyze reference patterns for activated participants in terms of 'default' and 'marked' encoding values. The first stage in this methodology (which is presented in detail in Dooley & Levinsohn 1999) is to identify the default encoding values for a specific set of contexts in which participants may occur. When default values have been established, exceptional or marked encoding values can then be analyzed, and over- and under-encoding in each context can be explained in terms of highlighting and the VIP (very important participant) strategy.

Default encoding is based on Givón's 'look-back' or sequential strategy; in this strategy, encodings are determined by looking back to the immediately preceding context. But Levinsohn (2000:143) claims that languages have a second strategy of reference: the very important participant strategy. In a VIP strategy, *"one referent is distinguished from the rest when introduced, and a special set of terms refer to it no matter how many other things have been mentioned more recently"* (Grimes 1978:viii).VIPs can be local (i.e. an otherwise minor participant is important for a short time) or global (one of the major participants, who is central to the whole story, is marked out from among the other major participants).

No statistical analysis of VIPs has been made in this study. Different languages use the sequential and the VIP strategy to different extents, and the tendency in Arop-Lokep is to treat all major participants equally, while minor participants and props that are prominent for a short time are marked in similar ways to major participants, i.e. by a combination of minimal encoding (agreement) and demonstratives. Levinsohn states that *"Typically, less coding material is used to refer to the VIP than to other participants"* (2003:2), and *"After being introduced, the global VIP is often referred to by minimum but virtually constant encoding"* (Dooley & Levinsohn, 1999:57). This is not the case for Arop-Lokep; the high use of demonstratives with all prominent participants suggests that the VIP strategy is not very important in this language, and therefore more attention has been given to methods that are effective for analyzing sequential strategies, identifying the contexts where these forms are likely to occur, and explaining marked encoding by other means, such as highlighting, topicality and repetition.

3 Referential forms in Arop-Lokep

Arop-Lokep speakers have access to a wide variety of forms to refer to participants in a narrative or discourse. For the purposes of this investigation, these have been divided into four categories: agreement-marking, noun phrases, demonstratives and determiners, and pronouns. There are numerous possibilities for combining these forms, which are mentioned briefly here but will be discussed in more detail later in the paper.

3.1 Agreement (AGR)

Participants can be minimally encoded in Arop-Lokep by means of a number of different verbal, prepositional and nominal possessor affixes. These are shown in Table 1.

Table 1: Arop-Lokep verbal and prepositional affixes

	1IN	1EX	2	3
Subject prefixes				
Singular		*a-*	*ku-*	*i-*
Plural	*ta-*	*am-*	*ka-*	*ti-*
Object suffixes/pronouns				
Singular		*au*	*ong*	*-V*
Plural	*idi*	*am*	*ang*	*di*
Inalienable noun possessor suffixes				
Singular		*-k*	*-m*	*-nV*
Plural	*-dV*	*-mam*	*-mim* (Arop) *-mu* (Lokep)	*-di*
Associative pronouns				
Singular		*yau*	*yong*	*ye*
Plural	*yidi*	*yam*	*yang*	*yedi*
Recipient pronouns				
Singular		*pau*	*pong*	*panga*
Plural	*paidi*	*pam*	*pang*	*pangdi*
Possessive pronouns				
Singular		*kiau*	*kiong*	*ki*
Plural	*kiidi*	*kiam*	*kiang*	*kidi*

3.1.1 Subject agreement

The majority of verbs exhibit subject-indexing prefixes that indicate person, number and, for first person plural subjects, inclusion or exclusion of the addressee. This prefix is obligatory (with certain exceptions – see Section 3.1.5 on zero agreement) with a noun phrase or pronoun subject (as in (1)), but may also occur on its own serving as the sole indicator of the identity of the subject (as in (2)).

1) *Garup tani i-longo ni-n-tooroo koo-noo.*
female DEF.S 3s-hear husband-3SPOS- mouth-3SPOS
'That girl obeyed her husband [lit. heard her husband's mouth].'

2) *Le nga ti-ken a muntu.*
and.so now 3p-rest and morning
'So then they slept and (it became) morning.'

3.1.2 Object agreement

Third person singular objects are minimally indicated by a vowel suffix on the verb (as in (3)); the quality of this vowel is verb-specific. In all other cases objects are marked by the same set of pronouns that is used in the subject position (as in (4)). These pronouns are the unmarked situation, and have similar status to the subject indexing prefixes. Therefore, for the purposes of participant reference tracking, they have been included in the agreement category, except where there is reason to believe that they are emphatic, as in (5) where the object pronoun has been left-dislocated.

3) *Yaru* *ti-salau-u* *a* *ti-sau-a,* *motong* *la* *ti-kum-u* *a* *i-me,*
3pDL 3p-singe-3s and 3p-cut-3s after FOC 3p-cook-3s and 3s-cooked.done
motong *ti-kan-i.*
after 3p-eat-3s
'(The) two of them singed it and cut it (up), then (having done that) they cooked it (in a ground oven) and it (was) done, then they ate it.'

4) *Ti-lung* *di.*
3p-lie 3p
'They lied (to) them.'

5) *Inbe* *ya* *be* *ti-rau-u,* *ngan* *ti-kap* *le* *tiap.*
and 3s IRR 3p-hit-3s then 3p-get/give.3p and.so no
'And he they (wanted to) hit, (but they couldn't [idiom]).'

3.1.3 Possessor agreement

Inalienable nouns are also given a person-marking suffix. There are differences between the behaviour of inalienable kinship terms, where the noun itself refers to a participant in the narrative, and the behaviour of other inalienable nouns which are body parts or qualities belonging to participants. Inalienable nouns which have a human referent require a subject agreement marker on the verb like other noun phrases with alienable noun heads (6), whereas body part inalienable nouns frequently do not (as in (7); see Section 3.1.5).

6) *Motong* *la* *tina-na* *i-li* *saka* *panga.*
After FOC mother-3sPOS 3s-weave basket to.3s
'Then (having done that) his mother wove (a) basket for him.'

7) *Lo-n* *wete* *nen,* *"Tiap."*
insides-3sPOS speak like.that no
'He thought, "No." [lit. 'his insides speak like that']

3.1.4 Prepositional and possessive pronouns

Oblique grammatical roles are minimally expressed with a prepositional pronoun formed from a reflex of *pang* (recipient/benefactor) or *ye* (associative) and a person-indexing suffix.

8) *Ngan* *natu-nu* *i-wete* *panga.*
then child-3sPOS 3s-speak to.3s
'Then her child spoke to her.'

9) *Motong* *i-tar* *lal* *pangdi.*
after 3s-put time to.3p
'Then he set a time for them.'

10) *Am-yepe* *yang.*
1pEX-live with.2p
'We (will) stay with you.'

Possession of alienable nouns may be shown minimally by a possessive pronoun, which is formed from the preposition *ke* 'of' and a person-indexing suffix.

11) *I-rookoo* *pang* *rumu* *kidi.*
3s-climb to house of.3p
'He climbed (up) to their house.'

3.1.5 Zero agreement

There are certain predicative words in the language which never take any form of inflection or which are inflected in an unusual way. Where the action of a participant is described by one of these

words and is not encoded in a noun phrase or other form, it has been counted in the agreement category. Technically the encoding on these words is zero, but to introduce a zero level of encoding would suggest that these examples were marked in some way, whereas in fact lack of agreement is a normal feature of these words.

Verbs ending in *–be* may take an NP subject (as in (12)) but also occur with no subject agreement encoding at all, the subject being the same as in the previous clause (as in (13)). These verbs typically express actions that are not agent oriented, including many onomatopoeic verbs such as *putumbe* 'explode', *pakbe* 'pop' and *pumbe* 'thump' (13).

12) *Ti-yepe, ti-yepe, le lal ke kumanga pombe.*
3p-live 3p-live and.so time of gardening arrive

'They lived (and) lived and (the) time of gardening arrived.'

13) *I-mol tina meneng pokai kutono ete ni le du*
3s-fall thus yonder custard.apple head-3sPOS above that and.so go.down

pumbe tana le i-mata.
thump ground and.so 3s-die

'He fell (from the) head of (the) custard apple tree above (all the way) down thumping (onto the) ground, and he died.'

A small number of words encoding stative properties such as *moomoo* 'shame', and *somai* 'big', may also occur as predicates with no referent encoding.

14) *Poo i-longo betanga ke garup nen, le moomoo san.*
crocodile 3s-hear talk of female like.that and.so shame very

'(The) crocodile heard (the) woman's talk like that, and (he was) very ashamed.'

15) *Poo tani i-yepe i-yepe a somai.*
crocodile DEF.s 3s-live 3s-live and big

'That crocodile lived (and) lived and (became) big.'

As noted above in Section 3.1.3, verbs which have inalienable noun body parts as subject are not marked for agreement, although the possessor of the inalienable noun is marked by a possessor suffix on the noun (see examples (7) and (16). One way to interpret this situation would be to treat these as complex predicates; thus in the phrase *Lon wete nen* 'His insides speak like that', 'insides' is not the subject of the verb 'speak' but there is an idiomatic complex predicate 'insides-speak', of which the inalienable noun possessor is understood to be the subject. For the purposes of this paper, the possessor of an inalienable noun such as a body part is treated as the subject or object of a clause (with agreement encoding) rather than as possessor if the inalienable noun is not a participant in the narrative itself.

16) *Tool tani lo-n ponana.*
person DEF.s insides-3sPOS be.happy

'That person (was) happy.'

3.2 Noun phrases (NP)

The next level of encoding available to Arop-Lokep speakers is the plain noun phrase. In the NP category I have included common and proper nouns and their modifiers; however, noun phrases modified by determiners or demonstratives have been counted separately from plain NPs. Both definite and indefinite plural nouns are marked by the pronominal form *di*, which is treated as part of the noun phrase rather than as a separate pronoun (as in (17)). Noun phrases containing a relative clause (as in (18)) have also been included in the NP category; most of the time relative clauses were used to give additional information about a participant rather than to identify one particular participant or another, and were therefore not considered relevant to the tracking of participants through the narrative.

17) *Motong di garup maimai ti-wete pang di garup kakase.*
after 3p female big 3p-speak to 3p female p.small.one

'Then the older women spoke to the younger women.'

18) *Bong i-kamata serek ki yo i-tar ran koo-noo nga.*
but 3s-see skirt 3sPOS that 3s-put water mouth-3sPOS now

'But he saw her skirt that she (had) put by the water's edge.'

3.3 Demonstratives and determiners (DEM, DEF, Q1)

The Arop-Lokep noun phrase has both a demonstrative and a determiner slot. Both are relevant to participant reference, and have therefore been analysed separately from the plain noun phrase. The determiner slot in the noun phrase comes first and may contain either the definite determiner (DEF) *tani/tina*, or the quantifier *atu* 'one' (Q1) which functions as an indefinite determiner. The demonstrative (DEM) slot follows the determiner slot. Demonstratives can be proximal, medial or distal. All may be used for spatial deictic purposes and the proximal and medial forms are also used for textual deixis and topicality-marking. Demonstratives and determiners may co-occur in the same NP.

Demonstratives (DEM):

Demonstratives usually have a spatial deictic function in general conversation and day-to-day interaction between people. The singular forms *i*, *in* and *ni*, and their plural counterparts *ngan*, *nga* and *ngo*, indicate 'near speaker' (proximal), 'near hearer' (medial) and 'distant from speaker and hearer' (distal) respectively. In narratives, however, *i* and *in* seem to be related to topicality. According to D'Jernes (1992), *i* is used to indicate a participant that is potentially relevant and thematic, while *in* is used with entities that are slightly less relevant or that are already known to the hearer (i.e. given information). (19) is an example of this. *Nga* and *ngan* can be used in the same way, but also have a temporal deictic function, and it should be noted that this is their role in (19); *nga* refers to an event that is proximal in time, and *ngan* to an event that is medial or slightly more removed in time.

19) *Le* *nga* *gaunu i* *rima-na* *i-pasui,* *le* *nga* *lal*
and.so now dog PROX.s wife-3sPOS 3s-give.birth and.so now time

ke *panga* *be* *tipa,* *ngan* *gaunu* *rimana* *tini* *in*
of walking IRR 3p-walk then dog wife-3sPOS DEF.s MED.s

nookoot *i-pasui* *nen,* *le* *ke* *be* *i-pa* *tiap.*
now 3s-give.birth like.that and.so able IRR 3s-walk not

'And so now this dog his wife gave birth, and so at (the) time of travel (when) they intended (to) walk, then that same dog's wife (just) now gave birth, (it was) like that and so she was unable to walk.'

It is less clear if the plural forms *nga* and *ngan* behave in the same way as *i* and *in*, specifying plural nouns as either thematic or given, but in general this seems to be the case.

20) *Yaru* *leu* *nga* *ti-kere* *tiap.*
3pDL only PROX.p 3p-marry not

'Only these two didn't marry.'

21) *I-kap* *i* *tina* *ngan* *kase* *ru* *panga* *i-la* *ye* *bus.*
3s-get/give.3p fish DEF.p MED.p small.one two to.3s 3s-go with taro

'She gave those same fish, two small ones, to him (to) go with (the) taro.'

Nga, *ngan* and the singular *i* are never found in isolation, but *in* may occur as the pronominal subject of a finite verb, as in (22). As will be discussed in Section 6.3, both *in* and *ngan* can function as resumptive pronouns in left-dislocation constructions.

22) *In* *i-ye* *ni-n-tooroo* *inbe* *di* *tooltool* *kapala* *ti-yepe* *ye*
MED.s 3s-with husband-3sPOS- and 3p person part 3p-live with

malala *kidi.*
village of.3p

'She with her husband and some (other) people lived in their village.'

Definite determiners (DEF):

The definite determiners *tani/tini* (singular, Arop and Lokep dialects respectively) and *tina* (plural, both dialects) can be glossed as 'the same or previously mentioned one(s).' Their behaviour is in many ways more typical of demonstratives than the demonstrative set described above, and the two categories are clearly distinct from each other because they can co-occur. A definite determiner denotes a referent as "given" or known, and already mentioned. It post-modifies a noun phrase and precedes the demonstrative. The demonstratives that normally co-occur with definite determiners are *in* and *ngan*; this supports D'Jernes' (1992) claim that *in* and *ngan*, like the definite determiners, indicate given information. One significant difference between demonstratives and definite determiners in participant reference is that while the definite determiners always require an antecedent in the discourse, demonstratives, particularly *in*, are common in introductory forms (the implications of this for the

interpretation of *in* as given information will be discussed later in this paper). Not all speakers use the definite determiners; they occur most frequently in the speech of older adults, and especially among the best story tellers.

23) *Inbe garup tani be mata-na i-du pang tana.*
and female DEF.S IRR eye-3SPOS 3s-go.down to ground

'And (the) same woman looked down at (the) ground [lit. 'her eye goes down'].'

24) *Natu-nu ngan i-yau gingin tina.*
child-3SPOS then 3s-gather lizard DEF.P

'Then his child gathered (the) same lizards.'

25) *Motong la du, tamoto tani in i-pie.*
after FOC go.down male DEF.S MED.S 3s-paddle

'Then having gone down, that same man paddled.'

Quantifier atu 'one' (Q1):

In general, quantifiers have been treated as part of the noun phrase for the purposes of this study. Special attention has been given to *atu* because of its frequency and because its behaviour differs somewhat from that of the other numerical quantifiers, in that it is often used to indicate indefiniteness. Arop-Lokep nouns do not require either definite or indefinite determiners; the occurrence of *atu* in this role is therefore marked and is worthy of further analysis. Like definite determiners, *atu* may occur with a following demonstrative (*in*), usually in introductory forms, where it seems to have the meaning 'a certain (one)'. There is no plural indefinite determiner; indefinite plural NPs are usually unmodified.

26) *Bianga atu i-pididi ye pokai bae-ne.*
fruit.bat one 3s-crawl with custard.apple branch-3SPOS

'A fruit bat (was) crawling in (the) branches of (the) custard apple tree.'

27) *Garup atu in i-kere pau-nu inbe kapo-no somai.*
female one MED.S 3s-marry new-3SPOS and stomach-3SPOS big

'A certain woman (was) newly married and she was pregnant [lit. her stomach big].'

3.4 Pronouns (PN)

Arop-Lokep pronouns distinguish singular, plural and dual number; first, second and third person; and in the first person dual and plural forms, a distinction is also made between inclusion and exclusion of addressee (the same distinctions, apart from dual, are made in agreement forms). These are shown in Table 2.

