

# 2 *Spatial reference in Alune*

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## 1 Introduction<sup>1</sup>

This paper examines the system of spatial reference in an Austronesian language, Alune, which is spoken on Seram island in eastern Indonesia. Cross-linguistic studies of spatial orientation and spatial terms have shown that languages do not divide space in the same way (Haviland 1979; Levinson 1991, 1992). Spatial orientation is often expressed in relation to a set of objective reference points relative to locations in a given space. These reference points may be presented in relation to ego or may be absolute and based upon:

- a system of cardinal edges (Levinson 1992);
- celestial reference points as marked by the sun (Diamond 1993);
- wind direction (Bowden 1992);
- or monsoons (Blust 1997), along with a variety of other fixed landmarks and environmental phenomena such as toward sea and toward land (Adelaar 1997).

Typical descriptions of spatial systems in the literature indicate relatively clear spatial distinctions which appear to be used in systematic ways within languages. For example, Bowden (1997) notes that the Taba (Makian Dalam) directional system consists of three distinct but partially overlapping scalar levels. These levels are within a house or neighbourhood, on or nearby Makian island, or in the wider world. This breakdown is similar to the types of spatial categories we find in other Austronesian languages, and speakers utilise the spatial system at each of these levels.

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<sup>1</sup> Research on which this paper is based was undertaken by Florey in the Alune villages of Lohiatala and Lohiasapalewa in five field seasons between 1988 and 1998. Research has been supported by the Social Science Research Council and the American Council of Learned Societies Joint Committee on Southeast Asia (with funding provided by the Ford Foundation); the Australian Research Council; and the Wenner-Gren Foundation for Anthropological Research. Thanks are particularly due to Michael Ewing for his careful reading and extensive comments on earlier drafts, and to Jennifer Coates for her helpful comments while Florey was based at Roehampton Institute in November 1997 on study leave. All errors remain the responsibility of the authors.

The literature indicates that the use of spatial systems in some Austronesian languages is complex and dependent upon a knowledge of environmental features (cf. the papers contained in Senft 1997). However, the majority of studies have focused upon elicited data with few examining the ways in which spatial terms are used in natural discourse. It is likely that elicited data or responses given in tests or experimental situations will be closer to a model of idealised usage than those which occur in discourse. Descriptions based on such data may conceal the range of functions filled by spatial referents. The present paper aims to address this issue by first describing the idealised use of the directional system of Alune and then examining the use of spatial referents in discourse data. In order to undertake this analysis we draw primarily on a database of thirty-one texts recorded with fluent speakers of Alune in the inland village of Lohiasapalewa.

In §2, four zones of spatial reference are described, which gradually move beyond the Alune world and increase in distance from the realm of ego's daily experience. Key components of the Alune spatial reference system which are analysed in this section include a set of directionals, a locative (which also serves aspectual and temporal functions), an ablative, allative, and a deictic. Certain prescriptive features, from a speaker's perspective, are described. The third section then analyses discourse data in order to compare the folk-linguistic perspective of spatial reference with an account based on actual usage. A number of interesting features emerge from this analysis of the spatial system, including the use of eight syntactic constructions to denote spatial reference, the use of locatives to mark movement rather than location, and the use of directionals to mark location rather than movement. In §4 we seek explanations for these features, and analyse both syntactic and discourse-functional factors. The discourse functional factors include contextualisation, clarification, and disambiguation of locations and participants in a narrative. We suggest that use of the locative to denote movement has arisen through social change which has resulted in greater shared knowledge within the community and a correspondingly decreased need to specify the direction of movement to some sites in village territory.

### 1.1 Linguistic setting

Alune is an Austronesian language which is spoken in twenty-six villages in western Seram island, in the central Maluku region of eastern Indonesia. Collins (1983) locates Alune in the Proto East Central Maluku subgroup of Central Eastern Malayo-Polynesian. There are three dialects of Alune—north, central, and south—distinguishable principally by phonetic features and by some lexical differences. The north dialect is the most widely spoken, while the central Alune dialect is spoken in six villages, and the south dialect is now known by only a few elderly speakers in Kairatu (1983:40). The linguistic vitality of Alune varies between the settings in which it is spoken: the language remains strong in villages which are still located in the mountainous interior, however language shift to Malay (Ambonese Malay and Indonesian) is clearly occurring in villages which have relocated to coastal Seram at some time during this century.

The research on which this paper is based was undertaken in three Alune-speaking villages: Lohiasapalewa, Lohiatata, and Murmaten. Lohiasapalewa, a central dialect village located in the mountainous interior of western Seram, is linguistically quite conservative. Although the regional *lingua franca*, Ambonese Malay, is now beginning to affect patterns of language use in inland Alune villages, use of Alune persists through all generations in Lohiasapalewa (Florey 1997).

Lohiatala is the daughter village of Lohiasapalewa. These two contemporary villages were originally one village, Lohia, located on the present-day site of Lohiasapalewa. In the mid-nineteenth century, internal conflict led to the departure of a break-away group who formed a new village approximately 20 kilometres to the south—now known as Lohiatala. In the 1950s, the people of Lohiatala were forcibly relocated to a site much closer to the south coast of Seram. Ambonese Malay is the first language of all Lohiatala villagers aged approximately thirty years and younger. People in this age group no longer speak Alune, though most retain some receptive skills. They are rarely addressed in Alune and if they are, they always respond in Malay (Florey 1990, 1991, 1993).

Murnaten is a north-dialect village which has been located on the north coast of Seram since the beginning of this century. Its coastal location and long-standing pattern of trade with non-Alune peoples has had a great impact on patterns of language use. Ambonese Malay has been spoken as a *lingua franca* in the village for most of the 20<sup>th</sup> century and is the first language of all people in the village aged approximately fifty years and younger. Like Lohiatala, people aged thirty years or younger retain some receptive skills but no longer speak Alune.

## 1.2 Database

The principal data source for the analysis of spatial reference comprises thirty-one texts recorded with speakers aged seventeen years or older in Lohiasapalewa. The texts (including both monologues and conversational data) total 1412 clauses. They cover a wide range of topics, including accounts of incidents of local interest which occurred in the village, discussions of current local events, descriptions of daily activities (gardening, cooking and so on), several folk tales, and historical narratives or origin myths. In the final section, we draw upon two further sources of data to analyse language change in the system of spatial reference in addition to the database of adult texts from Lohiasapalewa. These data are twelve texts recorded with children in Lohiasapalewa and the results of language proficiency tests undertaken in the villages of Lohiasapalewa, Lohiatala, and Murnaten.

## 2 Spatial reference in Alune

Spatial reference incorporates reference to location, to movement from a source location, movement to a goal location, and the path of movement. Key components of the Alune spatial reference system which are analysed in this section include a set of directionals, a locative (which also serves aspectual and temporal functions), an ablative and allative preposition, and a deictic. The Alune system of spatial reference is oriented around the location of ego, the location of other actors, geographical features of the local landscape, and space at various distances from the speaker or other relevant referent. There is no interrelationship between spatial orientation and the position of the sun (sunrise, sunset), the direction of winds, or cardinal directions.

## 2.1 Directionals

A set of six directionals is used to mark movement from a source (location) to a goal (destination). The six directionals have both full lexical forms (with some dialectal variants) and clitic forms, as set out in Table 1 below. The full lexical forms are the most frequently used, and clitic forms are restricted to use with the allative preposition (§2.4 below). Included in the last column of Table 1 are innovative forms used by younger fluent speakers or semi-speakers of Alune. The central dialect full form of each directional is used as the citation form throughout this paper.

**Table 1:** Alune directionals

| Full form:<br>central dialect | Full form:<br>north dialect | Clitic form  | Innovative forms        |
|-------------------------------|-----------------------------|--------------|-------------------------|
| <i>mlau</i>                   | <i>ndau</i>                 | <i>-lau</i>  | <i>mau, nau</i>         |
| <i>nda</i>                    | <i>nda</i>                  | <i>-ra</i>   | <i>da, ra</i>           |
| <i>mlete</i>                  | <i>ndete</i>                | <i>-lete</i> | <i>mnete, nete, nde</i> |
| <i>mpe</i>                    | <i>mpe</i>                  | <i>-pe</i>   | <i>pe</i>               |
| <i>ndi</i>                    | <i>ndi</i>                  | <i>-ri</i>   | <i>di, ri</i>           |
| <i>mpai</i>                   | <i>mpai</i>                 | <i>-pai</i>  | <i>pai</i>              |

Syntactically, the full lexical form of the directionals may function as prepositions, as in example (1) below, or as nominals, as in (2) below.<sup>2</sup>

- (1) *Au 'eu mpai mlinu.*  
 1sg go DIR garden  
 'I'm going to the garden.'  
 (MA: LStest6)<sup>3</sup>

- (2) *(E)le('i) imi leu bei mpe-re imi pusu-mi sui*  
 then 2pl return.home from DIR-DET 2pl all-2pl chase  
*asu-re pi-be batu ale dua-mu-o?*  
 dog-DET or-COMP only 2sg alone-2sg-Q  
 'Then when you all were coming home from down there did all of you follow the dogs or only you?'  
 (YM: Cl.11–12)<sup>4</sup>

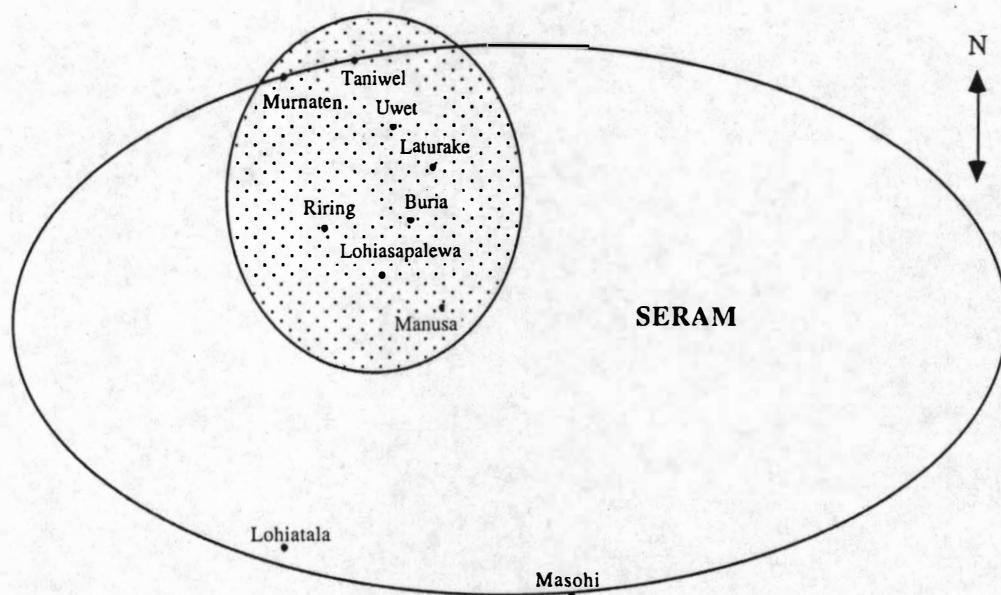
<sup>2</sup> Abbreviations used in this paper are:

AI – alienable possession, ALL – Allative, ASP – aspect, CAUS – causative, CL. – clause, COMP – complementiser, DEI – deictic, DET – determiner, DIR – directional, DM – discourse particle, Exc – exclusive pronoun, Gen – genitive, H – human, Inal – inalienable possession, LOC – locative, NEG – negative, NH – non-human, pl – plural, Q – question, REDUP – reduplication, sg – singular, Tr – valency-increasing suffix

<sup>3</sup> A limited number of sentence examples have been drawn from test data. These are coded as follows: speaker's initials followed by the initials of the village and the relevant number of the test item.