Table 2: Arop-Lokep pronouns

	1IN	1EX	2	3
Singular		*au*	*ong*	*ya* (Arop) *ye* (Lokep)
Dual	*aru*	*amru*	*angru*	*yaru* (Arop) *yeru* (Lokep)
Plural	*idi*	*am*	*ang*	*di*

Pronouns can occur on their own (as in (28)) or modified by a demonstrative (as in (29)); first person pronouns take a proximal demonstrative, second person pronouns may take either a proximal or a medial demonstrative (both occur in (29)), and third person pronouns may take a medial demonstrative. It is also possible to modify a pronoun with a definite determiner (e.g. *ya tani* 'he himself'), but no occurrences of this occurred in the text corpus upon which this paper is based.

28) *Di saura-na ti-yepe tana inbe ya i-rookoo.*
3p brother.in.law-3SPOS 3p-live ground and 3s 3s-climb

'His brothers-in-law stayed (on the) ground and he climbed.'

29) *Ong in pon natu-nu la ong i!*
2p MED.S turtle child-3SPOS FOC 2p PROX.S

'(As for) you, (the) turtle's child (is) you!'

A pronoun can be used to emphasize the possessor of an inalienable noun, as in (30) and (31). In (30), with the reflexive *tau-* 'self', the pronoun is obligatory, but in (31) it is optional. A pronoun can also occur in a verbless clause, as in (32).

30) *Bong* *i-re* *ye* *ya* *tau-nu* *lo-no* *a* *i-re* *sokorai.*
but 3s-build with 3s self-3SPOS insides-3spos and 3s-build without.purpose

'But he built with (his own inclinations) [lit. he himself his insides] and he built without purpose.'

31) *Ya* *lo-n* *wete* *nen.*
3s insides-3SPOS speak like.that

'He thought like that [lit. he his insides speak].'

32) *Ngan* *garup* *tani,* *ya* *lapau.*
then female DEF.S 3s too

'Then that woman, she (was happy) too.'

As noted above, object pronouns in the object slot have been treated as agreement, because these are the unmarked situation; object pronouns have only been counted as pronouns if they have been marked as emphatic by left-dislocation, as with *ya* in example (5), repeated here as (33).

33) *Inbe* *ya* *be* *ti-rau-u,* *ngan* *ti-kap* *le* *tiap.*
and 3s IRR 3p-hit-3s then 3p-get/give.3p and.so no

'And he they (wanted to) hit him, (but they couldn't [idiom]).'

In the general analysis of the data, no distinction has been made between dual and other pronouns, although I later considered it worthwhile to count them separately and compare their distribution (see Section 6.4). It should be noted that because dual pronouns refer to two participants, they have generally been counted twice in the statistical analysis.

4 Methodology

4.1 The texts

This study is based on data from seventeen written narratives by eleven different authors from both dialects of the language; these narratives consist of 1254 lines of text or 2257 clauses. Some stories are modern and some are traditional; six first person and eleven third person texts are included. Some researchers have excluded first person narratives on the grounds that the speaker is always involved in the speech act and is therefore always mentally accessible. According to Staley (1995:115), *"This assumption, while not false in itself, implies that the speaker would only ever use a single device in referring to himself, or to the group he is a part of."* Patterns of first person reference are expected to be different from third person patterns, and are therefore relevant to the study of participant reference, and of interest to the translator. Therefore I have included first person texts in the database, although more space has been given in the analysis to the far wider variety of forms referring to third person participants.

4.2 Charting methodology

Each text was divided into clauses and entered in an Excel chart (see Appendix for a sample chart). Coordinate clauses were counted separately; relative and subordinate clauses were included within the main clause. For each participant, the following information was recorded:

Prominence:

Participants were divided into three categories: major participants, minor participants and props. The boundary between major and minor participants was somewhat fluid; it could not be determined on the number or percentage of mentions alone; this was a good indicator of prominence but was affected both by the length of the story and the number of other participants involved. Therefore, major participants are those who are given a formal introduction, are mentioned throughout the text rather than in just one or two episodes, and are mentioned mostly in agent rather than patient roles. Major participants are often what the story is said by the narrator to be about. They may be described in more detail than other participants and their emotions might be described. Minor participants are those who are mentioned in only one or two episodes in the story, are often patients rather than agents and are not central to the plot of the story. Props are inanimate objects and some animals. Animals have been classed as participants rather than props if their role in the story is important and if they tend to act as agents rather than patients.

Encoding:

The referential forms in each clause (as described above) were recorded. If a participant was referred to twice in the same clause, only one form was recorded: either the most prominent grammatical role (e.g. subject rather than possessor) or the form with the highest level of encoding (e.g. noun phrase rather than agreement).

Left-dislocation of a topic (in any grammatical role) occurs in Arop-Lokep, with a second referential form (usually a demonstrative or agreement) in the original position. Left-dislocation has been ignored in the general analysis of the data, but will be discussed in more detail in Section 6.3.

Grammatical role:

The grammatical role of each participant was noted: subject, object, oblique or possessor.

Context:

The classification of referents by context was based on Dooley & Levinsohn's (1999) methodology. The first mention of a participant (in any grammatical role) was marked as 'introductory'. All subsequent mentions were identified as being in one of the following contexts (Dooley & Levinsohn 1999:180):

Subjects:

S1 the subject is the same as in the previous clause
S2 the subject was involved in the previous clause in a non-subject role
S3 the subject was the addressee of a speech reported in the previous clause
S4 other changes of subject than those covered by S2 and S3

Non-subjects:

N1 the referent occupies the same non-subject role as in the previous clause
N2 the addressee of a reported speech (in the present clause) was the subject (speaker) of a speech reported in the previous clause
N3 the referent was involved in the previous clause in a different role than that covered by N2
N4 other non-subject references than those covered by N1-N3

Where a group of two or more participants share a grammatical role, a variety of things can happen. If the subject and other participants in the previous clause are referred to by a plural subject in the next clause, this is treated as the same subject. If the subject of the previous clause is joined by other participants as subject of the next clause, this is treated as a change of subject. When a member of a group of participants from the previous clause becomes the individual subject of the next clause, this is also treated as a change of subject (Levinsohn, 2000:138-9).

Persistence:

Persistence or 'decay' involves the behaviour of a referent in the subsequent discourse, and is the count of how many subsequent clauses a participant continues to be mentioned in. Persistence is *"a reflection of the topic's* importance *in the discourse, and thus a measure of the* speaker's *topical intent"* (Givón 1983:14). The assumption is that:

> *"More important discourse topics appear more frequently in the register, i.e. they have a higher probability of persisting longer in the register after a relevant measuring point."* (p.15).

Referential distance (RD):

Also relevant to the continuity of a referent is referential distance or 'look-back', which is measured by the number of clauses since the previous mention of a participant. The minimal RD is 1, indicating that the participant was mentioned in the previous clause and is maximally continuous. The maximal RD of 20 is given to introductory forms and to participants who have not been referred to for more than 20 clauses (Givón 1983:13).

5 Results

5.1 Encoding

The most frequently occurring encodings in Arop-Lokep are (highest frequency first):

- AGR (2032)
- NP (681)
- NP+DEF (256)
- PN (100)
- NP+DEM (68)
- NP+DEF+DEM (55)
- NP+Q1 (27)
- PN+DEM (10)
- NP+Q1+DEM (7)

Other combinations that occur are:

- DEM (6)
- NP+DEF,PN (3)
- DEF (2)
- Q1 (1)

The distribution of encodings for 3rd person participants is discussed in Sections 5.2 to 5.6. First person participants are discussed separately in Section 5.7.

5.2 Introductory referential forms

Introductory forms were counted separately from later mentions of an entity. Table 3 compares the forms found for 3rd person major participants, minor participants and props.

Table 3: Introductory referential forms (3rd person)

	Major	Minor	Prop	Total
NP	17 (59%)	22 (69%)	22 (61%)	61 (63%)
NP+Q1	6 (21%)	10 (31%)	10 (28%)	26 (27%)
NP+Q1+DEM	6 (21%)		1 (3%)	7 (7%)
NP+DEM			3 (8%)	3 (3%)
Total	29	32	36	97

The form most commonly used to introduce any kind of participant is a noun phrase (NP); these account for 63% of all introductory references. A noun phrase modified by the quantifier *atu* 'one' (NP+Q1) is the next most frequent encoding, and again is distributed fairly evenly between major and minor participants and props. NP+Q1 can be further modified by a demonstrative, usually *in* (NP+Q1+DEM), and this form is used almost entirely to introduce major participants. The combined counts for introductory forms with Q1 constitute 42% of the introductory forms for major participants, 31% of minor participants and 31% of props; *atu* can therefore be used to introduce participants at all levels of prominence, whereas *in* is used to mark participants who will be highly prominent in the story.

On one occasion only, the sequence NP+Q1+DEM is used to introduce a prop. The prop in question is the *pokai* (custard apple) tree in the story **"Pokai"**. As the tree is the central theme in the story, it is hardly surprising that even as a prop, its introduction marks it as important. The clause in which it is introduced also contains a subordinate clause giving a description of the tree:

34) *ngan* *ti-kamata* *pokai* *atu* *in* *i-pu,* *pu* *le* *be* *i-sareng-kata*
then 3p-see custard.apple one MED.S 3s-bear bear and.so IRR 3s-bend-break

bae-ne
hand-3SPOS

'… then they saw a certain custard apple tree (that was) bearing (so much) fruit (that) it was about to break its branches.'

For the three props introduced with NP+DEM, two of the demonstratives can be regarded as having a deictic rather than a discourse function, both of them pointing to an entity that is assumed to be familiar to the listeners. In both cases the demonstrative used is the proximal *i* (most of the other demonstratives used in introductory forms are the medial *in*):

35) *a* *i-lunaia* *pat* *ke* *yimoongoo* *so* *i*
and 3s-vomit stone of buying something PROX.S

'… and he (the crocodile) vomited this money for buying things…'

36) *Ole* *a-nanpoto* *nen:* *malala* *ben* *Bunu* *i,* *tool* *kuto* *mai* *ki* *atu*
IRR 1s-illustrate like.that village like Bunu PROX.S person head big of.3s one

'I will illustrate like that: (there was a) village like this Bunu (village on Long Island), (and) one of its head men…'

The third example is particularly interesting because it contains not one but two demonstratives, in both cases *in*, referring to the same argument. The context in which it occurs is a description of what was generally going on in people's gardens at the time, and the function of the demonstratives is to emphasize very clearly which garden the speaker is now referring to, and Tau's ownership of it (Tau being the central participant in the story).

37) *Bong* *ye* *kumu* *in,* *ki* *in,* *Tau* *walwalingi* *le* *i-rau-pala* *tiap.*
but with garden MED.S of.3s MED.S Tau cutting.brush and.so 3s-hit-split not

'But in that garden, that (one) of his, Tau didn't clear brush and split (wood).'

Table 4 shows the syntactic contexts in which new participants are introduced.

Table 4: Syntactic contexts for introductory forms

	Major	Minor	Prop	Total
O	3 (11%)	7 (22%)	29 (81%)	39
OBL	5 (17%)	8 (25%)	5 (14%)	18
POSR	5 (17%)	2 (6%)		7
S	16 (55%)	15 (47%)	2 (5%)	33
Total	29	32	36	97

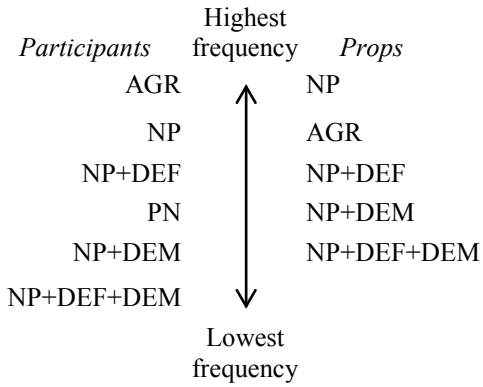
Major and minor participants are most commonly introduced in a subject role, and props in an object role. This is a reflection of the fact that props are inanimate and are unlikely to be agents, while participants tend to be more active. One of the factors on which the classification of major or minor participant was made, was whether a participant occurred more in patient or agent roles; these figures support this distinction, with more minor than major participants being introduced in non-subject roles (with the exception of possessors).

5.3 Post-introductory referential forms

Table 5 shows the frequencies of post-introductory forms for major and minor participants and props. The hierarchy below the table shows the difference between the distributions for participants and props. There is no difference in the ordering of this hierarchy for major and minor participants. Encodings that occur less than 1% of the time have been excluded from the hierarchy.

Table 5: Post-introductory referential forms

	Major		Minor		Prop		Total	
AGR	1509	(69%)	312	(61%)	59	(22%)	1880	(63%)
NP	336	(15%)	136	(27%)	149	(55%)	621	(21%)
NP+DEF	187	(9%)	28	(6%)	41	(15%)	256	(9%)
PN	71	(3%)	18	(4%)			89	(3%)
NP+DEM	45	(2%)	8	(1%)	12	(4%)	65	(2%)
NP+DEF+DEM	38	(2%)	7	(1%)	10	(4%)	55	(2%)
Total	2186		509		271		2966	



For participants, agreement is by far the most common form of encoding (major 69%, minor 61%), with the frequency of NPs significantly lower, although NP occurrence is higher for minor participants (27%) than for major (15%). For props, this order is reversed, with NPs occurring 55% of the time and agreement 22%. It is predictable that the most prominent (and topical) participants in the story should have the most minimal encoding, with a predominance of agreement; meanwhile, less prominent participants, and especially props, which are the least activated in the listener's mind, require much more explicit encoding. Prominence and degree of activation will be considered further in Section 5.6 in relation to context and the presence or absence of the participant in the immediately preceding discourse.

Table 5 shows high numbers of agreement encodings for major participants, in comparison with minor participants and props. However, because such a large percentage of major participant encodings are agreement, this table does not allow us to see very clearly the proportions of different types of NP across levels of prominence. Table 6, therefore, shows determiner- and demonstrative-modified NPs as a percentage of all NPs in the data, enabling us to compare their distribution among major and minor participants and props.

Table 6: Distribution of NPs with demonstratives and determiners

	Major		Minor		Prop	
Plain NPs	337	(56%)	138	(76%)	151	(71%)
NP+DEF	187	(31%)	28	(15%)	41	(19%)
NP+DEM	45	(7%)	8	(5%)	12	(6%)
NP+DEF+DEM	38	(6%)	7	(4%)	10	(5%)
Total	607		181		214	

Following the discussion of NPs and agreement above, we might expect the correlation between longer phonological forms, higher encoding and lower prominence to continue with demonstratives and determiners. This would be consistent with Givón's iconicity principle (more coding material must be assigned to less accessible topics), but the situation is clearly more complex than this. 44% of NPs referring to major participants take a demonstrative or determiner, in comparison with 30% of props and 24% of minor participants. Overall, definite determiners are more common than demonstratives and the combination NP+DEF+DEM is the least frequent of all. The exact function of each of these forms will be considered in more detail elsewhere; here it is sufficient to note that demonstratives and determiners mark a participant as being significant at a particular point in the discourse; this participant is probably already activated and important (see Sections 6.2 and 6.3 for further discussion). Interestingly, props seem slightly more likely to be marked by demonstratives or determiners than minor participants do; props can have an important part to play in a story and the figures suggest that these forms are used to mark this.

The final category in the above hierarchy is the pronoun. Pronouns are more commonly used to refer to major than to minor participants; they are personal and never refer to inanimate objects or props. For major participants only, a pronoun can also be modified by a demonstrative; occurrences of this form are very infrequent (there are only 6 examples in this database referring to 3rd person participants) and are highly marked.

5.4 Persistence

Persistence or decay is a measure of the importance of a topic and of the speaker's topical intent (Givón 1983:14); it is an indicator of how far ahead in the subsequent discourse a participant will continue to be referred to (counted in clauses). The hierarchy below shows the average persistence of the most commonly occurring referential forms in Arop-Lokep:

Highest persistence

PN (4.76)
NP+DEF (3.38)
AGR (3.3)
NP+Q1+DEM (3.29)
NP+DEF+DEM (3.22)
NP+Q1 (3.04)
NP+DEM (1.9)
NP (1.9)

Lowest persistence

The persistence of major participants is expected to be higher than that of minor participants and props. Table 7 shows the average persistence for each of these forms according to participant prominence, and demonstrates clearly that this is true. Major participants have the highest persistence rate for all forms, averaging 3.63 overall. Minor participants have a lower average of 1.92, and props without exception have the lowest rate of all, averaging 0.4.