<sup>4</sup> Sentence examples are coded as follows: speaker's initials followed by the relevant clause number/s within the text.

The principal domain of usage of the six directionals is for spatial reference within a zone of local space. This is the zone in which ego dwells—the realm of everyday interactions and experiences. The village is the prototypical dwelling location of Alune people and the zone of local space typically includes the home, the village residential site, the wider village territory (including primary and secondary forest and cultivated land), and villages roughly within a day's travel with which the villagers have regular contact (for trade, educational, or ritual purposes). Figure 1 illustrates the zone of local space for the villagers of Lohiasapalewa. This zone, which has a radius of approximately 30 kilometres, typically remains largely within Alune territory, *albeit* including that occupied by other Alune villages. It includes some non-Alune territory near the coast and the town of Taniwel, the regional administrative centre which contains government and military offices, the marketplace, a junior high school, and the boat harbour.



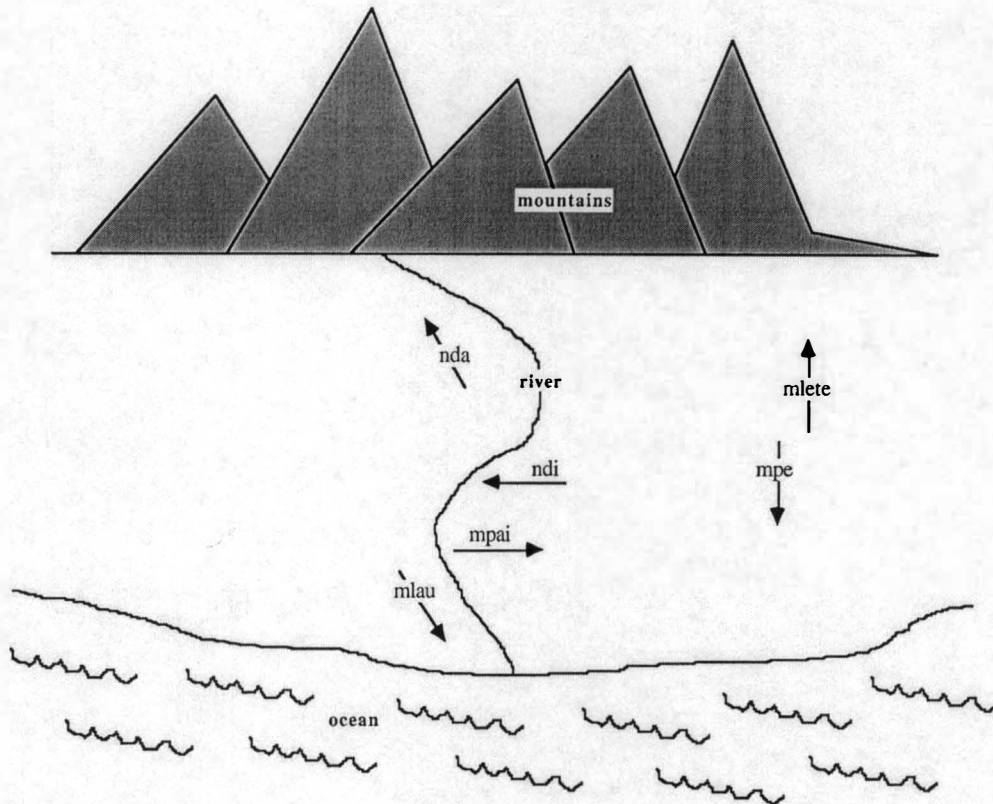
**Figure 1:** The zone of local space for the village of Lohiasapalewa

In contemporary society, Alune people are more mobile and may live away from the village for short periods for educational or employment purposes. Because it is egocentric, the system of spatial reference for local space moves with ego: a villager dwelling in Taniwel while attending secondary school would determine local spatial reference by taking into account features of the local environment.

Within local space, the six directionals are mapped onto three planes: seawards/inland (*mlau/nda*), upwards/downwards (*mlete/mpe*), and opposing directions on the transverse axis (*ndi/mpai*). These planes are mapped in Figure 2, below.

*Mlau.* The directional, *mlau*, denotes the direction towards the sea, downstream. In the context of the physical geography of Seram, movement seawards also involves movement downwards from the mountains. However, the salient feature of this plane is the direction seawards versus inland, rather than elevation.

- (3) *Au 'wali-a lua (e)si-bei mlau Bulie.*  
 1sg same.sex.sibling-PL two 3plH-from DIR Buria  
 'My two brothers came from Buria.'  
 (GT: Cl.48)



**Figure 2:** The Alune directional system in local space

*Nda.* The directional, *nda*, denotes the direction inland, upstream: that is, the opposing direction to *mleu*.

- (4) *Ami leu lo-ra nda lusune.*  
 1plExc return.home to-DIR DIR orchard  
 'We returned over there, to the orchard.'  
 (MM: Cl.17)

*Mlete.* The directional, *mlete*, is used to denote upwards elevation.

- (5) *Lisona (e)i-sa mlete luma.*  
 Lisona 3sgH-climb DIR house  
 'Lisona climbed up to the house.'  
 (NK: Cl.134)

*Mpe.* The directional, *mpe*, denotes downward elevation, the opposing direction to *mlete*.

- (6) *Ami 'eu a-beli cengkeh mpe Tani'we.*  
 1plExc go CAUS-sell clove DIR Taniwel  
 'We went to sell clove down in Taniwel.'  
 (YM: Cl.11)

*Ndi.* The directional, *ndi*, denotes direction on the transverse plane, parallel to the shoreline and the mountain range: relative to the speaker's position, the mountains/upstream are on the right side, and the ocean/downstream are on the left.

- (7) *Au leu le 'wetele dani pene,*  
 1sg return.home because child cry already  
*(e)le('i) au leu bei ndi lo-mei.*  
 then 1sg return.home from DIR to-LOC  
 'I went home because the children were crying, then I came home here from over there.'  
 (SML: Cl.8)

*Mpai.* The directional, *mpai*, denotes direction on the transverse plane, parallel to the shoreline and the mountain range, in the opposite direction to *ndi*: that is, relative to the speaker's position, the mountains/upstream are on the left side, the ocean/downstream on the right.

- (8) *Au 'eu mpai mlinu.*  
 1sg go DIR garden  
 'I'm going to the garden.'  
 (MA: LStest6)

## 2.2 Beyond local space

As previously mentioned, the six directionals outlined above are used within the zone of daily experience, which we will refer to as zone 1. Beyond the zone of daily experience, the world is divided conceptually into three more zones according to relative distance from the zone in which ego dwells. Three directionals are used to denote space towards or within these three zones. These directionals are homophonous with three of the directionals used to denote local space in zone 1. Each of the zones is described and illustrated below.

### 2.2.1 Zone 2: within Seram beyond zone 1

The directional, *ndi*, is used for spatial reference to places within Seram which are beyond zone 1: that is, beyond the daily experience of the speaker. Figure 3 illustrates zones 1 (local space) and 2 (Seram) for the villagers in the south coastal village of Lohiatata.

From Lohiatata, Taniwel is distantly located across the mountain range of central Seram and is thus beyond the realm of daily experience denoted by zone 1. Speakers in Lohiatata refer to Taniwel using the directional *ndi* to denote that it is conceptually within zone 2.

- (9) *Au 'eu ndi Tani'wele abeli-e tema.*  
 1sg go DIR Taniwel sell-Tr banana  
 'I went to Taniwel to sell bananas.'  
 (SM: LTtest89)

This usage contrasts with example (6) above, in which the choice of the directional *mpe* by a Lohiasapalewa speaker in reference to Taniwel indicates that, for villagers in Lohiasapalewa, Taniwel is within the zone of local space.