Table 7: Average persistence

	Major	Minor	Prop	Average
PN	5.28	2.56		4.76
NP+DEF	4.15	2.54	0.44	3.38
AGR	3.69	1.94	0.56	3.3
NP+Q1+DEM	3.67		1	3.29
NP+DEF+DEM	3.97	2.86	0.6	3.22
NP+Q1	4.83	4.1	1.09	3.04
NP+DEM	2.62	0.88	0.38	1.9
NP	2.83	1.58	0.28	1.9
Overall average	3.63	1.92	0.4	3

One of the things a speaker may wish to indicate with the choice of a particular referential form is whether that participant is going to persist in the discourse and continue to be topical. The persistence hierarchy for Arop-Lokep suggests that determiners and demonstratives may be used for this purpose: noun phrases modified by demonstratives or determiners are more persistent than noun phrases without demonstratives or determiners.[1] This is consistent with the findings of Csongor (2001) for Arop-Sissano (an Austronesian language of Sandaun Province) and Bugenhagen (1995:337) for Mangap-Mbula (another language of the Vitiaz family, spoken on a neighbouring island): in these languages too, the persistence of reference forms with demonstratives is lower than of those without.

It is also worth noting that the demonstratives have a lower persistence than the definite determineres. NP+DEF has the highest persistence (3.38), followed by NP+DEF+DEM (3.22), with NP+DEM significantly lower again (1.9). This may be a reflection of the different functions of these two word classes. Definite determiners seem to be used as a straightforward reference-tracking device throughout the discourse, whereas demonstratives have the function of marking a participant as topical at a particular point in time. We might expect to find more topicality marking when there are more changes of topic, i.e. where two or more major participants are interacting with each other. The consequence of a high level of interaction between participants is a lower persistence; thus even though a demonstrative marks a participant as highly important for a few clauses, its persistence is notably lower than that of determiners.

5.5 Referential distance

Referential distance (RD) is a measure of recency, i.e. the distance (in clauses) since the last mention of a participant. It therefore reflects the accessibility or activation of a participant in the listener's memory, and the greater the referential distance the higher the encoding that we would expect to find. The following hierarchy is based on the average referential distance for the most frequent forms referring to major participants in Arop-Lokep; there is some variation in this hierarchy for minor participants and props. It should be noted that the forms NP+Q1 and NP+Q1+DEM only occur in introductions, and thus are always assigned the maximum RD of 20.

[1] The average persistence for a pronoun modified by a demonstrative is 14.5, compared with 4.76 for an unmodified pronoun. This is not included in the table because of the infrequency of PN+DEM, but it also lends some support to the claim that demonstratives indicate participants who will persist in the discourse for longer periods of time

Lowest referential distance
(major participants only)

AGR	(1.25)
PN	(1.4)
NP+DEM	(2.49)
NP+DEF	(3.2)
NP+DEF+DEM	(3.79)
NP	(4.26)
NP+Q1+DEM	(20)
NP+Q1	(20)

Highest referential distance

Like persistence, we would expect RD to be affected by the prominence of the participants referred to, so Table 8 shows the average RD for major and minor participants and props.

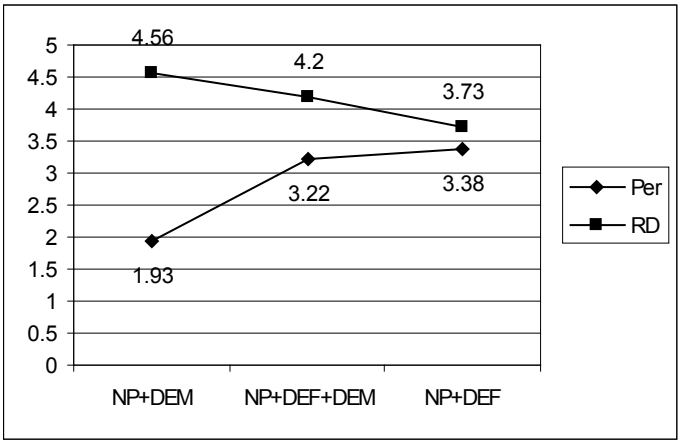
Table 8: Average referential distance (RD)

	Major	Minor	Prop	Average
AGR	1.25	1.2	1.75	1.26
PN	1.4	1.25		1.37
NP+DEF	3.2	3.79	6.02	3.73
NP+DEF+DEM	3.79	6.5	3.9	4.2
NP+DEM	2.49	4.88	10.06	4.52
NP	4.26	7.69	11.2	6.8
NP+Q1	20	20	20	20
NP+Q1+DEM	20		20	20
Overall average	2.07	3.68	8.74	3.03

In general, Table 8 shows what we might predict – that RD is low for major participants, higher for minor participants and highest of all for props. One exception to this trend is the form NP+DEF+DEM, which has a lower RD for props than for minor participants. It has already been noted that more props than minor participants are marked with demonstratives and definite determiners, and I have suggested that the props involved are those which are more prominent in the story than many minor participants; a lower RD for these props lends further support to this claim; prominent props are both more marked and more frequently mentioned.

For all participant types, the plain NP has the highest RD of all post-introductory forms. In relation to persistence, it was observed that noun phrases without demonstratives or determiners have a lower persistence than those with demonstratives or determiners. For referential distance the opposite is true: NPs without demonstratives or determiners have a higher RD than those with demonstratives or determiners. There is also a slight negative correlation between RD and persistence for determiners and demonstratives: the form NP+DEM has a lower average persistence (1.9) but a higher RD (4.52), while the form NP+DEF has a higher persistence (3.38) and a lower RD (3.73). The combination NP+DEF+DEM falls between NP+DEM and NP+DEF on both measures (persistence 3.22, RD 4.2). This relationship is illustrated more clearly in Chart 1 (based on overall averages; it should be noted that for major participants alone, this correlation does not hold).

Chart 1: Persistence and referential distance of determiners and demonstratives



This gives some support to my earlier suggestion that definite determiners are used to track participants continually throughout the discourse. They have a low RD (i.e. they have been mentioned recently) and a comparatively high persistence (i.e. they will continue to be mentioned). Demonstratives, on the other hand, are used to mark participants for topicality. These participants have been mentioned slightly less recently (thus they have a higher RD) and will now become prominent or topical (hence the need for some kind of marking) but their topicality is often of short duration (thus their persistence is lower). Participants referred to by both a definite determiner and a demonstrative are both highly topical and will continue to be so.

5.6 Context

Table 9 is a summary of the most common or default encodings for major and minor participants and props in the contexts S1-4 and N1,3-4. Very few examples of the context N2 (the addressee of a reported speech was the subject of a speech reported in the previous clause) were found; these were therefore incorporated into the N3 category.

Table 9: Default encodings

Context	Subject			Context	Non-Subject		
	Major	Minor	Prop		Major	Minor	Prop
S1	AGR	AGR	AGR	N1	AGR	AGR	AGR
S2	AGR	AGR	AGR				
S3	NP	NP		N3	AGR	AGR	AGR
S4	AGR	NP	NP	N4	NP	NP	NP

By far the most frequent encoding overall is agreement, followed by the noun phrase, and these are the two default encodings that we find. For subject roles, Table 9 presents some surprising results. A predominance of agreement in the contexts S1 and S2 is to be expected, given that the participant is already activated and was referred to in the previous clause. In S4, where the participant was generally not involved in the previous clause (unless as one of a group of participants acting together), we would expect to find a higher encoding such as a noun phrase. This is true for minor participants and props but not for major participants. Presumably major participants are often sufficiently prominent in the narrative that they do not always need to be reactivated by a noun phrase or other higher form of encoding, even if another participant interferes. What is surprising is that major participants in the context S3 (subject is addressee in the previous clause) require a higher level of encoding than S4. This issue will be discussed in more detail below.

The default encodings for non-subjects are agreement for all contexts where the participant was involved in the previous clause, and noun phrases where it was not. This applies to all levels of prominence.

Tables 10 and 12 show the distribution of forms in more detail. Encodings that constitute less than 1% of the whole dataset have been excluded.

Table 10: Referential forms in subject role

Context	Encoding	Major	Minor	Prop	Total
S1	AGR	1022 (91%)	225 (88%)	3 (43%)	1250 (90%)
	PN	37 (3%)	10 (4%)		47 (3%)
	NP	30 (3%)	13 (5%)	2 (29%)	45 (3%)
	NP+DEF	24 (2%)	3 (1%)		27 (2%)
	NP+DEM	8 (0.7%)	1 (0.4%)	1 (14%)	10 (0.7%)
	NP+DEF+DEM	4 (0.4%)	3 (1%)	1 (14%)	8 (0.6%)
S1 Total		1125	255	7	1387
S2	AGR	75 (63%)	16 (73%)	9 (53%)	100 (63%)
	NP	25 (21%)	4 (18%)	4 (23%)	33 (21%)
	NP+DEF	11 (9%)		1 (6%)	12 (8%)
	PN	4 (3%)	2 (9%)		6 (4%)
	NP+DEM	3 (3%)		1 (6%)	4 (3%)
	NP+DEF+DEM	2 (2%)		2 (12%)	4 (3%)
S2 Total		120	22	17	159
S3	NP	35 (41%)	15 (83%)		50 (48%)
	NP+DEF	22 (26%)	1 (6%)		23 (22%)
	AGR	19 (22%)	2 (11%)		21 (20%)
	NP+DEF+DEM	8 (9%)			8 (8%)
	NP+DEM	2 (2%)			2 (2%)
S3 Total		86	18		104
S4	AGR	156 (40%)	32 (28%)	2 (10%)	190 (36%)
	NP	107 (27%)	60 (52%)	14 (67%)	181 (34%)
	NP+DEF	64 (16%)	12 (10%)	4 (19%)	80 (15%)
	PN	23 (6%)	4 (3%)		27 (5%)
	NP+DEM	21 (5%)	4 (3%)	1 (5%)	26 (5%)
	NP+DEF+DEM	19 (5%)	3 (3%)		22 (4%)
S4 Total		390	115	21	526
Grand Total		1722	410	46	2178

Table 10 shows us that although agreement is the default encoding for all participants in S1 and S2 contexts, the proportion of agreement to other encodings tends to decrease as prominence decreases. Thus 91% of major participants in S1 are encoded by agreement, compared with 88% of minor participants and only 43% of props. The proportion of agreement to other encodings also decreases going down the table; thus for major participants, agreement in 91% of S1 contexts compares with 63% of S2 contexts and 40% of S4 contexts. A corresponding increase of NP and NP+DEF can be observed. For minor participants and props, NPs are more common as the number of agreement encodings decreases.

As mentioned above, S3 is the only subject context where major participants have a higher frequency of NPs than of agreement. The difference between S3 and S4 encoding is significant: 39% of S4 references are encoded as agreement, compared with 27% as NP and 16% as NP+DEF. For S3, 22% of references are agreement, compared with 40% as NPs and 25% as NP+DEF. It is clearly a common pattern in Arop-Lokep to increase encoding following speech, as in (38).

38) *Motong* *la* *i-wete* *panga* *nga.* *I-yei* *ne,* *"Ku-mata..."* *Le* *nga*
after FOC 3s-speak to.3s now 3s-do like.this 2p-see and.so now

ni-n-tooroo *i-wete* *panga.*
husband-3SPOS- 3s-speak to.3s

'After that she spoke to him. She said, "Look…" And then her husband spoke to her.'

Increased encoding also occurs following speech where the same participant continues as subject (S1), as in (39).

39) *Motong* *la* *mada* *garup* *i-wete* *panga.* *I-yei* *ne,* *"Ai*
after FOC spirit female 3s-speak to.3s 3s-do like.this hey

tiu-k..." *Motong* *mada* *garup* *tani* *i-kaua* *mie* *atu...*
grandchild-1SPOS after spirit female DEF.S 3s-get/give mat one

'After that the spirit woman spoke to him. She said, "Hey grandchild…" Then that spirit woman took a mat…'

A count of S1 forms after speech revealed the following results.

Table 11: Encoding of S1 forms following speech

Encoding	Total	Repeated verb
AGR	18 (40%)	8
NP	11 (24%)	1
NP+DEF	10 (22%)	1
PN	3 (7%)	3
NP+DEF+DEM	2 (4%)	
NP+DEM	1 (2%)	
Total	45	

Table 11 shows that although agreement can occur after speech when the speaker continues as subject, it is very common to have a higher level of encoding, such as a noun phrase or a noun phrase and determiner or demonstrative, in this context. The rightmost column in Table 11 shows the number of these forms that involve the repetition of a verb referring to the speech act in a tail-head linkage, before the action moves on. These repetitions, illustrated in the examples below, account for nearly half the agreement and all the pronouns that occur in this context (however, it should be noted that all the pronoun examples come from the same story, **"Rimadi"**, and all involve thinking rather than speaking). (40) is an example of agreement encoding after speech, and (41) of a pronoun, both with the verb *wete* 'speak'.

40) *Ngan* *i-yei* *ne,* *"E..."* *I-wete* *nen* *le* *tina-na* *i-yei* *ne,* *"Aoo..."*
then 3s-do like.this yes 3s-speak like.that and.so mother-3SPOS 3s-do like.this okay

'Then she (spoke) like this, "Yes…" She spoke like that and her mother (spoke) like this, Okay…"'

41) *Le* *nga* *ke* *atu* *in* *ngan,* *tai-ni* *kase* *i,* *in*
and.so now day one MED.S then younger.brother-3SPOS small.one PROX.S MED.S

lo-n *wete,* *"Tiap..."* *Ya* *lo-n* *wete* *nen.*
insides-3SPOS speak no 3s insides-3SPOS speak like.that

'And then one day, this small younger brother, that one thought [lit. his insides speak], "No…" He thought like that [lit. he his insides speak like that].'

Increased encoding after speech, with either the same subject or a change of subject, may be due to the fact that in reported speech, there are nearly always at least two participants (the speaker and the hearer), and therefore there is the potential for confusion between them in the next sentence, particularly when they are both third person.

Table 12: Referential forms in non-subject role

Context	Encoding	Major	Minor	Prop	Total
N1	AGR	27 (63%)	5 (83%)	16 (41%)	48 (55%)
	NP	12 (28%)		14 (36%)	26 (30%)
	NP+DEF	4 (9%)		7 (18%)	11 (13%)
	NP+DEF+DEM		1 (16%)	1 (3%)	2 (2%)
	NP+DEM			1 (3%)	1 (1%)
N1 Total		43	6	39	88
N3	AGR	174 (71%)	25 (57%)	17 (74%)	216 (69%)
	NP	42 (17%)	13 (30%)	5 (22%)	60 (19%)
	NP+DEF	24 (10%)	5 (11%)		29 (9%)
	NP+DEM	4 (2%)	1 (2%)		5 (2%)
	NP+DEF+DEM	1 (0.4%)		1 (4%)	2 (0.6%)
N3 Total		245	44	23	312
N4	NP	85 (48%)	31 (63%)	110 (67%)	226 (58%)
	NP+DEF	38 (22%)	7 (14%)	29 (18%)	74 (19%)
	AGR	42 (24%)	9 (18%)	12 (7%)	63 (16%)
	NP+DEM	7 (4%)	2 (4%)	8 (5%)	17 (4%)
	NP+DEF+DEM	4 (2%)		5 (3%)	9 (2%)
N4 Total		176	49	164	389
Grand Total		464	99	226	789

Table 12 displays the distribution of encodings for non-subject roles. Agreement is again the most common encoding, accounting for the majority of N1 and N3 references. In N4 contexts, NPs are considerably more frequent than agreement for both participants and props, and the frequency of NP+DEF also increases; this is to be expected, given that the participant is usually being reactivated after a break. NP+DEM and NP+DEF+DEM are comparatively rare in all non-subject roles, which may be a reflection of the fact that non-subjects are unlikely to be marked as highly topical.

Another issue related to context is whether there is any difference between sentence-initial and non-initial clauses. In many languages there is a tendency to use pronouns or other higher encoding at the beginning of a sentence, even though the same subject is maintained, whereas a pronoun in mid-sentence usually indicates a change of subject. The reason for this may be that sentences need some sort of overt topic at the beginning. Table 13 is based on a comparison of S1 (same subject) encodings in three texts (381 sentences and 975 clauses) for sentence-initial and non-initial clauses.

Table 13: S1 encodings in sentence-initial and non-initial clauses

	Initial	Non-initial	Total
Agreement	195 (87%)	410 (95%)	605 (93%)
NPs (all)	18 (8%)	9 (2%)	27 (4%)
PNs (all)	10 (5%)	12 (3%)	22 (3%)
Total	223	431	654

These figures suggest that there may be a slight tendency for higher encoding sentence-initially; there is a higher proportion of agreement for non-initial clauses, and there are a few more NPs and pronouns in initial clauses. However, while position in the sentence may have some effect on encoding, this is clearly not the only factor involved in referential choice; it is also possible to have higher encoding in non-initial clauses, and it should also be noted that many of the sentence-initial clauses where higher encoding occurs come after speech, which has already been shown to have an influence. Therefore sentence position alone is probably not very important in Arop-Lokep; other factors such as breaks in the event-line of the story for speech (see Section 6.2 for a discussion of other types of discontinuity) have more impact on the speaker's choice of encoding.

5.7 1st person encoding

As expected, 1st person referential forms differed dramatically from 3rd person forms. Table 14 shows the distribution of forms found according to context. Average persistence and referential distance are also shown.

Table 14: Distribution of 1st person forms

	Per.	RD	Intro	S1	S2	S3	S4	N1	N3	N4	Total
AGR	3.46	1.85	6 (86%)	118 (94%)	4 (67%)	1	50 (85%)	1	14	5	199 (91%)
PN	5.05	3.1	1 (14%)	8 (6%)	1 (17%)		6 (10%)				16 (7%)
PN+DEM	3	2			1 (17%)		3 (5%)				4 (2%)
Total	3.61	1.91	7	126	6	1	59	1	14	5	219

The variety of forms available for referring to first person participants is significantly less than for third person. The majority of first person references occur in subject role and are encoded as agreement, even in introductions. This is to be expected, given that there can never be any doubt about who first person agreement refers to. The speaker is always accessible in the mental representation of the hearer.

Most first person referents are highly persistent and have a low referential distance; a first person narrator is usually involved in the action throughout the story. Variations in first person encoding are therefore unlikely to be motivated by the need to reactivate the participant in the mind of the hearer; we expect the use of pronouns and demonstratives to have another function. A number of stories in this database seem to use these forms for the purpose of *contrasting* the narrator's action with the action of other participants, as the following examples demonstrate:

42) *Am-du,* *motong* *la* *au* *a-yepe* *ookoo* *pono,* *inbe* *Galga*
1pEX-go.down after FOC 1s 1s-live canoe on and Galga

i-ye *Lenas* *ti-pas* *a* *ti-we* *pang* *ye.di* *pon* *tina* *a*
3s-with Lenas 3p-jump and 3s-swim to with.3p turtle DEF.p and

ti-la.
3p-go.across

'We went down, then I stayed on the canoe, and Galga and Lenas jumped and swam to those turtles and went across.'

43) *Garup* *be* *di* *tamoto* *kapala* *ngan* *ti-yin* *ran* *kidi* *kookoonoo*
female and 3p male part MED.p 3p-drink water of.3p whiteskin

be *lo-di* *ponana,* *bong* *au* *i* *a-yin* *tiap.*
and insides-3pPOS happy but 1s PROX.S 3s-drink not

'(The) women and some of those men drank water of the whiteskins (i.e. alcohol) and they were happy [lit. their insides happy], but (as for me) I didn't drink.'

First person pronouns are occasionally used to mark the start of the action in a story. **Gasanga ke Wewak** (44) has no formal introduction but begins with *au ataleu* 'I alone'. **Kiroro** (45) starts with a standard introductory formula which takes a 1st person affix, but then begins the real action of the story with a pronoun.

44) *Gaongo* *mai* *atu* *au* *ataleu* *a-du* *pang* *malala* *ke* *tina-k.*
gathering big one 1s one.only 1s-go.down to village of mother-1sPOS

'(At the time of) a big gathering I alone went down to my mother's village.'

45) *Nga* *be* *a-gasa* *betanga* *kiau* *modmodono* *pattu* *nga.*
now IRR 1s-tell talk of.1s short part now

Airi *au* *a-ye* *Yep* *am-lo* *be* *lo* *am-pa* *karam.*
2.days.ago 1s 1s-with Jeff 1pEX-go.up and go.up 1pEX-walk bush

'Now I'm going to tell you a short bit of my talk. The day before yesterday I and Jeff went up and going up we walked (into) the bush.'

6 Further discussion

So far in this paper I have presented a general survey of the referential forms most commonly found in Arop-Lokep, and their distribution. In this section, additional data is presented to further exemplify the behaviour of some of the more marked forms, including the definite and indefinite determiners, the demonstratives, and dual and other pronouns.

6.1 The indefinite determiner *atu*

The indefinite determiner *atu* is only used in introductory forms. As shown in Section 5.2, nearly 43% of introductory forms in the data contained *atu*, and it could be used to introduce participants at any level of prominence. This leads us to the question of why *atu* should sometimes occur and sometimes not, and whether there is something marked about its usage. A more detailed analysis of the introductory NPs not modified by *atu* produced some revealing results. Table 15 shows the different types of non-indefinite NPs found.

Table 15: Non-indefinite NPs in introductory forms

NP	
Generic	7
Inalienable possession	22
Alienable possession	11
Plural	14
Others	7
Total	61

The majority of plain NP introductory forms (without *atu*) can be accounted for in one of three ways:

A) The NP is plural, and therefore *atu* cannot be used. Instead a number or the plural marker *di* (which, like *atu*, does not require an antecedent) is used. In (46), both *di* and the number *ru* 'two' are used to introduce the two bachelors. In (47), *di garup* 'the women' refers to a group, and it is not known how many women were involved.

46) *Nga be a-gasa barau kidi maimai atu ye di tooltool koskos ru.*
now IRR 1s-tell story of.3p big.ones one with 3p person bachelor two
'Now I will tell a story of the elders about two bachelors.'

47) *Kene san in lal ke kumanga, le di garup ngan lo*
day another MED.S time of gardening and.so 3p female then go.up
ti-kumu.
3p-garden
'Another day it (was the) time of cutting gardens, and so the women then going up cut the gardens.'

B) The NP is either a possessed alienable noun or an inalienable noun with possessive marking. A possessed noun is, in a sense, definite, and therefore *atu* is unlikely to occur. Thus in (48), the inalienable noun *toonoo* 'his older sibling' is possessed by the younger brother, who has already been introduced; similarly in (49), the canoe is possessed by an already active participant.

48) *Kene atu in tamoto kase atu i-ye too-noo ti-pelele…*
day one MED.S male small.one one 3s-with older.sibling-3SPOS 3p-beachcomb
'One day a small boy and his older brother beachcombed…'

49) *I-du a du i-yolo ookoo ki.*
3s-go.down and go.down 3s-pull canoe of.3s
'He went down, and going down he pulled (out) his canoe.'

If *atu* does modify a possessed noun it usually functions more like the other numerals rather than as an indicator of indefiniteness. In (50), the man may have more than one son, but the story is only concerned with this one.

50) *Inbe* *i-ye* *natunu* *tamoto* *atu* *in* *ti-yepe* *ye* *malala* *atu.*
and 3s-with child-3SPOS male one MED.S 3p-live with village one

'And he and (a certain) one of his sons lived in a village.'

C) The NP is generic, referring to food or other mass nouns, as in (51):

51) *Muku* *yedi* *maimai* *Poonoo* *ngan* *ti-kan-en* *kaning* *moolmool* *tiap.*
first with.3p big.ones Long.Island then 3p-eat-PROG yam true not

Ti-kan-en *lum* *ke* *tiek* *lo-no.*
3p-eat-PROG seagrass of sea insides-3SPOS

'In the beginning those Long Island elders didn't eat real yams. They ate seagrass from the sea [lit. of sea's insides].'

This brings us to the conclusion that all singular, indefinite, count, non-possessed nouns should be introduced with *atu* by default. There are only seven exceptions to this in the database. Three of these involve nouns that are used as proper names in a traditional story, as in (52) (there were no other proper nouns in introductory forms):

52) *Nga* *be* *a-gasa* *barau* *ke* *Gaunu* *i-ye* *Ook.*
now IRR 1s-tell story of dog 3s-with kangaroo

'Now I'm going to tell the story of Dog and Kangaroo.'

The other examples are all objects of active, creative verbs, such as *pasuiu* 'give birth' or *yeie* 'make'. In (54), an already activated prop (the afterbirth) becomes a participant (a man), so *tooltool tamoto* may or may not be understood as an introductory form.

53) *Ngan* *i-pasuiu* *poo* *a* *i-du* *tana* *tina.*
then 3s-give.birth crocodile and 3s-go.down ground thus

'Then she gave birth (to a) crocodile and it went down (to the) ground like (that).'

54) *Motong* *pon* *tini* *i-kau-u* *a* *i-takrai-i,* *i-takrai-i* *le* *i-yeie*
after turtle DEF.S 3s-get/give-3s and 3s-shake-3s 3s-shake-3s and.so 3s-make

tooltool *tamoto.*
person male

'Then that turtle got it (the afterbirth) and shook it (and) shook it and made (a) male person.'

6.2 The definite determiners *tani* and *tina*

As noted in Section 3.3, both definite and indefinite determiners can be followed by a demonstrative. The co-occurrence of *tani/tina* and the demonstratives is evidence that they constitute wholly distinct classes and that their functions are different. *Tani/tina* and *atu*, however, are in complementary distribution and never co-occur. *Atu* is nearly always found in introductory forms, and *tani* and *tina* without exception are found in post-introductory contexts. This suggests that these two types occupy the same slot in the noun phrase (together with words such as *sa* 'some', *san* 'another') and that this slot relates to definiteness and specificity.[2] It should be noted, however, that the indefinite determiner can refer to a participant or prop at any level of prominence, whereas definite determiners seem to be restricted to major participants, or to props and minor participants who are prominent in the narrative for a short time.

A consideration of data from two related Austronesian languages may tell us something more about the formal properties of *tani* and *tina*. In many Austronesian languages the form *ta* or *tau* is a relative clause complementizer, and may also be a reflexive pronoun (Arop-Lokep is unusual in having *yo* as relative clause complementizer). In Mangap-Mbula and Mutu, two languages spoken on nearby Umboi Island, the complementizers *ta* (Mangap-Mbula) or *tau/to* (Mutu) combine with the full set of demonstratives to produce a class of words that behave in a similar way to *tani* and *tina* in Arop-Lokep (see Table 16). Bugenhagen (1995) calls these compound forms demonstratives too, but now suggests that, owing to their construction, they should be described as a kind of highly reduced relative clause meaning 'that (is/are) here/there/over there' (personal communication). According to Lambrecht

[2] One problem with this claim is that other numerical quantifiers such as *ru* 'two' are allowed to co-occur with *tina*, the plural referential demonstrative, e.g. *di kase ru tina* 'the same two children'. I suggest that *atu* has a different function when it is used as an indefinite determiner than as a numerical quantifier, and therefore that numerical quantifiers occupy a different slot in the noun phrase.

(1994:51), a restrictive relative clause is anaphoric and refers to an argument that is already known, i.e. to a definite argument; this supports the case for *tani* and *tina* as indicators of definiteness.

Table 16: Mangap-Mbula and Mutu demonstratives (Bugenhagen, personal communication)

Demonstrative pronouns	Demonstratives (reduced relative clauses)
Mangap-Mbula	
iŋgi (proximal)	taiŋgi
ina (medial)	tana
iŋga (distal)	taŋga
Mutu	
ene (proximal)	tane
ena (medial)	tana
ewe (distal)	tawe

It should be noted, however, that a definite determiner does not occur every time a prominent, definite participant is referred to by a noun phrase; definiteness may be a property of these words but not all NPs referring to known participants are overtly marked as definite (in many languages of Papua New Guinea a subject NP's referent is assumed to be definite unless it is overtly marked as indefinite). As suggested in Chapter 5, definite determiners are used to track participants throughout the discourse; referential distance and persistence measurements support this claim. But we still need to answer the question of why an unmodified NP is used on some occasions, and NP+DEF on others (ignoring NP+DEF+DEM for the present). One clue comes from the data on context presented in tables 10 and 12; the distribution of the forms NP and NP+DEF across all subject and non-subject contexts is repeated here in Table 17.

Table 17: Comparison of NP and NP+DEF by context

	S1	S2	S3	S4	N1	N3	N4	Total
NP	45	33	50	181	26	60	225	620
NP+DEF	27	12	23	80	11	29	74	256
Total	72	45	73	261	37	89	299	876

It will be observed that the majority of NP+DEF forms occur in S4 and N4 contexts; therefore they are likely to indicate a complete change of subject. This is not the only criterion for NP+DEF, however, because NPs show a similar distribution and are a great deal more common. A comparison of the average referential distances for S4 and N4, as shown in Table 18, is more helpful.

Table 18: Average RD for NP and NP+DEF in S4 and N4 contexts

	S4	N4	Average
NP	6.19	8.85	7.67
NP+DEF	5.14	5.66	5.39

Table 18 shows that the referential distance for NP+DEF is significantly lower than for a plain NP. This indicates that definite determiners are used in contexts where the participant is more likely to be known to the hearer, i.e. for given information. For Mangap-Mbula, Bugenhagen (1995:480-1) suggests that plain NP subjects and subject NPs with demonstratives have the following meanings:

> *Plain NP subject (=X):* I want to say something about someone/something different (=X) now. I do not think you know who/what X is.
>
> *Subject NP with demonstrative (=X):* I want to say something about someone/something different (=X) now. I think you could know who/what X is.

This seems similar to the situation in Arop-Lokep. Thus in (55), both the woman and the younger brother have been mentioned recently and are activated in the mental representation of the hearer; they are therefore marked as given or known participants by *tani*. The older brother, however, has not been mentioned since the beginning of the story, and is referred to by a plain NP (the *tani* in the phrase *tamoto tani toonoo* 'that man's older brother' refers to the younger brother and serves to clarify the relationship between them).

55) *Ti-pa* *ti-pa* *be* *di* *pombe* *malala* *be* *tamoto* *tani*
3p-walk 3p-walk and go.inland arrive village and male DEF.S

too-noo *be* *mata-na* *pang* *nen* *be* *i-kamata* *garup* *tani*
older.sibling-3SPOS IRR eye-3SPOS to like.that and 3s-see female DEF.S

ngan *le* *ya* *betanga* *i-mot* *ye.*
then and.so 3s speech 3s-finish with.3s

'They walked (and) walked and going inland arrived (at the) village and that man's older brother looked (towards them) and he saw that woman and then (he was speechless).'

It should be stressed that this is a *tendency* for NP+DEF in Arop-Lokep, rather than being an absolute rule of usage. Table 17 also shows that there are many occasions where NP+DEF occurs in S/N1-3 contexts. Change of grammatical role may be another motivation for its occurrence (e.g. where a non-subject in the previous clause becomes subject in the current clause, or perhaps vice versa) – this might also be regarded as a situation where something different but given is being talked about, as above.

There are three main motivations for the encoding of a participant as NP+DEF in S1 (same subject) contexts. It has already been observed that higher encoding such as NP or NP+DEF is common after speech, whether the speaker continues as subject or whether there is a change of subject; examples of this are found in Section 5.6. The second environment is where the verb from the previous clause is repeated; this is a common stylistic device in Arop-Lokep, and the subject of the second verb is often more highly encoded than the first, as in (56) and (57):[3]

56) *I-dikmaia* *gaunu* *a* *i-la* *potai* *le* *la* *kano-no*
3s-move-VAL dog and 3s-go.across near and.so go.across stomach-3SPOS

i-kapa *gaunu.* *Ook* *tini* *kano-no* *i-kapa* *gaunu,* *a* *ti-ken...*
3s-touch dog kangaroo DEF.S stomach-3SPOS 3s-touch dog and 3p-rest

'He moved (himself towards the) dog and he went across near(er) and so going across his stomach touched the dog. That kangaroo's stomach touched (the) dog, and they slept…'

57) *motong* *la* *i-pot* *pang* *malala* *nga.* *Ingangau* *tani*
after FOC 3s-come.seaward to village now Ingangau DEF.S

i-pot *malala...*
3s-come.seaward village

'…after (that) he came seaward towards (the) village now. That Ingangau came seaward (to the) village…'

Thirdly, NP+DEF may occur where there is some other kind of discontinuity or interference, although this is much rarer than either after speech or with repetition. (58) is an example of temporal discontinuity. (59) is an example of interference; the object, the child's afterbirth, is highly encoded and marked with *tani*; this is, in Givón's terminology, disruptive, and therefore more coding material is also assigned to the continuing subject of the next clause, the turtle (Givón 1983:18).[4] Example (89) may be another instance of this.

[3] This could be evidence in support of the earlier suggestion (Section 5.6) that sentence-initial subjects sometimes have higher encoding because of a preference for a sentence to have an overt topic (the subject being the default topic of a sentence).