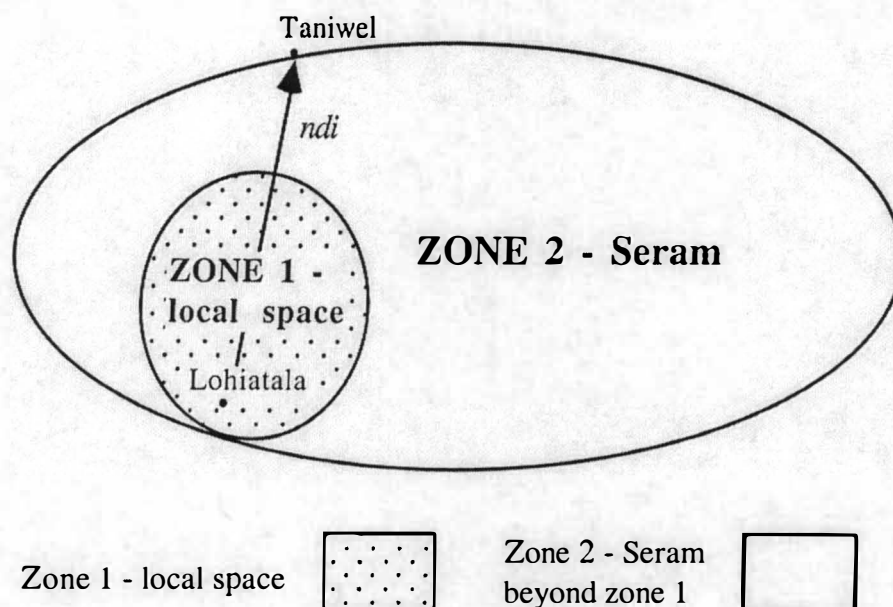
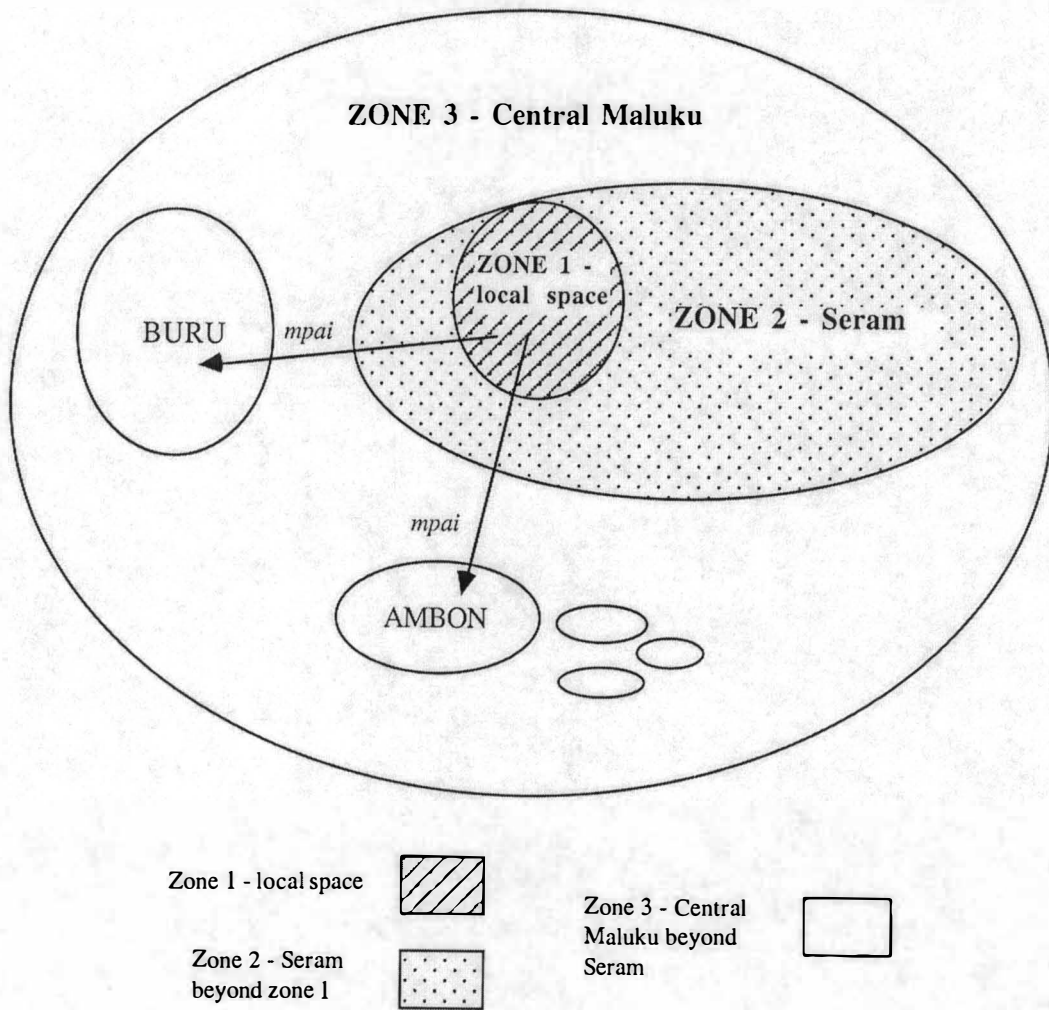


Figure 3: Zone 2: Seram beyond zone 1

### 2.2.2 Zone 3: Central Maluku beyond Seram

The directional, *mpai*, is used for spatial reference to locations which are beyond Seram yet within Maluku. This zone includes the regional capital of Ambon city, located on Ambon island to the south of Seram. Although distant to Alune villages, Ambon is known to the villagers either through personal experience or, more commonly, through the narratives and songs of the people who have travelled to Ambon (teachers, the village headman, and so forth). Some young people now travel to Ambon for upper-secondary education. Speakers from all Alune villages, regardless of their village location on Seram, refer to Ambon with the directional, *mpai*.

- (10) *Ami leu bei mpai Ambon lo-mei.*  
 1plExc return.home from DIR Ambon to-LOC  
 'We came home here from Ambon.'  
 (ES: Cl.6)



**Figure 4:** Zone 3: Central Maluku beyond Seram

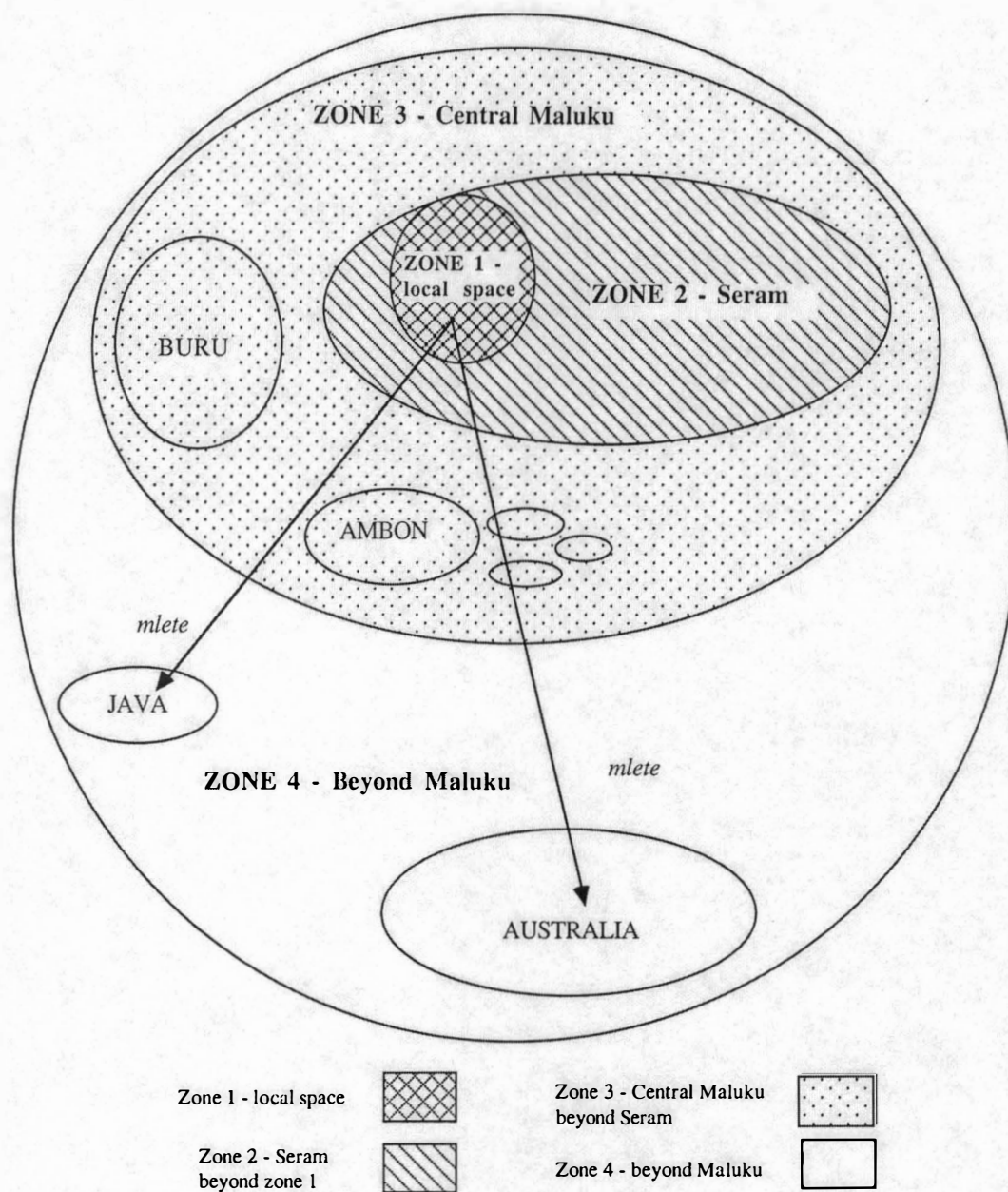
### 2.2.3 Zone 4: the world beyond Maluku

The directional, *mlete*, is used for spatial reference to locations beyond Maluku. For example, it is used by all Alune people, regardless of their village location on Seram, to refer to Java or to Australia.

- (11) (E)i-'eu *mpai lo-lete* Jakarta (e)i-leu *musa*.  
 3sgH-go DIR to-DIR Jakarta 3sgH-return.home not.yet  
 'She went to Jakarta and hasn't come home yet.'  
 (ES: Cl.14)

In such a locally defined world, there are very few examples of reference to zone 4 in the database. Example (11) above is interesting because the speaker uses two consecutive directionals to denote Jakarta: *mpai lo-lete*. Two explanations are possible: she may be referring to movement of the actor first to Ambon (in zone 3), which would require *mpai*, and then onwards to Jakarta (in zone 4), which requires *mlete*. Alternatively, the speaker may

have chosen *mpai* to denote the distant spatial zone beyond Seram, and then corrected to *mlete* to denote the greater distance beyond Maluku.



**Figure 5:** Zone 4: beyond Maluku

### 2.3 Locative

The system of spatial reference also includes a locative, *mei*, which is commonly used together with a noun phrase to map location in local space.

- (12) ((E)n)i-nane      Benselina po (e)i-meī      hena      mo.  
 3sgHGenAI-name    Benselina    but 3sgH-LOC village    NEG  
 'Her name is Benselina but she isn't in the village.'  
 (ES: Cl.13)

The locative, *mei*, also occurs in a preverbal position to mark progressive aspect.

- (13) Beta-ni                                      *mei dani meije, dani ita*      'petu.  
 opposite.sex.sibling-3sgHGenInal      ASP cry    this cry    until    dark  
 'Her brother was crying like this, crying until nightfall.'  
 (ES: Cl.51)

Within local space, location can also be specified using the set of directionals.

- (14) Lua-si      sasi-'e      u'ui      lua *mlete mlinu*      ului.  
 two-3plH contract-Tr seedling two DIR garden head  
 'The two of them made a pact with two seedlings at the top of the garden.'  
 (ATK: Cl.124)

## 2.4 Allative

The system of spatial reference includes a preposition, *lo('o)*, which serves an allative function indicating movement along a path towards a goal.

- (15) (E)i-lepa      *lo'o*      Lisona      be      su'a (e)i-'ai      po  
 3sgH-speak    to    Lisona    COMP like    3sgH-marry    but  
*Lisona (e)i-su'a*      mo.  
 Lisona    3sgH-like    NEG  
 'He said to Lisona that he'd like her to marry but Lisona didn't want to.'  
 (NK: Cl.3)

The allative, *lo-*, may be cliticised to the clitic form of the six directionals (given in Table 1 above). The primary function of *lo-* when cliticised to a directional (henceforth abbreviated *lo-DIR*) is to focus on the path of movement rather than the source location or the goal location of the movement. Proficient speakers of Alune discussing prescriptive use of this construction assert that it should not, therefore, be used in conjunction with a noun phrase to further specify the goal. Examples (16)–(18) illustrate 'correct' usage (from a folk-linguistic perspective) of the *lo-DIR* construction.

- (16) Leu                      bei      mpe      'wele *lo-lete*      yo      ama,  
 return.home    from    DIR    water    to-DIR    DM    father  
*(e)i-ono apale mere.*  
 3sgH-do    pig    that  
 'We returned up there from down at the river and father, he was preparing that pig.'  
 (ES: Cl.40–41)

- (17) (E)le('i) au bala-'u 'ila bei ai telai-je (e)le('i)  
 then 1sg hand-1sgGenInal free from tree middle-DET then  
 au tetu lo-pe.  
 1sg fall to-DIR  
 'Then my hand slipped from the tree and I fell downwards.'  
 (YM: Cl.27)

- (18) Apale e-betu bei au (e)le('i) e-sisa bei au lo-pai.  
 pig 3sgNH-get.up from 1sg then 3sgNH-move from 1sg to-DIR  
 'The pig got up from me then it moved over there away from me.'  
 (YM: Cl.37–38)

The allative, *lo-*, may be cliticised to the locative *mei* to focus on the path of movement from a given source towards the location of the speaker: *lo-mei* 'to here'.<sup>5</sup>

- (19) Ami leu bei mpai Ambon lo-mei.  
 1plExc return.home from DIR Ambon to-LOC  
 'We came home here from Ambon.'  
 (ES: Cl.6)

## 2.5 Ablative

The system of spatial reference includes a preposition, *bei*, which serves an ablative function indicating movement from a source.

- (20) (E)i-mei selu au 'weini mei sidi bei batu-re.  
 3sgH-ASP see fire smoke LOC outside from stone-DET  
 'He saw smoke coming out from the stone.'  
 (ATK: Cl. 159)

The preposition, *bei*, may be affixed to an enclitic pronoun. It does not occur with the clitic forms of the directionals.

- (21) (E)i-leu bei-(n)i mei hena.  
 3sgH-return.home from-3sgH LOC village  
 'He returned home from where she was (lit. from her) to the village.'  
 (NK: Cl.24)

<sup>5</sup> The spatial term *lo-mei* also serves a temporal function.

Au bita pia 'ena biaya-a h'ola.  
 1sg pound sago for expense-PL school

Lo-mei ujian pela, au 'u=h'ola mpai Ambone.  
 to-LOC exam finish 1sg 1sgGenAl=school DIR Ambon  
 'I processed sago (to pay) school expenses. After the exam, I went to school in Ambon.'  
 (GT: Cl. 42-44)

## 2.6 Deictic *ete*

A further feature of the system of spatial reference is the deictic marker, *ete*, indicating 'over there in that direction', which can occur with each of the directionals.

- (22) *Ho'o imi ntulu ete-mlau-re 'ena 'inu*  
 therefore 2pl sleep DEI-DIR-DET in.order.to drink  
*tuae-le piseu?*  
 palm.wine-DET uncertainty  
 'So you all slept over there seawards to drink some palm wine or what?'  
 (MK: Cl.25–26)

If the actual direction is unspecified or unknown to the speaker either of the two directionals on the transverse plane (*ndi* or *mpai*) may be used with *ete* to denote 'over there'.

- (23) *Ho'o ete-ndi-re a-'eri-'e sarei?*  
 therefore DEI-DIR-DET 2sg-work-Tr what  
 'So what work did you do over there?'  
 (FS: Cl.28)

This pattern was confirmed in an item on a language proficiency test (discussed further in §5 below), in which respondents were asked to translate into Alune the Ambonese Malay sentence *Ada ikang banyak di sana* 'There are many fish over there'. The direction 'over there' was unspecified, and respondents translated it with either *ete-ndi* or *ete-mpai* with 65 per cent of respondents choosing the latter.

- (24) *Iane ete-ndi-de bo'ala.*  
 fish DEI-DIR-DET many  
 'There are many fish over there.'  
 (MM: LStest80)
- (25) *Ete-mpai-je iane bokala.*  
 DEI-DIR-DET fish many  
 'There are many fish over there.'  
 (JS: LStest80)

The contrast between 'here' and 'there' is also marked by *ete* in conjunction with the deictic pronoun 'this' and 'that'.

- (26) *Au due ete-meije ta'wali pene'a.*  
 1sg live DEI-this long already  
 'I've already lived here a long time.'  
 (MM: LStest60)
- (27) *Dulu-'e ielu mere ete-mere ne'a.*  
 lower-Tr things that DEI-that just  
 'Just put those things down there.'  
 (AKM: LStest90)

## 2.7 Summary

In this section we have shown that, conceptually, the Alune system of spatial reference divides the world into four spatial zones. Zone 1 is the zone of local space in which everyday interactions and experiences occur. Zone 2 is within Seram but beyond the bounds of everyday experience. Zone 3 is within Maluku but beyond Seram, and zone 4 is the world beyond Maluku. As summarised in Table 2 below, 6 directionals are used to denote spatial reference in zone 1, while only 1 directional is used to denote spatial reference in each of zones 2–4. The system of spatial reference also includes the locative, *mei*, an allative, *lo'o*, an ablative, *bei*, and a deictic, *ete*.

**Table 2:** Use of directionals within spatial zones

| Zone 1                                                                               | Zone 2                             | Zone 3                              | Zone 4                               |
|--------------------------------------------------------------------------------------|------------------------------------|-------------------------------------|--------------------------------------|
| <i>mlau</i><br><i>nda</i><br><i>mlete</i><br><i>mpe</i><br><i>mpai</i><br><i>ndi</i> | <br><br><br><br><br><br><i>ndi</i> | <br><br><br><br><br><br><i>mpai</i> | <br><br><br><br><br><br><i>mlete</i> |

In this section, our analysis has drawn on folk-linguistic representations of the spatial reference system. From this perspective, the directionals are used to denote movement towards a goal and the locative is used to denote a location. The allative may be cliticised to a directional, but folk-linguistic prescriptive usage requires that such constructions may not be followed by a noun phrase. In the following section we look at the actual syntactic structures which occur in discourse to denote spatial reference.

## 3 Directionals and locatives in discourse

Ozanne-Rivierre points out that spatial reference is so important in the languages of New Caledonia that 'oral texts can often only be properly understood when the spatial context of utterance is precisely known' (1997:84). This is clearly the case in Alune: in the database of 31 adult texts, occurrences of spatial reference were found in almost 25 per cent of the 1412 clauses in the adult texts recorded in Lohiasapalewa. The 350 occurrences consist of 209 directionals and 141 locatives.

The idealised folk-linguistic description of the system of spatial reference leads us to understand that directionals are used to denote the direction of movement or to focus on the path of movement, and that the locative, *mei*, is used to mark source or location. However, analysis of the 350 occurrences of Alune spatial referents in the text database reveals a more complex system. The database revealed 8 syntactic constructions containing a directional and/or the locative. These constructions may be used for spatial reference to each of the 4 spatial zones. Further, the directionals are used extensively to mark source or location, and the locative is used to mark movement. This analysis leads us to question why such a wide range of constructions exists and what discourse functions distinguish them. In this section

we describe the 8 constructions and their relative frequency. In §4 we will then look at functional motivations for the proliferation of constructions.

The principal features which differentiate the eight constructions are:

- whether the spatial referent is a directional or the locative;
- whether or not a noun phrase co-occurs with the spatial referent to contextualise the location, the source, or ultimate goal of the movement;
- whether the allative preposition *lo-* 'towards' co-occurs with a spatial referent—the locative or the clitic form of a directional;
- whether a spatial referent is used to denote movement or location.

### 3.1 Spatial reference denoted with directionals

Each of the four constructions using a directional to denote spatial reference is described in §3.1.1–§3.1.4 below. The analysis of each construction is subdivided into two categories which differentiate it functionally according to whether the construction is used to denote movement or location.

#### 3.1.1 Directional with NP

The most common use of a directional in the database consists of a directional used together with a noun phrase. There are 95 occurrences of this construction, 36 of which denote movement towards a goal or movement from a source and 59 of which specify a location.

- a) **Movement.** The following sentence exemplifies the use of a directional together with a noun phrase to denote movement. The 36 examples of this construction represent 17 per cent of the total use of directionals.

(28) *Lo-lete (e)si-siba doma mlete 'wala ului.*  
 to-DIR 3plH-continue.on until DIR 'wala head  
 'Once up here, they continued on up to the head of the 'Wala river.'  
 (MM: Cl.8)

- b) **Location.** The following sentences exemplify the use of a directional together with a noun phrase to denote location. The 59 examples of this construction represent 28 per cent of the total use of directionals. As shown in the examples, the noun phrase indicating location may immediately precede or immediately follow the directional.