[4] It should be noted that this occurs even though there should be no difficulty in identifying who does what, given that the turtle is animate and the afterbirth is not. Givón's measure of potential interference was not used in this study, but a fruitful area for further investigation would be to study not only the extent to which the presence of an interfering topic affects encoding, but also the effect of the encoding of that topic. There are several examples in the database where there could be no possible ambiguity, but where one participant with high encoding (e.g. the afterbirth) causes another participant to have higher encoding, even where this second participant continues in the same grammatical role as in the previous clause (e.g. the turtle).

58) *Ingangau* *i-yepe* *karam* *lo-no* *ye* *ke* *sangaul* *tol* *inbe*
Ingangau 3s-live bush insides-3sPOS with day ten three and

bala-na *limi* *be* *ru,* *motong* *la* *i-pa* *karam* *lo-no* *a*
remainder-3sPOS five and two after FOC 3s-walk bush insides-3sPOS and

i-pot *nga.* *Ingangau tani* *i-yepe* *karam* *lo-no* *go* *nga...*
3s-come.seaward now Ingangau DEF.s 3s-live bush insides-3sPOS yet now

'Ingangau lived in the bush for thirty seven days [lit. day ten three and remainder five and two], after that he walked (out of) the bush and he came towards the sea. (While) that Ingangau (was) still living in the bush…'

59) *Le* *pon* *atu* *i-pa* *ke* *tiek* *lo-no* *a* *i-long* *a*
and.so turtle one 3s-walk of sea insides-3sPOS and 3s-come.inland and

i-rookoo *a* *i-lo,* *ngan* *i-kamata* *kase mata-na tani.* *Motong*
3s-climb and 3s-go.up then 3s-see small.one eye-3sPOS DEF.s after

pon tani *i-kau-u…*
turtle DEF.s 3s-get/give-3s

'And so a turtle came (out of the) sea and came inland and climbed and went up, then it saw that child's afterbirth. Then that turtle got it…'

Another type of discontinuity involves breaks in the event line for descriptions of participants' perceptions and emotions. This also seems to provoke higher encoding.

60) *Ti-wete-wete* *inbe* *lo-n galanga.* *Motong* *la* *natu-nu tani*
3p-speak-speak and insides-3sPOS clear after FOC child-3sPOS DEF.s

i-toro *tina-na tani* *nen.*
3s-ask mother-3sPOS DEF.s like.that

'They (the child and his mother) talked and he (understood) [lit. his insides clear]. After that, that child questioned that mother (of his) like that.'

61) *inbe* *i-kamata* *di* *tooltool* *ke* *malala* *ki* *ngan* *kate-n malmal*
and 3s-see 3p person of village of.3s then chest-3sPOS angry

san. *Le* *Ingangau tani* *i-pas* *ke* *rumu* *ke* *tina-na*
very and.so Ingangau DEF.s 3s-jump of house of mother-3sPOS

'…and he saw the people of his village then he (was very angry) [lit. his chest angry very]. And so that Ingangau jumped (down) from his mother's house…'

In conclusion we can say that definite determiners are a reference tracking device for prominent participants who are assumed to be known to the hearer (activated, or given). They act as a signal to the hearer that the participant referred to is one that the speaker has mentioned recently. Usually it follows some sort of discontinuity: either a complete change of subject (or non-subject), a change of grammatical role, or a break in the event line of the story for reported speech or other non-event material. But the participant is always present in the preceding discourse.

6.3 The demonstratives and topicality

The demonstrative slot is the final slot in the NP, following the definiteness slot. The behaviour of demonstratives in narrative discourse is quite different from their behaviour when they have a purely spatial deictic function, having to do with the topicality of participants and left-dislocation as a topicalization construction.

The medial singular demonstrative *in* is by far the most common; its plural form *ngan* appears in similar environments but is considerably rarer in this database because of the scarcity of prominent plural participants. *In* and *ngan* frequently co-occur with the determiners *tani* and *tina*; they are also used as resumptive pronouns in left-dislocation constructions; and *in* appears in introductory forms alongside the indefinite determiner *atu.* The proximal demonstratives *i* and *nga* also exhibit textual deictic and topicality-marking functions, but their distribution varies somewhat from that of the medial demonstratives in that they do not seem to co-occur with the determiners and cannot stand alone as

pronouns. The distal demonstratives *ni* and *ngo* are the rarest of all the demonstrative set, and their scope is limited to spatial deixis; they are not used to track participants at a discourse level.[5]

Topics are defined by Andrews as *"given, that is, presumed to be in the consciousness of the hearer by virtue of the preceding discourse or already shared knowledge… There are two principal kinds of topics: those whose topicality is predictable from the immediately preceding discourse, and those whose topicality is not."* (1985:78). A predictable topic is likely to take minimal encoding, such as the subject-indexing prefixes in Arop-Lokep. A topic which is not predictable from the immediately preceding discourse will require a higher encoding, and most languages have a variety of devices available to identify and topicalize the new topic. In Arop-Lokep, there are a number of ways of doing this. Participants identified by a definite determiner, as discussed in 6.2, are usually topics, although they do not always seem to be unpredictable. But where the Arop-Lokep speaker wishes to put particular emphasis on a participant, the demonstratives, especially the medial *in*, are brought into service, with left-dislocation as a further strategy for arguments whose topicality the speaker particularly wishes to emphasize.

In the following examples, *in* is used to mark participants as highly topical and prominent. (62) is a particularly interesting case, because it refers to a prop which hitherto has been referred to only with the noun *matuk* 'coconut', with very little importance to the story. At this point the coconut ceases to be an inanimate prop, acquires its own volition and becomes a woman, who henceforth will be a major participant; in anticipation of this, therefore, the speaker needs to increase its topicality. (63) involves a change of topic between one major participant and another, so the new topic, the older brother, is marked with *in*. (64) involves several actions of a minor participant (the fruit bat), who concludes by doing something to a major participant (the younger brother); even though the brother is the undergoer of the fruit bat's action, he immediately becomes topical again, and *in* is an indicator of this.

62) *I-tu* *ye* *serenge* *tanga* *le* *matuk,* *inbe* *matuk* *tani* *yo* *i-kau-u,*
3s-busy with finding bilum and.so coconut and coconut DEF.S that 3s-get/give-3s

in *i-portak* *a* *i-yei* *garup* *nene* *a* *la* *i-rau-u* *a*
MED.S 3s-change and 3s-do female unmarried.woman and FOC 3s-hit-3s and

i-wete *panga* *nen.*
3s-speak to.3s like.that

'He was busy looking for (the) bilum and (the) coconut, and that same coconut that he got, it changed and became (a) young woman and going across she touched him and she spoke to him like that.'

63) *Yaru* *ti-parsu* *ye* *rookoongoo* *bong* *ngan* *kase* *koo-n* *mede*
3pDL 3p-debate with climbing but then small.one mouth-3sPOS strong

san *le* *nga* *too-noo* *mai* *in* *i-malum* *panga.* *I-yei* *ne*
very and.so now older.sibling-3sPOS big MED.S 3s-consent to.3s 3s-do like.this

'(The) two debated about climbing, but (the) younger (brother) spoke very strongly and so (the) big older brother consented to him. He (spoke) like this…'

64) *inbe* *bianga* *atu* *i-pididi* *ye* *pokai* *bae-ne* *a* *i-man*
and fruitbat one 3s-crawl with custard.apple hand-3sPOS and 3s-come.across

tina *le* *i-kana* *kase* *tani* *in* *bae-ne* *le* *nga* *i-mol.*
thus and.so 3s-eat small.one DEF.S MED.S hand-3sPOS and.so now 3s-fall

'…and a flying fox was crawling in the custard apple tree's branches and it came across and it bit that little (boy's) hand, and so it was that he fell.'

Examples (62) and (63) have topic-comment articulation; i.e. the topic (the coconut in (62) and the older brother in (63)) is identified first and then the rest of the clause is a comment giving further information about that topic. Mithun (1987:325) makes a distinction between pragmatically based languages, where all ordering of constituents reflects pragmatic considerations, and syntactically based languages (such as English and Arop-Lokep) where any deviation from the basic word order is pragmatically marked. Topic-comment is usually the unmarked configuration for syntactically based (or fixed word order) languages, but they can also have marked topic-comment constructions where a linguistic device is used to indicate the topic as the point of departure. One such device is left

[5] The following combinations of determiners and demonstratives are common within a noun phrase: *tani in*, *tina ngan*, *atu in*. Combinations such as *tani i*, *tina nga*, *tani ni* and *tina ngo* do not occur in this database; nor have any examples of *atu i* or *atu ni* been observed.

dislocation, as in (62) above, where the coconut is the (left-dislocated) topic of the second clause, and what the coconut does is the comment.

In Arop-Lokep, a marked topic can be indicated by two means. Left-dislocation is very common, and both participant and non-participant arguments in any grammatical role can be left-dislocated; left-dislocation constructions nearly always contain demonstratives. A topic may also be marked by a demonstrative occurring in its noun phrase-internal position, as in (65).

65) *Inbe* *mada garup tani in* *i-daun* *i.*
and spirit female DEF.S MED.S 3s-roast fish

'And that same spirit woman roasted (the) fish.'

It will be observed that the order of the constituents in (65) would be the same whether the subject is left-dislocated or not. Structurally, left-dislocation uses the demonstrative *in* (and occasionally *ngan*) as a resumptive pronoun or place holder in the main clause; thus for subjects prosody is often the only clue as to the pragmatic structure of the clause. Where a left-dislocated NP refers to a subject, the demonstrative is separated from the clause-external NP by a prosodic break, and is understood as being clause-internal, functioning as a resumptive pronoun in the subject slot of the main clause, as in (66) (where the break is indicated by a comma).

66) *Mada garup tani,* *in* *i-dawai* *a* *so* *i-me.*
spirit female DEF.S MED.S 3s-cook and something 3s-cooked.done

'(The) same spirit woman, she cooked and (the food) was ready.'

If an argument is left-dislocated from a non-subject role, the demonstrative follows the clause-external, left-dislocated NP, with a prosodic break in between, in the same way that it follows a left-dislocated subject NP, as in (67). This suggests that while *in* in this slot may have been a resumptive pronoun (for left-dislocated subjects) originally, it has now been grammaticalized as a topicalizer.

67) *be* *matuk tani, in* *i-kau-u* *lo* *i-tar-u* *ookoo* *damono*
and coconut DEF.S MED.S 3s-get/give-3s go.up 3s-put-3s canoe bow

'…and (as for) that coconut, it he took it (and) going up he put it (in the) bow (of the) canoe…'

As noted earlier, *in* can also occur in introductory forms with the indefinite determiner *atu*, as in (68). Usually a participant introduced in this way will be a major participant, possibly the central participant in the story. The co-occurrence of *in* with the indefinite *atu* raises the issue of whether the demonstratives require a definite referent and an antecedent in the discourse. In (68), it would be possible to interpret *garup atu in* either as a unit, a whole NP in the subject slot of the clause, or as a left-dislocated NP *garup atu*, with *in* functioning as a topicalizer or resumptive pronoun with the left-dislocated NP as its antecedent.

68) *Garup atu in* *i-kere* *pau-nu* *le* *nga* *kapo-no* *somai.*
female one MED.S 3s-marry new-3SPOS and.so now stomach-3SPOS big

'A certain woman (was) newly married and she (was pregnant).'

If the NP *garup atu* is left-dislocated and *in* is resumptive, then demonstratives, like determiners, must always be definite and have an antecedent (this is what we might expect to find). If, however, *garup atu in* is a unit and not an instance of left-dislocation, we can argue that demonstratives do not require an antecedent in the discourse, and that they are not necessarily indicative of definiteness (at least not in the same sense as the definite determiners). Instead, *in* is used in introductory forms simply to establish the prominence of the participant; in (68), the woman is not known to the hearer but the hearer is asked to assume the existence of a particular woman whom the speaker intends to talk about, and the woman is established as a major participant in the story that will follow.

The lack of prosodic break in the phrase *garup atu in* supports its analysis as a unit. Further supporting evidence comes from two main sources. Firstly, it is possible for a demonstrative-modified NP to occur in a non-subject slot within the main clause, as in (69), where the phrase *malala tani in* remains in its original clause-internal position; therefore the use of *in* is not restricted to left-dislocated clauses.

69) *Motong* *nga* *malala* *Barei* *la* *be* *ti-siki* *ye* *malala tani in* *nga.*
after now village Barei FOC IRR 3p-dance with village DEF.S MED.S now

'Then (the people of) Barei village (intended to) dance with (the people of) that same village now.'

Secondly, there is one example in the database of a demonstrative occurring in an introductory form which cannot be analyzed as left-dislocation. In (70), the noun phrase *natunu atu in* is coordinated

with the father (encoded by agreement), and any resumptive pronoun or topicalizer would have to be plural (*ngan*).

70) *Inbe* *i-ye* *natu-nu* *tamoto* *atu* *in* *ti-yepe* *ye* *malala* *atu.*
and 3s-with child-3sPOS male one MED.S 3p-live with village one

'And he and (a certain) one of his sons lived in a village.'

We can therefore conclude that unlike definite determiners, demonstratives do not require an antecedent in the discourse; they can occur in introductory forms alongside *atu.* Participants can be marked as topics either in their original position in the clause, by means of the demonstrative *in* (or *ngan*), or their topicality can be emphasized further by means of left-dislocation. The issue then to be considered is when and why the more marked left-dislocation construction should occur.

Heavy subject NPs, such as those modified by a relative clause as in (71), seem particularly likely to be left-dislocated (Note that the demonstrative *i* in this example is used to mark the end of the relative clause and probably has a structural rather than a referential function). The spirit woman in (72) is not relativized but the break between the NP and *in* may well be motivated by NP weight; this is a typical phenomenon in many of the world's languages.

71) *ngan* *garup* *tani* *sookoo* *kan-i* *i,* *in* *i-kenmata* *lapau*
then female DEF.S fungal.disease eat-3s PROX.S MED.S 3s-rest-die too

'…then this same woman (who had the fungal disease), she was asleep too…'

72) *ngan* *mada* *garup* *atu* *ke* *karam* *lo-no,* *in* *be* *pot*
then spirit female one of bush insides-3sPOS MED.S IRR come.seaward

i-kut *tiek*
3s-scoop sea

'...then a spirit woman from inside (the) bush, she was coming seaward (to) scoop salt water…'

Heavy or relativized non-subjects are also very likely to be left-dislocated in this way. The motivation for this is often no more than a means of facilitating the processing of heavy NPs. In (73), the role of the spear in the story is fairly marginal, but it is left-dislocated because of the weight of the NP. The coconut, however, is important to the story and is highly topical, and it is left-dislocated for this reason, even though the encoding is comparatively light.

73) *Motong* *la* *i-kaua* *depe* *ki* *lo* *kata* *pono,* *tutui* *ki* *ke*
after FOC 3s-get/give basket of.3s go.up platform on spear of.3s of

soongoo *i,* *in* *i-tar-u* *lo* *kata* *pono* *lapau,* *be* *matuk*
shooting fish MED.S 3s-put-3s go.up platform on too and coconut

tani, *in* *i-kau-u* *lo* *i-tar-u* *ookoo* *damono* *yo* *be* *i-wud* *ye*
DEF.S MED.S 3s-get/give-3s go.up 3s-put-3s canoe bow that IRR 3s-sit with

i *le* *i-ken* *ke* *muri-ni*
PROX.S and.so 3s-rest of back-3sPOS

'Then he got his basket (and put it) up on (the) platform (of the) canoe, his spear for shooting fish, it too he put up on (the) platform, and (as for) that coconut, it he got (and) going up he put it (in the) bow (of the) canoe where he (was going to) sit (so) it was at his back…'

Therefore, while *in* is used as an indicator of topic in a default or unmarked way, left-dislocation is an additional device available to the speaker to give further emphasis or prominence to this topic.

One further point that should be noted is that referential distance (RD) is slightly higher for left-dislocated NPs than for other topic-marked NPs. The average RD for topics without left-dislocation is 4.06, compared with 5.14 for left-dislocated topics.[6] This implies that left-dislocation may be used for topics that have decayed in the hearer's mental representation. A lapsed participant might also be expected to be encoded with a relative clause or other heavily modified NP. Thus although NP weight may in itself be a motivating factor for left-dislocation, we could also argue that the need to reactivate and topicalize a lapsed participant is a motivation for heavy NPs and left-dislocation together.

As noted earlier, the proximal demonstratives *i* and *nga* also occasionally exhibit a textual deictic function. The scarcity of examples makes it difficult to draw any firm conclusions, but from the data available it is possible to identify at least two uses. The first of these is exemplified in (74), where the speaker is addressing his audience outside of the event line of the story; both the story and the tree

[6] Calculation of RD is based on the encodings NP+DEM and NP+DEF+DEM.

kangaroo are referred to with the proximal demonstrative *i* because they are thematic and relevant in the speaker-audience context, rather than within the narrative context. The speaker is saying something about this story that he is telling, and particularly about this kangaroo that the story is about.