(29) *Meme-mu ma'-te'wa-le-i mlete mosole tala liline peneka.*  
 uncle-2sgGenInal NOM-know-with-3sgH DIR forest middle deep already  
 'Your uncle has done something with her up in the deep forest.'  
 (NK: Cl.37)

- (30) *apale 'ane bei-ni 'wali-ni tone mpe*  
 pig eat from-3sgH same.sex.sibling-3sgHGenInal small DIR  
*'ue-re, (e)le('i) (e)i-mpe-re (e)i-ombe...*  
 1sg.own-DET then 3sgH-**DIR-DET** 3sgH-say  
 'The pig ate that owned by the younger brother down there, then he down  
 there said...'  
 (ATK: Cl.45–46)

### 3.1.2 Directional without NP

The second construction using a directional is one in which the directional does not co-occur with a noun phrase. There are 25 occurrences of this construction, 19 of which denote movement towards a goal or movement from a source and 6 of which specify a location.

- a) **Movement.** The 19 examples of constructions in which a directional is used to denote movement without a noun phrase to mark the source or ultimate goal represent 9 per cent of the total use of directionals.

- (31) *Ho'o pi 'ena pina'e meije pine imi bei mlau mo-yo?*  
 therefore or when early.morning this before 2pl from **DIR** NEG-Q  
 'So probably it was early this morning when you all (came back) from seawards,  
 wasn't it?'  
 (MK: Cl.30)

A definite article {-re, -je} may be suffixed to a directional.

- (32) *Memane imi leu bei mpe-re, imi doma mei*  
 yesterday 2pl return.home from **DIR-DET** 2pl arrive LOC  
*hena-re 'petu pi-be mosa?*  
 village-DET dark or-COMP not yet  
 'Yesterday when you returned from (that place) down there, was it  
 night-time when you all arrived in the village or not yet?'  
 (MK: Cl.18–19)

- b) **Location.** The 6 examples of constructions in which a directional denotes location without a noun phrase to overtly specify the location represent 3 per cent of the total use of directionals. This construction is exemplified in the second clause of example (33) below.

- (33) *(E)i-mlete mlinu, mlete bata.*  
 3sgH-**DIR** garden **DIR** weed  
 'She was up in the garden, up there weeding.'  
 (ES: Cl.65–66)

### 3.1.3 Lo- directional with NP

The third construction using a directional is one in which the clitic form of the 6 directionals (given in Table 1) may be cliticised to the allative *lo-* and used to denote

movement or location. The primary function of *lo-* is to focus on the path of movement rather than the ultimate goal of the movement. Therefore, as described in §2.4 above, according to prescriptive usage this construction should not co-occur with a noun phrase. However, analysis of the textual data found 25 examples of the co-occurrence of the allative together with a directional and a noun phrase, 22 of which denote movement towards a goal or movement from a source and 3 of which specify a location.

- a) **Movement.** The 22 examples of constructions in which *lo-* is used with the cliticised form of a directional and with a noun phrase to denote movement represent 11 per cent of the total use of directionals.

(34) *(E)si-siba soli' lo-ra 'ota Liline.*  
 3plH-advance persist **to-DIR** city Riring  
 'They kept on advancing over to Riring.'  
 (MM: Cl.18)

- b) **Location.** The 3 examples of constructions in which a directional is cliticised with *lo-* and used together with a noun phrase to denote location represent only 1 per cent of the total use of directionals. Note that the noun phrase may precede or follow the directional.

(35) *Latlakeari (e)si-asu-ru sali bei mlete Boluta, lo-pe Kputi lalei.*  
 Laturake 3plGenAI-dog-PL bark from DIR Boluta **to-DIR** Kputi inside  
 'The people from Laturake, their dogs were barking up at Boluta, over inland of Kputi.'  
 (YM: Cl.17–18)

(36) *Au bua 'ena ai tlai-je lo-lau (e)le('i) apale e-bua*  
 1sg leap in tree middle-DET **to-DIR** then pig 3sgNH-leap  
*tutu-muli au lo-lau.*  
 collide-rear 1sg **to-DIR**  
 'I leapt up into the middle of the seawards tree then the pig leapt and pounded at me (who was) seawards.'  
 (YM: Cl.26)

### 3.1.4 *Lo- directional without NP*

The fourth construction using a directional is one in which the clitic form of one of the 6 directionals may be cliticised to the allative *lo-* and used either to denote movement towards a goal or away from a source, or used to denote location where the directional is the only overt specification of the location. There are 64 occurrences of this construction, 50 of which denote movement towards a goal or movement from a source and 14 of which specify a location.

- a) **Movement.** The 50 examples of constructions in which a directional cliticised with *lo-* is used without a noun phrase to denote movement represent 24 per cent of the total use of directionals.

- (37) *Au lo-pai 'eu dana manane.*  
 1sg **to-DIR** go fetch food  
 'I go down there to fetch food.'  
 (YL: Cl.3)

b) **Location.** The 14 examples of constructions in which a directional cliticised with *lo-* is used to mark location, represent 7 per cent of the total use of directionals.

- (38) *(E)le('i) au kulu lo apale lo-lete.*  
 then 1sg crawl to pig **to-DIR**  
 'Then I crawled over to where the pig was up there.'  
 (YM: Cl.24)

### 3.1.5 Summary

The above sections have described 4 constructions in which spatial reference is marked with a directional. Two of these constructions contain a noun phrase which may precede or follow the directional. Two of the constructions contain the allative preposition *lo-* cliticised to the clitic form of a directional. Table 3 below summarises the relative frequency of the 4 constructions which contain a directional. This table indicates that 61 per cent of spatial reference with a directional is used to denote movement to a goal or from a source, and 39 per cent of spatial reference with a directional is used to denote location. The most commonly occurring constructions are a) the use of a directional with a noun phrase to denote location, and b) the use of a directional together with the allative, *lo-*, to denote movement.

**Table 3:** Summary of spatial reference constructions with a directional<sup>6</sup>

| Construction              | Movement |    | Location |    |
|---------------------------|----------|----|----------|----|
|                           | #        | %  | #        | %  |
| DIR with NP               | 36       | 17 | 59       | 28 |
| DIR without NP            | 19       | 9  | 6        | 3  |
| <i>lo</i> -DIR with NP    | 22       | 11 | 3        | 1  |
| <i>lo</i> -DIR without NP | 50       | 24 | 14       | 7  |
| <b>TOTAL</b>              | 127      | 61 | 82       | 39 |

### 3.2 Spatial reference denoted with the locative *mei*

Each of the four constructions containing the locative to denote spatial reference is described in §3.2.1–§3.2.4 below. The analysis of each construction is subdivided into two

<sup>6</sup> The abbreviations used in this table are as follows: DIR = directional; LOC = locative; with NP = noun phrase precedes or follows the spatial referent to denote the source or ultimate goal of movement, or location; w/out NP = no noun phrase precedes or follows the spatial referent; *lo-* indicates the use of the allative cliticised to a spatial referent.

categories which differentiate it functionally according to whether the construction is used to denote movement or location.

### 3.2.1 Locative with NP

The locative may be used together with a noun phrase to denote spatial reference. There are 57 occurrences of this construction, 50 of which specify a location and 7 of which denote movement towards a goal or movement from a source.

- a) **Movement.** The 7 examples of constructions in which the locative together with a noun phrase is used to denote movement represent 5 per cent of the total use of locatives.

(39) (E)i-keu, keu *mei kota*, keu *mei kota* (e)le('i) (e)i-sabe obit nurui.  
 3sgH-go go LOC city go LOC city then 3sgH-buy cloth length  
 'He went, went to the city, went to the city and he bought a length of cloth.'  
 (NK: Cl.80–82)

- b) **Location.** The 50 examples of constructions in which the locative together with a noun phrase is used to denote location represent 35.5 per cent of the total use of locatives.

(40) (E)i-due *mei mlinu* au *meje dua-'u*.  
 3sgH-stay LOC garden 1sg this alone-1sg  
 'He lived in the garden (and) I was here alone.'  
 (GT: Cl.30)

### 3.2.2 Locative without NP

The second construction using the locative is one in which the locative may be used either to denote movement towards a goal or away from a source with no overt specification of the goal or source, or to denote location where the locative is the only overt specification of location. There are 16 occurrences of this construction, all of which specify a location.

- a) **Movement.** The database revealed no examples of this construction. However, given the low occurrence of some other constructions, it is likely that an expanded database would yield examples of the locative without a noun phrase which denotes movement.
- b) **Location.** The 16 examples of constructions in which location is specified by the locative used without a noun phrase represent 11 per cent of the total use of locatives.

(41) Ontuane 'eu pusu *mlinu lalei meije, lua-si mei mo*.  
 old man go all garden inside this, two-3plH LOC NEG  
 'The old man went all over the field, (but) the two of them weren't there.'  
 (ATK: Cl.139–140)

### 3.2.3 Lo- locative with NP

The third construction using the locative is one in which the locative may be prefixed with the allative, *lo-*, either used to indicate movement towards or away from an overtly specified location, or used together with a noun phrase to denote location. This construction is the least common in the database with only 6 occurrences, 1 of which specifies a location and 5 of which denote movement towards a goal or movement from a source.

- a) **Movement.** The 5 examples of constructions in which the locative cliticised with *lo-* is used together with a noun phrase to denote movement represent 3.6 per cent of the total uses of the locative.

(42) *Ami leu sui'e lo-mei hena.*  
 1plExc return.home again **to-LOC** village  
 'We returned here to the village again.'  
 (HS: Cl.6)

- b) **Location.** The 1 example of a construction in which the locative cliticised with *lo-* is used together with a noun phrase to denote location represents 0.8 per cent of the total uses of locatives.

(43) *Dunu 'ena ole, (e)le('i) bu-bui-e lo-mei meja.*  
 cook in bamboo then REDUP-shake.out-Tr **to-LOC** table  
 'Cook it in bamboo then shake it out on the table.'  
 (AK: Cl.79–81)

### 3.2.4 Lo- locative without NP

The fourth construction using the locative is one in which the locative may be prefixed with *lo-* 'towards' and either used to indicate movement towards a goal or away from a source, or used to denote location where the locative is the only overt specification of the location. This is the most common spatial reference construction involving the locative, with 62 occurrences, 5 of which specify a location and 57 of which denote movement towards a goal or movement from a source.

- a) **Movement.** The 57 examples of constructions in which the locative cliticised with *lo-* is used without a noun phrase to denote movement represent 40.5 per cent of the total uses of locatives.

(44) *(E)si-leu lo-mei 'ane.*  
 3plH-return.home **to-LOC** eat  
 'They come back home to eat.'  
 (AK: Cl.51)

- b) **Location.** The 5 examples of constructions in which the locative cliticised with *lo-* is used to denote location represent 3.6 per cent of the total use of locatives.