74) *Le barau yo i maimai ti-gasa ngan ti-wete ook i*
and.so story that PROX.S big.one 3p-tell then 3p-speak kangaroo PROX.S

i-yei dada dook tiap pang gaunu rima-na.
3s-do road good not to dog wife-3SPOS

'And so (in) this story which the big ones tell, they say (that) this kangaroo did a bad thing to the dog's wife.'

The second situation in which the proximal demonstratives are used is where there is more than one topic in the sentence, particularly in different roles. While definite determiners frequently occur in two different roles in the same clause, *in* almost never does, although it occasionally occurs with two coordinated NPs in the same grammatical role, as in (75).

75) *Yeisa be tooltool moolmool in i-ye markiaua tamoto in*
when IRR person true MED.S 3s-with spirit.being male MED.S

ti-seng porai gingin tina a i-mot, a yaru ti-man tina,
3p-chop finish lizard.sp DEF.p and 3s-finish and 3pDL 3p-come.across thus

ngan le ti-patoko yege.
then and.so 3p-fight very

'When that real person and that male spirit finished chopping (wood to find) (those) same lizards and (it was) finished, [and] (the) two of them came across, then they fought (intensely).'

There is a single example in the database of two medial demonstratives in different grammatical roles in the same clause:

76) *Inbe markiaua natu-nu in i-wete pang tool moolmool in*
and spirit.being child-3SPOS MED.S 3s-speak to person true MED.S

natu-nu.
child-3SPOS
'And that spirit's child spoke to (the) child (of) that true man.'

However, an alternative way of dealing with multiple topics, either in one clause or in a whole paragraph, is to indicate degrees of topicality by identifying the most topical participants with the proximal demonstratives, and others who are topical but slightly less relevant with the medial demonstratives. In (77), *i* and *in* are used to disambiguate the two women by means of their relevance to the man. At this point in the story, the man and his ugly wife are both in the same place and both are already topical, therefore they are marked with the proximal *i*. The spirit woman is in a different place and has not been mentioned for a while, therefore she is reintroduced with a relative clause and marked as a third topic with the medial *in*. It is possible, however, that spatial deixis may also be involved in the choice of demonstratives in this example.

77) *Ti-yepe a nga rrai, bong ngan tamoto i, lo-no dook*
3p-live and now afternoon but then male PROX.S insides-3SPOS good

tiap. Lo-no be le be garup i ole i-rau-mat-e, inbe
not insides-3SPOS IRR and.so IRR female PROX.S IRR 3s-hit-die-3s and

i-rau-mata mada garup yo ke karam lo-no in lapau.
3s-hit-die spirit female that of bush insides-3SPOS MED.S too

'They stayed and now (it was) afternoon, but then this man, (he felt bad). He (felt like) this woman (he wanted to) kill her, and kill that spirit woman from inside the bush too.'

In (78) there are three (or perhaps even four) topics: the parents and the two brothers. The parents are already topical from the immediately preceding discourse; their topicality is predictable and therefore they are unmarked. The two brothers are both reintroduced topics, and *i* and *in* are used to distinguish them. The older brother is the central character in the story and his topicality will continue in the subsequent action, therefore he is marked with *i* as the most topical. The younger brother is less important, and because at this point in the story he is unconscious and unlikely to be the agent of any action, he is marked with the slightly less topical *in*.

78) *Ti-la* *tina* *le* *tama-di* *i-palala* *natu-nu* *kase* *in*
3p-go.across thus and.so father-3pPOS 3s-separate child-3sPOS small.one MED.s

bae-ne *ye* *too-noo* *baba-na* *a* *i-kau-u* *inbe* *ti-toro*
hand-3sPOS with older.sibling-3sPOS back-3sPOS and 3s-get/give-3s and 3p-ask

natu-di *mai* *i.*
child-3pPOS big PROX.s

'They (the parents) went across like that and their father separated that small child's hand from his older brother's back and he got it and they questioned this (older) child.'

6.4 Pronouns

Pronouns are comparatively rare in the database and they only occur in very specific contexts. First person pronouns were discussed in Section 5.7 and are found in all the contexts where third person pronouns are found. The behaviour of dual pronouns, however, is quite distinct from that of singular or plural pronouns (in any person) and will be discussed separately.

6.4.1 Singular and plural pronouns

Singular pronouns always refer to major participants or VIPs. They usually express some sort of contrast (or emphasis) of the participant's actions with those of another participant or group of participants in the previous clause.[7] The participant referred to by the pronoun may or may not be included in the event expressed by the previous clause. In (79), the man and his brothers-in-law are acting together and are expressed by agreement; then they (expressed by a noun phrase) stay on the ground, while he (expressed by a pronoun) climbs the tree. Example (80) is similar: the man and his friends go up, then his friends (NP+DEM) do their work, but he (PN+DEM) does something different.

79) *Le* *ti-du,* *motong* *di* *saura-na* *ti-yepe* *tana* *inbe*
and.so 3p-go.down after 3p brother.in.law-3sPOS 3p-live ground and

ya *i-rookoo.*
3s 3s-climb

'And they went down, then his brothers-in-law stayed (on the) ground and he climbed.'

80) *Ti-lo* *ngan* *lo* *di* *e-ne* *ngan* *ti-pa* *so* *la*
3p-go.up then go.up 3p friend-3sPOS MED.p 3p-walk directly go.across

ti-yei *porai* *urata* *kidi,* *e* *ye* *in* *lo* *i-sama* *ye* *kaskas*
3p-do finish work of.3p but 3s MED.s go.up 3s-smear with charcoal

inbe *i-pas* *mulu* *pang* *malala* *a* *i-du* *pang* *tiek.*
and 3s-jump again to village and 3s-go.down to sea

'They went up, then (having gone up) those friends of his walked straight across (to) finish their work, but he [lit. 'he that.one'] going up smeared (himself) with charcoal and went back to the village and went down to the sea.'

The presence of the pronoun is sometimes necessary to indicate a change of subject where there are only two activated participants and a full noun phrase would be redundant. In (81), the ugly wife has been topical for several clauses. The only other participant on the scene is her husband, so he is re-established as topic by the use of the pronoun *ya*. In (82), the activated participants are the spirit woman and the man, and once the woman is dead and burnt, the only possible interpretation of *ya* is the man.

81) *a* *i-ngoro* *a* *i-ken* *kalli* *oo.* *Motong* *e* *ya* *i-lo* *lo*
and 3s-snore and 3s-rest unaware COMP after but 3s 3s-go.up go.up

i-soo-mat-e *ye* *yu* *ki* *lapau* *a* *i-mata.*
3s-stab-die-3s with spear of.3s too and 3s-die

'... and she (the ugly wife) snored and slept soundly. Then he went up (and having) gone up he stabbed her with his spear too and (she) died.'

[7] One other context is discussed in Section 5.6 (*ya lon wete* 'he thought')

82) *a* *i-daunu* *mada* *garup* *tani* *in* *le* *i-pa* *ye* *rumu* *ki*
and 3s-roast spirit female DEF.S MED.S and.so 3s-go with house of.3s

in *a* *sila* *i-ken* *oo,* *inbe* *ya* *i-mulu* *a* *i-du* *pang* *tiek.*
MED.S and DIR 3s-rest COMP and 3s 3s-return and 3s-go.down to sea

'...and he burnt that same spirit woman along with that house of hers [lit. and she go with house her that] and she stayed there, and he returned and went down to the sea.'

Plural pronouns are rare, partly due to the scarcity of major plural participants. The 3rd person *di* is used more commonly as a marker of plurality preceding a full NP than as an independent pronoun. Where plural pronouns do occur, however, their function is similar to that of singular pronouns.

83) *ngan* *di* *natu-di* *lapau* *ti-kamata* *di* *tama-di* *yo* *ti-patoko*
then 3p child-3pPOS too 3p-see 3p father-3pPOS that 3p-fight

nga, *le* *di* *lapau* *ti-patoko.*
now and.so 3p too 3p-fight

'...then their children too saw their fathers (who were) fighting now, so they too fought.'

The vast majority of pronouns in the database occur in the subject role, pronominal forms in object position being non-emphatic and functioning in a similar way to the subject-indexing prefixes (see Section 3.1 on object marking). It is possible, however, for an object pronoun to be left-dislocated like a noun phrase, and this too seems to involve reactivated topics and situations of contrast; in (84) below, the crocodile is reintroduced, and what happens to him is compared with what has just happened to his parents.

84) *ngan* *ti-rau-mata* *di* *le* *ti-mata.* *Inbe* *ya* *be* *ti-rau-u,* *ngan* *ti-kap*
then 3p-hit-die 3p and.so 3p-die and 3s IRR 3p-hit-3s then 3p-get/give.3p

le *tiap.* *I-palanai* *di* *a* *i-dada*
and.so no 3s-go.through 3p and 3s-run

'...then they killed them (his parents) and they died. And he they (wanted to) hit him, (but they couldn't [idiom]). He went between them and he ran…'

6.4.2 Dual pronouns

Dual pronouns are more common than singular or plural pronouns and are much more likely to be found in a same subject (S1) context. While the function of singular or plural pronouns is usually to contrast or separate one participant from others, dual pronouns naturally tend to do the opposite, combining the activities of two participants. One common environment is where two participants in the preceding clause occupied different grammatical roles, but are now combined as a single subject in the present clause (Levinsohn (2000:138-9) counts this as an S1 context). This happens twice in (85). Note that the first *yaru* in (85), and *amru* in (86), occur in the initial clause of the sentence.

85) *a* *tamoto* *tani* *in* *i-rookoo* *a* *i-si* *tana* *ye* *garup*
and male DEF.S MED.S 3s-climb and 3s-come.down ground with female

tani. *Motong* *yaru* *ti-la* *pang* *malala* *ke* *garup* *tani.*
DEF.S after 3pDL 3p-go.across to village of female DEF.S

Ti-la, *motong* *i-kau-u* *lo* *rumu* *lo-no* *a* *sila* *yaru*
3s-go.across after 3s-get/give-3s go.up house inside-3sPOS and DIR 3pDL

ti-yepe.
3p-live

'…and that same man climbed and came down (to the) ground to that woman. Then the two went across to that woman's village. They went across, then she took him up into the house and the two stayed (there).'

86) *Motong* *la* *a-wete* *pang* *Yep,* *"Tool* *kiau,* *aru* *ta-pa."* *Amru*
after FOC 1s-speak to Jeff person of.1s 1pIN.DL 1pIN-walk 1pEX.DL

am-kiu *di* *gaunu* *ru...*
1pEX-call 3p dog two

'After that I said to Jeff, "My friend, let's (the two of us) go." We two called the two dogs…'

Another widespread context for dual pronouns is where two participants have been introduced or reintroduced by a higher level of encoding such as a noun phrase in the previous clause, and then

continue to share the subject role in the current clause. A dual pronoun can also occur in the same clause as a coordinated NP, as a reiteration of the subject, as in (88).

87) *Motong* *la* *kase tani,* *in* *i-ye* *tama-na* *ti-pa.* *Yaru*
after FOC small.one DEF.S MED.S 3s-with father-3sPOS 3p-walk 3pDL

ti-pa *ti-pa* *le* *ti-lo...*
3p-walk 3p-walk and.so 3p-go.up

'After that that child, he and his father walked. The two of them walked (and) walked and went up…'

88) *Motong* *la* *kase* *tamoto* *tini* *i-ye* *garup* *nene* *tini*
after FOC small.one male DEF.S 3s-with female unmarried.woman DEF.S

yaru *ti-pa...*
3pDL 3p-walk

'After that, that young man and that unmarried woman the two of them walked…'

There are very few dual pronouns in S1 contexts that cannot be accounted for in one of these two ways, but one other situation worthy of comment is where, although the two activated participants continue as subject, another significant participant or prop is introduced in a different grammatical role; a dual pronoun may occur in this environment, as in (89), where the introduction of the riverbed interferes with the continuing subject.

89) *Yaru* *ti-pa* *a* *ti-la* *le* *nga* *ti-kamata* *moolooi* *atu.*
3pDL 3p-walk and 3p-go.across and.so now 3p-see riverbed one

Motong *la* *nga* *yaru* *ti-too* *moolooi* *tani* *a* *ti-di.*
after FOC now 3pDL 3p-follow riverbed DEF.S and 3p-go.inland

'The two walked and went across and then they saw a riverbed. After that the two followed that riverbed and went inland.'

All S4 contexts for dual pronouns involve contexts where two major participants are interacting separately (usually with no other participants involved), and then the two do something together.

90) *Inbe* *i* *kapala,* *ngan* *i-ken* *pang* *mada* *garup* *a* *mada*
and fish part then 3s-rest to spirit female and spirit

garup *i-kan.* *Yaru* *ti-kan* *so* *a* *i-mot,* *a* *mada*
female 3s-eat 3pDL 3p-eat something and 3s-finish and spirit

garup *i-wete* *panga.*
female 3s-speak to.3s

'And part (of the) fish, it (was for) the spirit woman and the spirit woman ate. The two ate something and (it was) finished, and the spirit woman spoke to him.'

91) *I-mede* *be* *nen* *be,* *bong* *be* *le* *ya* *i-yooloo* *tamoto* *tani,*
3s-strong IRR like.that not but IRR and.so 3s 3s-marry male DEF.S

garup *tani* *in* *i-wete* *nen,* *le* *taun* *yaru* *ti-di*
female DEF.S MED.S 3s-speak like.that and.so therefore 3pDL 3p-go.inland

a *di* *ti-yepe.*
and go.inland 3p-live

'He was strongly (decided) that it (would) not (be so), but she (intended) to marry that man, that same woman spoke like that, and so the two of them went inland and (having) gone inland they stayed.'

6.5 The focus particle *la*

A further element in Arop-Lokep reference strategies is the focus particle *la*. It has so far been omitted from the discussion because in the texts on which this analysis is based, it occurs far more frequently in reported speech than in the main event line of the story. Its scope seems to be fairly local and thus it seemed logical to deal with all occurrences together.

According to Andrews, *"the focus NP gives the identity of a participant presumed unknown to the hearer'* (1985:79). Dooley & Levinsohn give a broader definition, stating that *'the focus of an utterance is that part which indicates what the speaker intends as the most important or salient change*

to be made in the hearer's mental representation." (1999:29) Thus focussed material can be either new or contrastive (Dik et al 1981). Lambrecht (1994:222) identifies three types of focus structure: sentence focus, predicate focus and argument focus. In Arop-Lokep, the particle *la* can be used to mark all three types, but this paper will be restricted to argument focus, and *la* as a participant reference strategy.

Structurally, referential *la* can mark both subjects and objects for focus. Objects can only be marked with *la* when they are left-dislocated, falling either between the subject and the verb, or in front of the subject.[8] *La* can stand as a pronominal form for an object, but not for a subject.

New information:

New information focussed by *la* falls into two different categories. The first includes new information that is purely descriptive, often giving further details about a newly introduced participant. One of the most common examples is the naming formula:

92) *E-ne la Tau.*
name-3sPOS FOC Tau
'His name[FOC] (is) Tau.'

93) *Kookoonoo ye rima-na e-di la Eldon Ball ye rima-na*
white.one with wife-3sPOS name-3pPOS FOC Eldon Ball with wife-3sPOS
e-ne Merelyn Ball ti-long le am-ken rumu kiam le muntu.
name-3sPOS Merelyn Ball 3p-come and.so 1pEX-rest house of.1pEX and.so morning
'(A) white man and his wife, their names[FOC] (were) Eldon Ball and his wife's name (was) Merelyn Ball came and slept (at) our house until morning.'

Note that in (93), *la* refers to the names of both the man and his wife. If the wife's name is marked separately, the wife herself must also be marked with the demonstrative *in* as the topic of a separate subordinate clause:

94) *Kookoonoo ye rimana e-di la Eldon Ball ye rimana,*
white.one with wife-3sPOS name-3pPOS FOC Eldon Ball with wife-3sPOS
in e-ne la Merelyn Ball…
MED.s name-3sPOS FOC Merelyn Ball
'(A) white man and his wife, their names[FOC] (were) Eldon Ball and his wife, her[TOP] name[FOC] (was) Merelyn Ball…'

Other uses of *la* for presentative or descriptive purposes are exemplified below. In (95), the speaker is mentioning her village for the first time and identifying its location to the addressee. The speaker in (96) is remarking on something new in the environment and asking if the addressee is aware of it too.