(45) *(E)le('i) lua-'e lo-mei au lupu-'e hena toini.*  
 then arrive-Tr **to-LOC** 1sg gather-Tr village all  
 'Then once we had arrived here I gathered the village together.'  
 (MM: Cl.24)

### 3.2.5 Summary

The above sections have described 4 constructions in which spatial reference is marked with the locative *mei*. Two of these constructions contain a noun phrase. Two of the constructions contain the allative preposition, *lo-*, cliticised to the locative. Table 4 below summarises the relative frequency of the 4 constructions which contain the locative. This table indicates that 50.9 per cent of spatial reference with the locative is used to denote location, while 49.1 per cent of spatial reference with the locative is used to denote movement to a goal or from a source. The most commonly occurring constructions are a) the use of the locative together with the allative, *lo-*, to denote movement, and b) the use of the locative with a noun phrase to denote location.

**Table 4:** Summary of spatial reference constructions with the locative

| Construction              | Movement  |             | Location  |             |
|---------------------------|-----------|-------------|-----------|-------------|
|                           | #         | %           | #         | %           |
| LOC with NP               | 7         | 5.0         | 50        | 35.5        |
| LOC without NP            | 0         | 0           | 16        | 11.0        |
| <i>lo</i> -LOC with NP    | 5         | 3.6         | 1         | 0.8         |
| <i>lo</i> -LOC without NP | 57        | 40.5        | 5         | 3.6         |
| <b>TOTAL</b>              | <b>69</b> | <b>49.1</b> | <b>72</b> | <b>50.9</b> |

## 4 Discussion

Section 2 delineated the four zones into which the Alune world is conceptually divided according to the system of spatial reference. We noted that spatial reference in zone 1, local space, is specified by use of a set of 6 directionals, a locative, allative, ablative, and a deictic. In contrast, in each of zones 2–4, that is, the zones which move further away from ego's daily experience, only 1 directional is used for spatial reference (along with the locative, allative, ablative, and deictic). Section 2 also noted that folk-linguistic descriptions of the spatial reference system proscribe co-occurrence of a noun phrase in constructions with the allative *lo-*.

Several interesting features requiring further analysis emerged from §3. First, 8 syntactic constructions involving spatial referents (the set of directionals and the locative) were found in the database of 31 adult texts. The relative frequencies of these constructions were summarised in Tables 3 and 4. A comparison of these tables reveals a pattern in which the most common usage for both locatives and directionals is

- (i) the marking of location through use of a spatial referent (locative or directional) with a noun phrase; and
- (ii) the marking of movement through use of the allative together with the locative or the clitic form of a directional and without a noun phrase.

The data appear to separate functionally into two groups which are differentiated according to whether the speaker's focus is on the path of movement itself or on a specific location. If the focus is on path of movement itself, the speaker most commonly uses the following syntactic construction: the allative cliticised to the locative or the clitic form of a directional,

and with or without a noun phrase. If the focus is on location, the speaker's choice varies according to whether s/he is interested within the narrative in movement to or from a specific location, or is interested in focusing on the location itself. Movement to or from a specific location is most commonly marked by the use of a directional, with or without a noun phrase. Focus on the location itself is most commonly marked by use of the locative with or without a noun phrase, but may also be marked by use of a directional—also with or without a noun phrase. An issue which arises from these observations and which will be examined further in this section is:

- What motivates the presence or absence of a noun phrase in spatial reference constructions?

Second, contrary to prescriptive folk-linguistic descriptions, 20 per cent of the spatial reference constructions with the allative, *lo-*, co-occur with a noun phrase. In this section we further examine the data to ask:

- Under what conditions does the allative, *lo-*, co-occur with a noun phrase?

Third, while we might predict that directionals are used to denote movement in space, 39 per cent of all directionals are used to mark location. Similarly, while we might predict that the locative is used to denote location, 49 per cent of all locatives are used to mark movement. This is perhaps the most intriguing feature to emerge from the analysis of spatial reference in Alune. In this section we further examine the data to analyse two questions which thus arise:

- Is there a discourse-functional motivation for the signifying of location with a directional or the allative?
- Is there a discourse-functional motivation for the signifying of movement with the locative?

## 4.1 Noun phrases

This section addresses two questions concerning the use of noun phrases in spatial reference.

- Under what conditions does the allative, *lo-*, co-occur with a noun phrase?
- What motivates the presence or absence of a noun phrase in spatial reference constructions?

### 4.1.1 Noun phrases in spatial reference with an allative

Analysis of the discourse data in §3 indicated that the allative, *lo-*, may be cliticised to a directional (cf. §3.1.3 and §3.1.4) or to the locative (cf. §3.2.3 and §3.2.4). Our analysis reveals two findings concerning the function of constructions containing the allative. First, the primary function of these constructions is to signify movement rather than location: 85 per cent of the 157 occurrences of the allative in spatial reference (134 tokens) are used for this function. Second, constructions containing the allative are clearly speakers' preferred means of marking movement. Statistical analysis of the database reveals that the 134 occurrences of the allative represent 68.4 per cent of the total 196 spatial referents signifying movement.

Movement is secondarily marked using a directional (28 per cent) or, in very few cases, with use of the locative (3.6 per cent).

Of the 157 allative constructions 80 per cent comply with the proscription against co-occurrence with a noun phrase (126 tokens). Analysis of the data indicates that these constructions most commonly occur where the source or goal location of the movement has been contextualised earlier in the discourse. The following two consecutive clauses in a narrative illustrate this point.

- (46) *Au 'ai Anto lua-ma 'eu lo' 'wele-re mpe 'weune.*  
 1sg and Anto two-1plExc go to water-DET DIR valley  
 'Anto and I, the two of us went down to the river in the valley.'  
 (ES: Cl.32)

- (47) *'Eu lo-pe hnata 'wele 'ena depa ole.*  
 go to-DIR collect.in.receptacle water in cut bamboo  
 'We went down there to cut some bamboo in which to collect water.'  
 (ES: Cl.33)

The goal location of the movement is specified in example (46) in a construction with a directional, *mpe*, followed by a noun phrase, *'weune*. In the following clause the speaker then focuses on the purpose for movement rather than the goal location of the movement by using a construction with the allative cliticised to the clitic form of the appropriate directional, *-pe*. Given the previous contextualisation of the goal, there is no need for the speaker to include a noun phrase following the spatial referent.

In cases in which context cannot be retrieved from the preceding discourse, the speaker most often contextualises the source or goal of the movement in the same or the following clause by using a directional together with a noun phrase. This is exemplified in example (48) below in which the speaker immediately corrects to contextualise the location.

- (48) *Ami dulu lo-pe mpe Tani'we.*  
 1plExc descend to-DIR DIR Taniwel  
 'We went down there down to Taniwel.'  
 (MM: Cl.9)

Where the source or goal of movement remains unclarified within the text, it is always retrievable from shared knowledge between the speaker and hearer. In the following example the speaker was describing her daily activities which included going to fetch food for her children. In the setting of an isolated Alune village, this activity can only mean going to fetch vegetables from her garden, the location of which is known to all villagers.

- (49) *Au lo-pai 'eu dana manane.*  
 1sg to-DIR go fetch food  
 'I go down there to fetch food.'  
 (YL: Cl.3)

The 31 cases in which a noun phrase does co-occur with the allative plus a directional or the locative require further examination. Of these constructions 27 denote movement and the remaining 4 denote location. Our analysis of this construction indicates that in each case the noun phrase provides context which is not clear in the narrative.

- (50) (E)si-siba soli' lo-ra 'ota Liline.  
 3plH-advance persist to-**DIR** city Riring  
 'They kept on going over there to Riring.'  
 (MM: Cl.18)

In example (50) above, the narrator is discussing an historical incident involving a war between villages. When the conflict had been resolved, the soldiers continued on their way towards the neighbouring village of Riring. The speaker indicated the direction of their travels with the allative construction, but immediately clarified the goal location with the addition of a noun phrase. Clarification of the goal location also occurs in example (51) below, in which movement is indicated by the allative plus the locative.

- (51) Ami leu sui'e lo-mei hena.  
 1plExc return.home again to-**LOC** village  
 'We returned here to the village again.'  
 (HS: Cl.6)

In cases in which location is specified by the use of the locative or a directional cliticised with *lo-* and used together with a noun phrase, such as in examples (52) and (53) below, we see the same process of clarification.

- (52) Latlakeari (e)si-asu-ru sali bei mlete Boluta, lo-pe Kputi lalei.  
 Laturake 3plHGenAl-dog-PL bark from **DIR** Bolutu to-**DIR** Kputi inside  
 'The people from Laturake, their dogs were barking up at Boluta, over inland of Kputi.'  
 (YM: Cl.17–18)
- (53) Dunu 'ena ole, (e)le('i) bu-bui-e lo-mei meja.  
 cook in bamboo then REDUP-shake.out-Tr to-**LOC** table  
 'Cook it in bamboo then shake it out on the table.'  
 (AK: Cl.79–81)

#### 4.1.2 Noun phrases in spatial reference without an allative

In contrast with allative constructions in which noun phrases are uncommon, noun phrases are commonly found in spatial reference constructions which do not contain an allative. A noun phrase precedes or follows a directional in 79 per cent of the 120 spatial reference constructions in which a directional is used to signify movement or location (95 tokens). A noun phrase also occurs following a locative in 78 per cent of the seventy-three spatial reference constructions in which a locative is used to signify movement or location (57 tokens). These constructions are differentiated both syntactically and functionally.

Syntactically, directionals which occur with a noun phrase function as prepositions, while those without a noun phrase function as nominals. In constructions without noun phrases, the goal location or source location of the movement is clear from the earlier context or is clarified in the same or a closely following clause. The process of contextualisation is exemplified in the following clauses drawn from a conversation between two men.

- (54) MK: Ntulu mlau lalane 'lai, ninu.  
 sleep **DIR** road middle garden  
 '(We) slept seawards along the road, in a garden.'

[seven intervening clauses]

- (55) WM: *Ho'o pi 'ena pina'e meije pine imi bei mlau mo-yo?*  
 therefore or when early.morning this before 2pl from DIR NEG-Q  
 'So probably it was early this morning when you all (came) from seawards,  
 wasn't it?'  
 (56) MK: *Pina' beleti ami bei mlau mlinu.*  
 early.morning morning 1plExc from DIR garden  
 'It was early this morning when we (came) from the seawards garden.'  
 (MK: Cl.21–31)

The directional used in the question in example (55) above functions as a nominal following the ablative preposition. The source location of the movement is not specified, however the speaker does focus on the source direction of the movement through the context provided 8 clauses earlier by a directional together with a noun phrase. The location was again specified by the respondent in example (56).

The use of a definite article {-*re*, -*je*} suffixed to a directional indicates that the speaker considers the source of movement to be contextualised. The following excerpt from a conversation between two men illustrates this point.

- (57) YM: *Ami leu bei mpe Tani'wele.*  
 1plExc return.home from DIR Taniwel  
 'We were coming home from Taniwel.'

[2 intervening clauses]

- (58) YM: *Ami 'eu a-beli cengkeh mpe Tani'we.*  
 1plExc go CAUS-sell clove DIR Taniwel  
 'We went to Taniwel to sell clove.'  
 (59) WM: *(E)le('i) imi leu bei mpe-re imi pusu-mi sui*  
 then 2pl return.home from DIR-DET 2pl all-2pl chase  
*asu-re pi-be batu ale dua-mu-o?*  
 dog-DET or-COMP only 2sg alone-2sg-Q  
 'Then when you all were coming home from down there did all of you follow  
 the dogs or only you?'  
 (YM: Cl.8–12)

The two men were discussing an incident in which one of them, YM, had been injured during a pig hunt. Early in the narrative YM introduced the specific location from which he was returning when he and his companions encountered the pig. He used the directional, *mpe*, as a preposition, which is followed by the noun *Taniwel* to denote the location of Taniwel in local space. Given this contextualisation, WM was able to use a structure in which the directional is a nominal suffixed with a determiner, -*re*, and follows the ablative preposition *bei*. This example highlights the function of constructions consisting of a directional without a noun phrase: they serve to focus on the direction of the action rather than the source location.

Database examples of the construction in which a directional denotes location without a noun phrase to overtly specify the location were analysed. This also reveals that in each case

the context had been specified in the previous clause or was further specified by a noun phrase in the following clause.

- (60) (E)*i-mlete mlinu, mlete bata.*  
 3sgH-DIR garden DIR weed  
 'She was up in the garden, up there weeding.'  
 (ES: Cl.65–66)

In example (60) above, the speaker first denoted the specific location with a noun phrase, which then enabled her to omit the noun phrase in the following clause and focus on the direction of the second participant in the narrative relative to the speaker. In example (61) below, the speaker omitted a noun phrase in the first clause and then corrected to provide the necessary context in the following clause.

- (61) *Bete be(he) luma meije mlesa mpai,*  
 say COMP house this comparable.with DIR  
 'It's said that compared to those over there,  
 (JS: Cl.12)  
*mlesa 'aiye mpai hena-ru.*  
 comparable.with DIR village-PL  
 compared with those over in the village.'  
 (JS: Cl.13)

In a very few cases (5 per cent of all occurrences of the locative) the locative is used together with a noun phrase to denote movement towards a goal or away from a source. These examples represent innovative use of the locative and will be discussed in greater detail in §5. Syntactically, the locative functions as a preposition and the following noun phrase is used to introduce new information into the discourse context as exemplified in example (62) below.

- (62) (E)*i-keu, keu mei kota, keu mei kota (e)le('i) (e)i-sabe obit nurui.*  
 3sgH-go go LOC city go LOC city then 3sgH-buy cloth length  
 'He went, went to the city, went to the city and he bought a length of cloth.'  
 (NK: Cl.80–82)

In cases in which a locative is used without a noun phrase, the locative functions as an existential.

- (63) *Ontuane 'eu pusu mlinu lalei meije, lua-si mei mo.*  
 old.man go all garden inside this two-3plH LOC NEG  
 'The old man went all over the field, the two of them weren't there.'  
 (ATK: Cl.139–140)

#### 4.1.3 Summary

In this section we have examined the factors which condition the presence or absence of a noun phrase in spatial reference. Further analysis of the data has found that 80 per cent of the allative constructions comply with the proscription against co-occurrence with a noun phrase. An interesting contrast is provided by analysis of the 193 directional and locative constructions which do not contain an allative. Of the 120 directional constructions 79 per

cent co-occur with a noun phrase and 78 per cent of the 73 locative constructions co-occur with a noun phrase. This finding is summarised in Table 5 below.

**Table 5:** Summary of the use of NPs in constructions without an allative

|              | with NP | without NP | Total |
|--------------|---------|------------|-------|
| DIR          | 95      | 25         | 120   |
| LOC          | 57      | 16         | 73    |
| <b>TOTAL</b> | 152     | 41         | 193   |

The analysis has revealed that both syntactic and discourse-functional factors motivate the presence of a noun phrase. The primary function of allative constructions is to focus either on the path of movement or the purpose for the movement. A noun phrase is only added in order to provide clarification where the source location or the goal location of the movement has not been made clear earlier in the discourse. Spatial reference constructions with a directional and without an allative differ both syntactically and functionally. In constructions with a noun phrase plus a directional, the directional functions syntactically as a preposition, while in those constructions without a noun phrase the directional functions as a nominal and may be suffixed with a determiner. The function of such constructions with a noun phrase is to focus on the source or goal location. In contrast, a directional without a noun phrase serves to focus on the direction of the action rather than the source location.

## 4.2 Location

The database of 350 spatial referents yielded 154 examples in which the spatial referent signified location. Location is marked syntactically in four ways: with the allative plus a directional or the locative, with a directional, or with the locative. Table 6 below summarises the relative frequency of use for the four constructions.

**Table 6:** Relative frequency of spatial reference constructions signifying location

| Construction               | #   | %     |
|----------------------------|-----|-------|
| allative ( <i>lo</i> -LOC) | 6   | 4.0   |
| allative ( <i>lo</i> -DIR) | 17  | 11.0  |
| directional (DIR)          | 65  | 42.2  |
| locative (LOC)             | 66  | 42.8  |
| <b>TOTAL</b>               | 154 | 100.0 |

The marking of location with a locative (LOC or *lo*-LOC) is considered uncontroversial and is not further analysed here. However, given the high frequency of usage of spatial reference constructions other than the locative in denoting location, this section addresses the following question: What motivates the signifying of location with an allative (*lo*-DIR) or a directional (DIR)?

#### 4.2.1 Allative plus directional (Lo-DIR) marking location

In §2.4 above it was noted that the preposition, *lo-*, may be cliticised to the locative, *mei* (*lo-LOC*), or to one of the directionals (*lo-DIR*). In each case, the primary function of these constructions is to denote a path of movement. However, analysis of the discourse data indicates that 15 per cent of allative constructions mark location. Functionally, these constructions are used primarily in situations in which a contrast is drawn between the location of the speaker and the location of another key participant in the narrative. The use of an allative construction (rather than the locative) to mark location of a participant other than the speaker indicates the path of movement which the speaker would need to take to reach that location. In example (38), repeated below, the narrator was focusing on the location of the pig, which was upward (*lo-lete*) from him.

- (38) (E)le('i) au kulu lo apale lo-lete.  
           then 1sg crawl to pig to-DIR  
           'Then I crawled over to where the pig was up there.'  
           (YM: Cl.24)

Similarly, in example (35), repeated below, dogs were barking at a location downward (*lo-pe*) and inland (*lalei*) from the narrator.

- (35) Latlakeari (e)si-asu-ru Sali bei mlete Boluta, lo-pe Kputi lalei.  
       Laturake 3plHGenAI-dog-PL bark from DIR Boluta to-DIR Kputi inside  
       'The people from Laturake, their dogs were barking up at Boluta, over inland  
       of Kputi.'  
       (YM: Cl.17–18)

#### 4.2.2 Directionals marking location

As noted in Table 6 above, 42.2 per cent of all (non-allative) constructions signifying location do so with a directional. Analysis of these cases reveals that there are two functions for these constructions. The first function is the use of directionals to specify more accurately a location.

- (64) Au pala kwabi mlau ninu.  
       1sg bake cassava DIR garden  
       'I baked cassava in the seaward garden.'  
       (ES2: Cl.4)

In example (64) above, the function of the directional, *mlau*, is to specify clearly the location of the speaker's garden. This is a similar spatial reference to an English sentence such as 'I bought some new plants for the garden on the west side of our house'.

The second function of a construction employing a directional to mark a location is its role in contrasting the location of participants in a narrative and thus, in some cases, disambiguating the participants. This function is best illustrated by example (30), repeated below. This example, drawn from *Tuni tepete* 'Folktale about water rose apples', tells of the adventures of two young boys who ran away from home. At one point in the narrative the older brother climbed a tree to pick some water rose apples and dropped them down to his younger brother who waited beneath the tree. A pig came along and ate the younger brother's

fruit. In example (30) the speaker contrasts the location of two brothers in the narrative and in the second clause disambiguates the younger brother as ‘the downward brother’.

- (30) *apale 'ane bei-ni 'wali-ni tone mpe*  
 pig eat from-3sgH same.sex.sibling-3sgHGenInal small DIR  
*'ue-re, (e)le('i) (e)i-mpe-re (e)i-ombe...*  
 1sg.own-DET then 3sgH-DIR-DET 3sgH-say  
 ‘The pig ate that owned by the younger brother down there, then he down  
 there said...’  
 (ATK: Cl.45–46)

The frequency of marking location with directionals emphasises the important disambiguating or clarifying role of spatial reference.

#### 4.2.3 Summary

In this section we have asserted that it is predictable that the function of the locative is to denote location and we have turned our attention to the more interesting issue concerning the signifying of location with an allative (*lo*-DIR) or a directional (DIR). The analysis indicates that an allative cliticised to a directional functions to mark location when a contrast is drawn between the location of the speaker and that of another key participant in the narrative. The allative then indicates the path of movement which the speaker would need to take to reach that location. Directionals fill two functions in signifying location: first, a directional specifies more clearly a key location in a narrative, and second, a directional serves to contrast or disambiguate the relative locations of two participants in a narrative.

### 4.3 Movement

The database of 350 spatial referents yielded 196 examples in which the spatial referent signified movement. Movement is marked syntactically in four ways: with a directional, with the allative plus a directional or the locative, or with the locative. Table 7 below summarises the relative frequency of use for the four constructions.