95) *"Au i, malala kiau la i-ken udu i."*
1s PROX.s village of.1s FOC 3s-rest inland PROX.s
'"(As for) me[TOP], my village[FOC] is (just) inland here."'

96) *I-yei ne, "Ai, so atu la a-long-a ben tooltool i-tang a*
3s-do like.this hey something one FOC 1s-hear-3s like person 3s-cry and
ku-tar talnga-m ole ku-longo lapau, too tiap?"
2s-put ear-2sPOS IRR 2s-hear too or not
'She (spoke) like this, "Hey, I hear something[FOC] like a person crying, and (if) you listen [lit. you put your ear] (do) you hear (it) too, or not?"'

Another type of new information may involve either known or unknown participants, but they are marked with *la* for focus becaues there is something unexpected or surprising about them. (97) is particularly interesting because both subject and object have been left-dislocated, and *la* serves to disambiguate who is hiding whom; without it, the man would be the subject and the older sister would be the object.

[8] There are two examples in this database where *la* is not pre-verbal. Both of these involve an object that is the head of a relative or subordinate clause; the presence of this clause seems to make it necessary for the NP object to remain in its original post-verbal position.

97) *I-yei* *ne,* *"Ai,* *too-k* *garup* *ni* *tamoto* *atu* *la* *i-tark-oo*
3s-do like.this hey older.sibling-1sPOS female DIST.s male one FOC 3s-hide-3s

a *yaru* *ti-yepe* *rumu* *lo-no* *ni."*
and 3pDL 3p-live house insides-3sPOS DIST.s

'He (spoke) like this, "Hey, that older sister of mine, (there's) a man[FOC] she's hiding and the two of them (are) living in that house."'

98) *Ngan* *i-kamata* *ga* *somai* *i-mata* *a* *i-ken* *rumu* *lo-no.* *Le*
then 3s-see pig big 3s-die and 3s-rest house insides-3sPOS and.so

lo-n *wete,* *"Natu-k* *la* *o* *i-rau* *ga* *i."*
insides-3sPOS speak child-1sPOS FOC IRR 3s-kill pig PROX.s

'Then she saw (a) big pig (that had) died and (was) lying inside the house. And she thought, "My child[FOC] (must have) killed this pig."'

Included in the category of surprising information is a verbless construction similar to the naming formula, which can be used for insulting name calling (as in (99)) but also for declarations of the sort found in (100).

99) *"Ong* *in* *pon* *natu-nu* *la* *ong!"*
2s PROX.s turtle child-3sPOS FOC 2s

'"(As for) you[TOP], the turtle's child[FOC] (is) you!"'

100) *I-yei* *ne,* *"Alei* *ni-k-tooroo!* *Au* *i,* *ni-k-tooroo* *la* *ong* *i.*
3s-do like.this oh husband-1sPOS- 1s PROX.s husband-1sPOS- FOC 2s PROX.s

Au *ole* *a-yool-ong."*
1s IRR 1s-marry-2s

'She (spoke) like this, "Oh my husband! (As for) me[TOP], my husband[FOC] is you. I will marry you."

Contrastive focus:

La can also be used to disambiguate one participant from others or to contrast the behaviour of one with another. (101) and (102) are examples of disambiguation: in (101), one particular coconut is identified from within a larger group. In (102), the first *la* stresses that it is the speaker's children rather than someone else's who are coming, and the second makes clear which of the two children is being carried by the other.

101) *Mada* *garup* *i-yei* *ne,* *"Ku-lo* *la* *pang* *ke* *ete* *ngo,* *e*
spirit female 3s-do like.this 2s-go.up go.across to of top DIST.p but

matuk *kanono* *la* *i-ken* *ke* *ete* *ngo.* *La* *garung* *ni* *la* *be*
coconut fruit FOC 3s-rest of top DIST.p FOC ripe.coconut DIST.s FOC IRR

k-ouo *atu* *le* *i-ken* *leu."*
2s-take one and.so 3s-rest only

'Spirit woman (spoke) like this, "Go up to the top (of the tree) there, and the coconut fruit[FOC] at the top there. The ripe coconut[FOC] there[FOC], you take one and (one) only."'

102) *I-yei* *ne,* *"Ai,* *ku-wud* *yesoo?* *Di* *natu-du* *tina* *di* *nanga*
3s-do like.this hey 2s-sit why 3p child-1pIN DEF.p 3p here

la *ti-man* *nga.* *O* *ti-yei* *belei* *nga* *le* *nga* *kase* *na-ni*
FOC 3p-come.across now oh 3p-do what now and.so now small.one loc-DIST.s

la *mai* *i-yop-a* *ni?"*
FOC big 3s-carry-3s DIST.s

'She (spoke) like this, "Hey, why are you sitting? (That's) those children of ours[FOC] here coming across now. Oh what have they done so that the small one[FOC] the big one (is) carrying him there?"

La also occurs frequently with the adjective *leu* 'only', which can also be interpreted as disambiguation, in the sense that one participant or group is set apart from all the other participants who could potentially have been involved.

103) *Tooltool ru tina-di le tama-di ti-mata, le yaru leu la*
person two mother-3sPOS and.so father-3sPOS 3p-die and.so 3pDL only FOC

ti-yepe nga.
3p-live now

'Two people's mother and father died, so the two of them only[FOC] lived now.'

104) *Le motmot ni a-ye tama-k e-ne la Aingas Parsai amru*
and.so island DIST.s 1s-with father-1sPOS name-3sPOS FOC Aingas Parsai 1pEX.DL

am leu la am-ye di kookoonoo am-kenen ye nga.
1pEX only FOC 1pEX-with 3p white.one 1pEX-rest with.3s now

'And (on) that island, I and my father – his name[FOC] (was) Aingas Parsai – we two, we only[FOC], we and the whiteskins slept there now.'

In (105) and (106), *la* has a more contrastive function. In (105), the speaker is angry because his younger brother has found a beautiful wife. He uses *la* to contrast himself with his brother, as being older and more eligible to marry. Similarly, in (106), the younger brother's good behaviour is contrasted with the bad behaviour of the older. Note that in both examples, the focussed participant is also marked as topic.

105) *"Ong i, ong maitiap mata. Au i la somai, le be a-yooloo*
2s PROX.s 2s not.big very 1s PROX.s FOC big and.so IRR 1s-marry

garup i, ngan o dook."
female PROX.s then IRR good

'"(As for) you[TOP], you're not very big (old). (As for) me[TOP], (I'm)[FOC] big, so I will marry this woman, then (that) will (be) good."'

106) *"Tooltool yo i, tooltool dook tiap. Tamoto dook la i-man*
person that PROX.s person good not male good FOC 3s-come.across

yau mugu i, in la i-yei dada dook pau i."
with.1s first PROX.s MED.s FOC 3s-do road good to.1s PROX.s

'"This person[TOP], (he's) not a good person. (The) good man[FOC] (that) came across to me first, that one[TOP] (he)[FOC] treated me well [lit. did good road to me this]."'

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Appendix A: sample text

Pokai

Custard apple

Kene	*atu*	*in*	*tamoto*	*kase*	*atu*	*i-ye*	*too-noo*
time	one	MED.S	male	small.one	one	3s-with	older.sibling-3SPOS

ti-pelele	*a*	*ti-la*	*pang*	*ye*	*ni*	*balim*	*atu.*
3p-beachcomb	and	3p-go.across	to	with	place	uninhabited.beach	one

One day a small boy and his older brother combed (the) beach and they went across to an uninhabited beach.

Yaru	*ti-pa*	*a*	*ti-la*	*le*	*nga*	*ti-kamata*	*moolooi*	*atu.*
3p.DL	3p-walk	and	3p-go.across	and.so	now	3p-see	riverbed	one

(The) two of them walked and went across and so now they saw a riverbed.

Motong	*la*	*nga*	*yaru*	*ti-too*	*moolooi*	*tani*	*a*	*ti-di.*
after	FOC	now	3p.DL	3p-follow	riverbed	DEF.S	and	3p-go.inland

So then (the) two of them followed that riverbed and they went inland.

Ti-pa	*a*	*ti-di*	*inbe*	*mata-di*	*lo*	*pang*	*moolooi*
3p-walk	and	3p-go.inland	and	eye-3pPOS	go.up	to	riverbed

koo-noo	*ngan*	*ti-kamata*	*pokai*	*atu*	*in*	*i-pu,*	*pu*	*le*
mouth-3SPOS	then	3p-see	custard.apple	one	MED.S	3s-bear.fruit	bear.fruit	and.so

be	*i-sareng-kata*	*baene.*
IRR	3s-bend-break	branch-3SPOS

They walked and they went inland and their eyes went up to the mouth of the riverbed, and then they saw a custard apple tree there (that) was bearing fruit so that it (was about to break) (a) branch.

Le	*nga*	*too-noo*	*in*	*iwete*	*pang*	*tai-ni.*
and.so	now	older.sibling-3SPOS	MED.S	3s-speak	to	younger.sibling-3SPOS

So then that older brother spoke to (the) younger brother.

I-yei	*ne,*	*"Alei*	*tai-k,*	*nga*	*ole*	*ong*	*maitiap*	*a*
3s-do	like.this	sorry	younger.sibling-1SPOS	now	IRR	2s	big.not	and

ku-kodo	*tana,*	*e*	*au*	*mai*	*a*	*a-rookoo*	*pokai*	*kiidi*	*i."*
2s-stand	ground	but	1s	big	and	1s-climb	custard.apple	of.1PIN	PROX.S

He (spoke) like this, "Sorry little brother, now you aren't big (so) you stand (on the) ground, but I am big (so) I (will) climb this custard apple tree of ours."

Ngan	*tai-ni*	*iyei*	*ne,*	*"I*	*be!*	*Ong*	*mai*	*a*	*kukodo*
then	younger.sibling-3SPOS	3s-do	like.this	PROX.S	not	2s	big	and	2s-stand

tana,	*e*	*au*	*kase*	*a*	*a-rookoo*	*pokai*	*kiidi."*
ground	but	1s	small.one	and	1s-climb	custard.apple	of.1PIN

Then (the) younger brother (spoke) like this, "Not (so)! You (are) big (so) you stand (on the) ground, but I (am) small (so) I (will) climb our custard apple tree."

Yaru	*ti-parsu*	*ye*	*rookoongoo*	*bong*	*ngan*	*kase*	*koo-n*
3pDL	3p-debate	with	climbing	but	then	small.one	mouth-3SPOS

mede	*san*	*le*	*nga*	*too-noo*	*mai*	*in*	*i-malum*	*panga.*
strong	very	and.so	now	older.sibling-3SPOS	big	MED.S	3s-consent	to.3s

(The) two of them debated about climbing, but (the) younger (brother) spoke very strongly and so that big older brother consented to him.

I-yei	*ne,*	*"Dookoot,*	*ngan*	*ku-mangmang*	*a*	*ole*	*ku-rookoo,*	*e*	*au*
3s-do	like.this	enough	then	2s-beg	and	IRR	2s-climb	but	1s

a-kodo	*tana,*	*bong*	*kin*	*ku-rookoo*	*karatingi*	*dook*	*le*	*mata-m*	*pang*
1s-stand	ground	but	must	2s-climb	carefully	good	and.so	eye-2sPOS	to

ye	*pokai*	*tani*	*inbe*	*ku-rookoo."*
with	custard.apple	DEF.s	and	2s-climb

He (spoke) like this, "Enough, you (have) begged and (so) you will climb, and I (will) stand (on the) ground, but you climb very carefully, and you climb with your eye on that custard apple tree."

I-rookoo	*rookoo*	*le*	*i-lo*	*meneng*	*pokai*	*kuto-no*	*ete*	*ni*
3s-climb	climb	and.so	3s-go.up	over.there	custard.apple	head-3sPOS	above	DIST.s

inbe	*bianga*	*atu*	*i-pididi*	*ye*	*pokai*	*bae-ne*	*a*	*i-man*
and	fruitbat	one	3s-hand.walk	with	custard.apple	branch-3sPOS	and	3s-come.across

tina	*le*	*i-kana*	*kase*	*tani*	*in*	*bae-ne,*	*le*	*nga*	*i-mol.*
thus	and.so	3s-consume	small.one	DEF.s	MED.s	branch-3sPOS	and.so	now	3s-fall

He climbed and climbed until he (had) gone up (to the) head of (the) custard apple tree, and a flying fox was crawling in the custard apple tree's branches and it came across and bit that little (boy's) hand, and so it was that he fell.

I-mol	*tina*	*meneng*	*pokai*	*kutono*	*ete*	*ni*	*le*	*du*
3s-fall	thus	yonder	custard.apple	head-3sPOS	above	that	and.so	go.down

pumbe	*tana*	*le*	*i-mata,*	*le*	*nga*	*too-noo*	*i-dada*
thump	ground	and.so	3s-die	and.so	now	older.sibling-3sPOS	3s-run

du	*i-kau-u*	*inbe*	*i-poongoo,*	*ngan*	*i-madit*	*tiap.*
go.down	3s-get-3s	and	3s-awaken	then	3s-arise	not

He fell (from the) head of (the) custard apple tree above (all the way) down thumping (onto the) ground, and he died. And his older brother (came) running (and bending) down he got him and (tried to) wake him, (but) he didn't wake up.

Motong	*la*	*i-yop-a*	*tina*	*ngan*	*le*	*i-tang*	*be*	*i-pa*	*pang*	*tiek.*
after	FOC	3s-carry.piggyback-3s	thus	then	and.so	3s-cry	and	3s-walk	to	sea

Then he carried (the younger brother) piggyback and he cried and he walked to (the) beach.

I-tang	*nen,*	*"Tai-k,*	*ku-tang*	*ye*	*pokai*	*be,*	*bianga*	*o-o*	
3s-cry	like.that	younger.sibling-1sPOS	2s-cry	with	custard.apple	not	flying.fox	oh	

i-koko	*bae-m*	*be."*
3s-nip	hand-2sPOS	not

He cried like that, "Little brother (if) you (had) not cried for (a) custard apple, (the) flying fox oh would not (have) nipped your hand."

Le	*nga*	*ti-du*	*pombe*	*tiek,*	*motong*	*la*	*i-suku*	*du*	*tana*
and.so	now	3p-go.down	arrive	sea	after	FOC	3s-put.down	go.down	ground

inbe	*i-taia*	*ran*	*atu*	*a*	*be*	*i-pa-yin-u*	*ye.*
and	3s-dig	water	one	and	IRR	3s-CAUS-drink-3s	with.3s

And thus they went down (and) arrived (at the) beach, then he put him down (on the) ground and he dug (for) water (to give) him a drink with.

Le	*nga*	*be*	*i-kut*	*lo*	*koo-noo,*	*ngan*	*ran*	*i-malingling*	*ye*
and.so	now	IRR	3s-scoop	go.up	mouth-3sPOS	then	water	3s-dribble	with

koo-noo.
mouth-3sPOS

And thus he (tried to) scoop (water) into his mouth, then (the) water dribbled out of his mouth.

Motong	*la*	*i-yitmak-i*	*mulu*	*se*	*i-yop-a*	*inbe*	*i-tang*	*a*
after	FOC	3s-lift.up-3s	again	come.up	3s-carry.piggyback-3s	and	3s-cry	and

i-pa	*mulu.*
3s-walk	again

Then he lifted him up again and coming up he carried him piggyback and he cried and he walked again.

I-tang	*nen,*	*"Tai-k,*	*ku-tang*	*ye*	*pokai*	*be,*	*bianga*	*o-o*
3s-cry	like.that	younger.sibling-1sPOS	2s-cry	with	custard.apple	not	flying.fox	oh

i-koko	*bae-m*	*be."*
3s-nip	hand-2sPOS	not

He cried like that, "Little brother (if) you (had) not cried for (a) custard apple, (the) flying fox oh would not (have) nipped your hand."

Ti-pa	*kasin*	*a*	*ti-la*	*ngan*	*i-kamata*	*ran*	*san*	*mulu*	*rongrongbe*	*tiek.*
3p-walk	a.bit	and	3p-go.across	then	3s-see	water	another	again	trickle	sea

They walked a little and they went across, then he saw another (bit of) water trickling (into the) sea.

Motong	*la*	*i-suku*	*tai-ni*	*tani*	*idu*	*tana*	*inbe*
after	FOC	3s-put.down	younger.sibling-3sPOS	DEF.s	3s-go.down	ground	and

i-wono	*ran*	*tani,*	*motong*	*la*	*i-kut*	*lo*	*tai-ni*	*koonoo,*
3s-block	water	DEF.s	after	FOC	3s-scoop	go.up	younger.sibling-3sPOS	mouth-3sPOS

ngan	*i-yin*	*tiap,*	*bong*	*ran*	*imalingling*	*ye*	*koonoo*	*mulu.*
then	3s-drink	not	but	water	3s-dribble	with	mouth-3sPOS	again

Then he put his little brother down (on the) ground and he blocked (the) water, then he scooped it into his little brother's mouth, and he didn't drink, but (the) water dribbled out of his mouth again.

Le	*nga*	*i-yitmaka*	*tai-ni*	*tani*	*lo*	*i-yop-a*	*mulu*	*inbe*
and.so	now	3s-lift.up	younger.sibling-3sPOS	DEF.s	go.up	3s-carry.piggyback-3s	again	and

i-tang	*a*	*i-pa*	*mulu.*
3s-cry	and	3s-walk	again

And thus he lifted his little brother up and carried him piggyback again and he cried and he walked again.

I-tang	*nen,*	*"Tai-k,*	*ku-tang*	*ye*	*pokai*	*be,*	*bianga*	*o-o*
3s-cry	like.that	younger.sibling-1sPOS	2s-cry	with	custard.apple	not	flying.fox	oh

i-koko	*bae-m*	*be."*
3s-nip	hand-2sPOS	not

He cried like that, "Little brother (if) you (had) not cried for (a) custard apple, (the) flying fox oh would not (have) nipped your hand."

Tooltool	*tani*	*i-yopo*	*tai-ni*	*inbe*	*i-tang*	*be*	*i-pa*
person	DEF.s	3s-carry.piggyback	younger.sibling-3sPOS	and	3s-cry	IRR	3s-walk

le	*nga*	*potai*	*kasin*	*pang*	*malala.*
and.so	now	near	a.bit	to	place

(The older brother) carried his little brother piggyback and he cried and he walked and thus (he came) near to (the) village.

Le	*nga*	*tina-di*	*talnga-na*	*i-longo*	*so*	*ben*	*tangini,*	*le*	*nga*
and.so	now	mother-3pPOS	ear-3sPOS	3s-hear	something	like	crying	and.so	now

i-wete	*pang*	*ni-n-tooroo.*
3s-speak	to	husband-3sPOS-

And thus their mother heard something like crying, and thus she spoke to her husband.

I-yei	*ne,*	*"Ai,*	*so*	*atu*	*la*	*a-long-a*	*ben*	*tooltool*	*i-tang*	*a*	*ku-tar*
3s-do	like.this	hey	something	one	FOC	1s-hear-3s	like	person	3s-cry	and	2s-put

talnga-m	*ole*	*ku-longo*	*lapau,*	*too*	*tiap?"*
ear-2sPOS	IRR	2s-hear	also	or	not

She (spoke) like this, "Hey, (there's) something I hear like (a) person crying, you listen, (do) you hear (it) too, or not?"

Inbe	*kase*	*tani*	*too-noo*	*i-suku*	*du*	*tana*	*mulu*	*inbe*	*i-taia*
and	small.one	DEF.s	older.sibling-3sPOS	3s-put.down	go.down	ground	again	and	3s-dig

ran	*san*	*mulu*	*inbe*	*i-kut*	*lo*	*koo-noo*	*ngan*	*se*	*kale-ne*
water	another	again	and	3s-scoop	go.up	mouth-3sPOS	then	come.up	throat-3sPOS

kootbe	*ye*	*inbe*	*mata-n*	*galanga*	*kasin.*
drink	with.it	and	eye-3sPOS	be.clear	a.bit

And that little (boy's) older brother put him down again and he dug (for) water again and he scooped it into (the little boy's) mouth and his throat drank it and he (seemed to come to a) little.

Le	*nga*	*i-yitmak-i*	*mulu*	*se*	*i-yop-a*	*inbe*	*i-tang*	*mulu.*
and.so	now	3s-lift.up-3s	again	come.up	3s-carry.piggyback-3s	and	3s-cry	again

And so he lifted him up again (and) he carried him piggyback and he cried again.

I-tang	*nen,*	*"Tai-k,*	*ku-tang*	*ye*	*pokai*	*be,*	*bianga*	*o-o*
3s-cry	like.that	younger.sibling-1sPOS	2s-cry	with	custard.apple	not	flying.fox	oh

i-koko	*bae-m*	*be."*
3s-nip	hand-2sPOS	not

He cried like that, "Little brother (if) you (had) not cried for (a) custard apple, (the) flying fox oh would not (have) nipped your hand."

Tina	*ngan*	*le*	*tama-di*	*i-longo*	*natu-nu*	*tani*	*kalnga-na*	*inbe*	*i-kilala,*
thus	then	and.so	father-3pPOS	3s-hear	child-3sPOS	DEF.s	voice-3sPOS	and	3s-recognize

le	*nga*	*i-wete*	*pang*	*rima-na.*
and.so	now	3s-speak	to	wife-3sPOS

And so (it was) then (that) their father heard his child's voice and recognized it, so he spoke to his wife.

I-yei	*ne,*	*"Oi,*	*ku-wud*	*yesoo?*	*Ku-dada*	*pang*	*tiek*	*du*	*ku-kamata*
3s-do	like.this	oh.no	2s-sit	why	2s-run	to	sea	go.down	2s-see

di	*tooltool*	*ngo*	*too,*	*ngo*	*ti-yei*	*belei?*	*A-longo*	*tooltool*	*i-tangtang*	*i,*
3p	person	those	or	those	3p-do	what	1s-hear	person	3s-cry-cry	PROX.s

kalnga-na	*ngan*	*ben*	*natu-k*	*mai*	*i."*
voice-3sPOS	then	like	child-1sPOS	big	PROX.s

He (spoke) like this, "Oh no, why are you sitting (here)? You run down to (the) beach (and) see (if it's) them or (not), (and) what are) they doing there? I hear this person crying, (and his) voice is like my older child."

Le	*taun*	*rima-na*	*i-dada*	*du*	*i-pakele*	*ngan*	*i-kilala*	*di*	*natu-nu*
and.so	now	wife-3sPOS	3s-run	go.down	3s-scrutinize	then	3s-recognize	3p	child-3sPOS

tina	*yo*	*mai*	*in*	*i-yopo*	*kase*	*nga,*	*le*	*nga*	*koo-noo*
DEF.p	that	big	MED.s	3s-carry.piggyback	small.one	now	and.so	now	mouth-3sPOS

pang	*ni-n-tooroo.*
to	husband-3sPOS-

So immediately his wife ran down peered out, (and) then she recognized her children, (the) larger carrying (the) smaller piggyback, and so (she) called to her husband.

I-yei *ne,* *"Ai,* *ku-wud* *yesoo?* *Di* *natu-du* *tina* *di* *na-nga* *la*
3s-do like.this hey 2s-sit why 3p child-1pIN.POS DEF.p 3p LOC-MED.p FOC

ti-man *nga.* *O* *ti-yei* *belei* *nga* *le* *nga* *kase* *na-ni* *la*
3p-come.across now IRR 3p-do what now and.so now small.one loc-DIST.s FOC

mai *i-yop-a* *ni."*
big 3s-carry.piggyback-3s that

She (spoke) like this, "Hey, why are you sitting (there)? Our children (are) here, (it's) them coming now. What did they do, so (as for the) younger one, (the) older is carrying him piggyback there?"

Le *nga* *ni-n-tooroo* *i-madit* *le* *i-dada* *le* *i-mugu* *inbe* *rimana*
and.so now husband-3sPOS- 3s-arise and.so 3s-run and.so 3s-preceed and wife-3sPOS

i-too *a* *ti-dada* *kala* *di* *natu-di* *tina.*
3s-follow and 3p-run join 3p child-3pPOS DEF.p

And thus her husband got up and he ran first, and (the) wife followed and they ran (and) joined their children.

Ti-la *tina* *le* *tama-di* *i-palala* *natu-nu* *kase* *in* *bae-ne*
3p-go.across thus and.so father-3pPOS 3s-separate child-3sPOS small.one that hand-3sPOS

ye *too-noo* *baba-na* *a* *i-kau-u* *inbe* *ti-toro* *natu-di* *mai* *i.*
with older.sibling-3sPOS back-3sPOS and 3s-get/give-3s and 3p-ask child-3pPOS big PROX.s

(So) they went across and their father separated (the) smaller child's hand from his older sibling's back and he got it and they questioned their older child.

Ti-yei *ne,* *"Ai,* *tai-m* *i* *nga* *yelei?"*
3p-do like.this hey younger.sibling-2sPOS PROX.s now why

They (spoke) like this, "Hey, (how is it that) your younger brother (is) like this?"

Ngan *se* *natu-di* *mai* *in* *i-yei* *ne,* *"Atoo,* *di* *tama-k* *le*
then come.up child-3pPOS big MED.s 3s-do like.this oh.boy 3p father-1sPOS and.so

tina-k *nga* *be* *ka-tor* *yesoo?* *Bong* *a-ye* *tai-k* *nga*
mother-1sPOS now IRR 2p-ask why but 1s-with younger.sibling-1sPOS now

am-pelele *a* *am-la* *balim* *ni,* *motong* *la* *am-too*
1pEX-beachcomb and 1pEX-go.across uninhabited.beach DIST.s after FOC 1pEX-follow

moolooi *atu* *a* *am-di* *ngan* *am-kamata* *pokai* *atu* *in* *i-pu,* *pu*
riverbed one and 1pEX-go.inland then 1pEX-see custard.apple one MED.s 3s-bear bear

le *be* *i-sareng-kata* *bae-ne,* *le* *nga* *a-wete* *panga* *be* *ya* *kase*
and.so IRR 3s-bend-break hand-3sPOS and.so now 1s-speak to.3s IRR 3s small.one

a *i-kodo* *tana* *e* *au* *mai* *a* *a-rookoo,* *ngan* *tiap.* *I-wete* *be* *au* *mai*
and 3s-stand ground but 1s big and 1s-climb then not 3s-speak IRR 1s big

a *a-kodo* *tana* *e* *ya* *kase* *a* *i-rookoo* *pokai.* Ngan la le
and 1s-stand ground but 3s small.one and 3s-climb custard.apple then FOC and.so

i-rookoo *inbe* *a-kodo* *tana,* *bong* *ngan* *i-rookoo,* *rookoo* *le,* *le* *i-lo* *meneng*
3s-climb and 1s-stand ground but then 3s-climb climb and.so and.so 3s-go.up yonder

pokai *kuto-no* *ni,* *inbe* *bianga* *atu* *i-pididi* *ye* *pokai* *bae-ne*
custard.apple head-3sPOS DIST.s and flying.fox one 3s-hand.walk with custard.apple hand-3sPOS

a *i-man* *tina* *le* *i-kana* *bae-ne* *i.* *Ngan* *la* *le* *i-mol*
and 3s-come.across DEF.p and.so 3s-eat hand-3sPOS this then FOC and.so 3s-fall

si *pumbe* *be* *a-kau-u* *a* *a-poongoo,* *ngan* *i-mata* *oo.* *Motong* *la*
come.down thump and 1s-get/give-3s and 1s-awaken then 3s-die COMP after FOC

a-yop-a *a* *am-pot* *pang* *tiek* *nga."*
1s-carry.piggyback-3s and 1pEX-come.seaward to sea now

Then their older child (spoke) like this, "Oh, boy, my father and mother, now why do you question (me)? But my little brother and I beachcombed and we went across (to) that uninhabited beach, then continuing across we followed a riverbed and we went inland, then we saw a custard apple tree that was bearing so that its branches (were about to) break, thus I said to him, (since) he (is) small, (to) stand (on the) ground while I, (who am) bigger, climb, (but) no. He said (that) I (was too) big, so I (should) stand (on the) ground, but

he (was) smaller so he (would) climb (the) custard apple tree. So then (it was he who) climbed and I stood (on the) ground, but then he climbed and climbed, until he went up (to the) head (of the) custard apple tree there, and (a) flying fox was moving around (in the) custard apple's branches and it came across and it bit his hand. Then (it was that he) fell coming down and thumping (on the ground), and I got him and I (tried to) awaken him, and he had completely died. Then I carried him piggyback and we came seaward toward (the) ocean."

I-gasa	*pang*	*di*	*tama-na*	*le*	*tina-na*	*a*	*i-mot,*	*motong*	*la*	*ti-kap*	*ran*
3s-tell	to	3p	father-3sPOS	and.so	mother-3sPOS	and	3s-finish	after	FOC	3p-get	water

a	*ti-rriui*	*kase*	*tani*	*inbe*	*ti-maia*	*kadu-nu*	*le*	*se*	*katene*
and	3p-bathe	small.one	DEF.s	and	3p-blow	nose-3sPOS	and.so	come.up	chest-3sPOS

katbe	*inbe*	*mata-n*	*galanga*	*mulu,*	*le*	*tama-na*	*le*	*tina-na*	*le*
breathe	and	eye-3sPOS	be.clear	again	and.so	father-3sPOS	and.so	mother-3sPOS	and.so

too-noo	*ti-kamata*	*yo*	*i-madit*	*mulu*	*nga*	*le*	*lo-di*	*ponana*	*welewele.*
older.sibling-3sPOS	3p-see	that	3s-arise	again	now	and.so	insides-3pPOS	be.happy	plenty

He told his father and mother all (about it), then they got water and they bathed (the) younger brother and they blew (in) his nose until his chest breathed and his eyes were clear again, and his father and mother and older brother they saw that he woke again and they were very happy.

Le	*barau*	*i*	*a-gasa*	*le*	*se*	*i-mot*	*nanga.*
and.so	story	PROX.s	1s-tell	and.so	come.up	3s-finish	LOC-now

And (so) this story I am telling is finished now.

Appendix B: sample chart

				Younger brother (major)					Older brother (major)				
Cl#	S#	Text	Free translation	Encoding	GR	Con	Per	RD	Encoding	GR	Con	Per	RD
1	1a	Kene atu in tamoto kase atu iye toonoo tipelele	One day a small boy and his older brother combed (the) beach	NP,Q1	S	Intro	10	20	NP	S	Intro	10	20
2	1b	a tila pang ye ni balim atu.	and they went across to an uninhabited beach.	AGR	S	S1	9	1	AGR	S	S1	9	1
3	2a	Yaru tipa	(The) two of them walked	PN2	S	S1	8	1	PN2	S	S1	8	1
4	2b	a tila	and (they) went across	AGR	S	S1	7	1	AGR	S	S1	7	1
5	2c	le nga tikamata moolooi atu.	and so now they saw a riverbed.	AGR	S	S1	6	1	AGR	S	S1	6	1
6	3a	Motong la nga yaru titoo moolooi tani	So then (the) two of them followed that riverbed	PN2	S	S1	5	1	PN2	S	S1	5	1
7	3b	a tidi.	and they went inland.	AGR	S	S1	4	1	AGR	S	S1	4	1
8	4a	Tipa	They walked	AGR	S	S1	3	1	AGR	S	S1	3	1
9	4b	a tidi	and they went inland	AGR	S	S1	2	1	AGR	S	S1	2	1
10	4c	inbe matadi lo pang moolooi koonoo	and their eyes went up to the mouth of the riverbed	AGR	S	S1	1	1	AGR	S	S1	1	1
11	4d	ngan tikamata pokai atu in ipu, pu le be isarengkata baene.	and then they saw a custard apple tree there (that) was bearing fruit so that it (was about to) break (a) branch.	AGR	S	S1	0	1	AGR	S	S1	0	1
12	5	Le nga toonoo in iwete pang taini.	So then that older brother spoke to (the) younger brother.	NP	Obl	N4	0	2	NP,DEM	S	S4	1	2
13	6a	Iyei ne, "Alei taik, nga ole ong mai tiap a kukodo tana, e au mai a arookoo pokai kiidi i."	He (spoke) like this, "Sorry little brother, now you (aren't) big (so) you stand (on the) ground, but I (am) big (so) I (will) climb this custard apple tree of ours."						SM	S	S1	0	1
14	7	Ngan taini iyei ne, "I be! Ong mai a kukodo tana, e au kase a arookoo pokai kiidi."	Then (the) younger brother (spoke) like this, "Not (so)! You (are) big (so) you stand (on the) ground, but I (am) small (so) I (will) climb our custard apple tree."	NP	S	S3	3	2					
15	8a	Yaru tiparsu ye rookoongoo	(The) two of them debated about climbing,	PN2	S	S1	2	1	PN2	S	S1	3	2
16	8b	bong ngan kase koon mede san	but (the) younger (brother) spoke very strongly	NP	S	S4	1	1	AGR	Posr	N3	2	1
17	8c	le nga toonoo mai in imalum panga.	and so that big older brother consented to him.	AGR	Obl	N3	0	1	NP,DEM	S	S2	1	1