**Table 7:** Relative frequency of spatial reference constructions signifying movement

| Construction               | #   | %     |
|----------------------------|-----|-------|
| locative (LOC)             | 7   | 3.6   |
| directional (DIR)          | 55  | 28.0  |
| allative ( <i>lo</i> -LOC) | 62  | 31.6  |
| allative ( <i>lo</i> -DIR) | 72  | 36.8  |
| <b>TOTAL</b>               | 196 | 100.0 |

The marking of movement with the allative (*lo*-DIR) or with a directional (DIR) is considered uncontroversial and is not further analysed here. However, the total frequency of usage of the locative (LOC or *lo*-LOC) in denoting movement (35.2 per cent of all spatial

reference denoting movement) requires explanation. This section addresses the following question: What motivates the signifying of movement with the locative?

#### 4.3.1 Allative plus locative (Lo-LOC) marking movement

The constructions which consist of the allative cliticised to the locative, *mei* (lo-LOC), function to denote movement towards the narrator's location—either his or her location at the time of narrating the story, or a specific location at a particular point in the action of the narrative. The clauses in examples (65)–(67) below are drawn from a conversation between two men who were discussing an incident in which one of them, YM, had been injured during a pig hunt. The conversation took place in YM's house in the village. However, clauses (65) and (66) show that the speaker's use of *lo-mei* 'to here' does not indicate movement towards his location at the time of narrating the story but rather movement towards a specific location at a particular point in the action of the narrative.

- (65) *Ami leu lulu Kputi lalei bei mlau lo-mei,*  
 1plExc return.home follow Kputi inside from DIR to-LOC  
 'We were returning following along inland of Kputi from seaward to here,'
- (66) *lo-mei 'ena lo-lete Bolu 'weli-(n)i,*  
 to-LOC towards to-DIR Boluta river-3sgHGenInal  
 'to here up to the river Boluta,'
- (67) *ami lene lo-ri teba yo.*  
 1plExc hear to-DIR other.side DM  
 'when we heard (something) on the other side.'  
 (YM: Cl.14–16)

#### 4.3.2 Locative marking movement

The most controversial body of data concerns the small number of constructions from the discourse database in which the locative, *mei*, is used without an allative to denote movement. In order to expand the database for analysis of the functions of this construction, test data is also included. Testing of Alune language proficiency was undertaken with 105 adult respondents in the three research sites. This was done to provide standardised data which would allow comparisons to be drawn between different locations of syntactic changes which are occurring as part of the process of language shift from Alune to Malay.<sup>7</sup> The adult test consisted of 100 test sentences which were designed to elicit a number of Alune morph-syntactic structures. Test sentences were constructed in Ambonese Malay and respondents were asked to translate the sentences into Alune. Of the sentences 23 contained a spatial reference,<sup>8</sup> yielding a total of 2520 sentences for analysis. In the test data the use of the locative to mark movement is more striking, with an average frequency of 17 per cent of spatial referents used to mark movement. We draw on both test data and discourse data in proposing two explanations for this usage.

<sup>7</sup> A more complete discussion of the test methodology and results is provided in Florey (1997).

<sup>8</sup> The test sentences with a spatial reference are provided in Appendix 1.

Using evidence from the discourse data, we first hypothesise that the function of *mei* is to denote movement in contexts in which the path of movement between two locations is unknown. A folktale in the database (Lisona) involves a young girl who was taken to the mountains by her uncle and held captive in a tree house. Her mother was at home in the village, and her brother travelled several times between the mountains and the village attempting to free her. The brother also travelled to the city to purchase items needed to free her, and the entire family later moved to the city. In this folktale all locations are fictional, unnamed, and unspecified, and the path of movement between any two locations is therefore also unknown. The narrator uses *mei* to mark movement where the source location and the goal location are unknown.

- (68) (E)i-leu                      bei-(n)i      *mei*    hena.  
          3sgH-return.home from-3sgH LOC village  
          ‘He left her and went home to the village.’  
          (NK: Cl.24)
- (69) (E)i-keu    *mei*    kota (e)le(’i) (e)i-sabe    obit    nurui.  
          3sgH-go    LOC city then      3sgH-buy    cloth    length  
          ‘He went to the city and he bought a length of cloth.’  
          (NK: Cl.82)
- (70) Lua-si    leu,                      leu                      *mei*    hena.  
          two-3plH return.home return.home LOC village  
          ‘The two of them returned home, returned home to the village.’  
          (NK: Cl.130–131)

In order to investigate this hypothesis further, we analysed the use of locatives to mark movement towards a specified goal in the test sentences which respondents were asked to translate. Seven of the test sentences named a specific village as the goal, 5 of the test sentences named a geographical landmark in local space (river, mountains, forest, treetop), and 5 of the test sentences designated the garden as the goal. As indicated in Table 8 below, the results for each village show a clear contrast in usage of spatial referent between the garden and all other locations as the ultimate destination.

**Table 8:** Spatial referent indicating movement analysed by spatial type of ultimate destination

|                     | DIR | LOC |
|---------------------|-----|-----|
| a) Lohiasapalewa    | %   | %   |
| garden              | 26  | 63  |
| all other locations | 74  | 37  |
| b) Murnaten         |     |     |
| garden              | 20  | 64  |
| all other locations | 80  | 36  |
| c) Lohiatala        |     |     |
| garden              | 26  | 100 |
| all other locations | 74  | 0   |

There is only one directional which is appropriate for each location in the test sentences other than those specifying the garden as the ultimate location. The river is downward, *mpe*,

while the mountains, forest, and treetop are upward, *mlete*. There is one appropriate directional for Ambon and each of the villages named in the test questions. In contrast, gardens are located in all directions from the village settlement site, thus rendering all six directionals possible responses to the five test items which named the garden as the ultimate destination. The respondents were not guided regarding the location of the garden in the test sentence. Each respondent could choose to interpret the question as meaning the direction of his or her own garden in the village territory, or the direction of a fictional or an unspecified garden. The choice of *mei* by the majority of test respondents in Lohiasapalewa and Murnaten, and categorically by respondents in Lohiatata may lend support to the hypothesis that *mei* functions to mark movement to a site where the location of that site is not known to the speaker. However, a second explanation is also feasible.

Written records and the history transmitted through oral traditions, indicate that, in the era prior to more constant contact with colonial and postcolonial authorities, the Alune people dwelled in extended family groups in small hamlets in the mountainous rainforest interior of west Seram. Villagers combined hunting and the harvesting of noncultivated forest products with the extraction of sago starch and the cultivation of rice, roots, tubers, and vegetable crops in swidden fields. The village of Lohiasapalewa occupies the most extensive tract of land within the Alune region. The hamlets, each consisting of perhaps two or three dwellings, were therefore dispersed over a distance of several kilometres from each other. Contact with members of other hamlets was irregular, occurring while hunting or moving to distant sago stands in the forest, or on occasions of ritual importance such as the celebration of a marriage or the payment of bridewealth. Knowledge of the daily lives of people in other hamlets was, therefore, limited. For example, members of one hamlet may not have known in which part of the forest another family was making a new garden, or in which direction a group of men had gone hunting boar. In this context, an elaborate directional system was an important means of conveying such information.

In the contemporary era, each Alune village is established in a nucleated settlement site within its territory. Land close to the village residential area is becoming scarce and gardens may be located up to 5 or 6 kilometres through the rainforest from the village. Most villagers, particularly those with children attending primary school, return to their home each evening. Some villagers may remain in the gardens for several days at a time, dwelling in simple shelters. All villagers, however, return to the village by Saturday afternoon in order to participate in religious services on Saturday evening and throughout Sunday. In this context, communication between villagers is much more frequent. In the evenings and in the relaxed atmosphere which characterises Sundays in the village, people visit their neighbours and chat about daily activities and village events. Everyone, from the youngest to the oldest, knows where people are working—in which part of the forest men are processing sago, where the gardens are located, which spring is flowing and being used as a laundry site, who is harvesting cacao or clove in which orchard, and so forth. Greater ease and frequency of communication and the resulting increase in shared knowledge in the community provides an equally plausible explanation for the use of locatives to mark movement.

Finally, we propose that superstrate influence from Ambonese Malay on Alune may explain the usage of *mei* to mark movement in Alune. In contrast with both Standard Malay and with Alune, Ambonese Malay does not have a prepositional contrast between locative and allative. The locative, *di*, is used in both functions. This convention appears to parallel some of the uses of *mei* in Alune.

- (71) *Beta pi di pasar.*  
 1sg go ALL market  
 'I'm going to the market.'
- (72) *Katong tinggal di kabong tadi malang.*  
 1pl stay LOC garden previous night  
 'We stayed in the garden last night.'

### 4.3.3 Summary

In this section we have asserted that it is predictable that the function of a directional is to denote movement and we have turned our attention to the more interesting issue concerning the signifying of movement with the locative (*lo*-LOC or LOC). The analysis indicates that an allative cliticised to a locative functions to denote movement towards the narrator's location—either his or her location at the time of narrating the story, or the narrator's specific location at a particular point in the action of the narrative.

The issue of the signifying of movement with the locative without an allative has been addressed using both discourse data and the results of language testing. We proposed two functional explanations for this usage. First, we asserted that the function of these constructions is to denote movement in contexts in which the path of movement between two locations is unknown. Data from test sentences with spatial references appears to support this assertion, particularly concerning the location of gardens, which varies widely throughout village territory. Second, we suggested that the use of locative to mark movement towards certain locations may have arisen through social change in the village. Villagers now dwell in one nucleated settlement site, rather than in small extended family hamlets throughout the village territory. The resulting greater ease and frequency of communication has led to an increase in shared knowledge in the community. Thus, it is less necessary for villagers to use a directional to specify clearly the direction of movement towards sites which they regularly visit, such as gardens, as the locations of such sites are known to all villagers. Finally, we proposed that the use of the locative to mark movement may reflect superstrate influence from Ambonese Malay.

## 5 Conclusion

This paper has examined spatial reference among the Alune of central Seram, eastern Indonesia. Certain key issues have emerged from the analysis. Conceptually, the Alune system of spatial reference divides the world into 4 spatial zones which increase in distance from the daily experience of the speaker. Six directionals are used to denote spatial reference in zone 1, while only 1 directional is used to denote spatial reference in each of zones 2–4. The system of spatial reference also includes a locative, allative, ablative, and a deictic.

Spatial reference in Alune discourse is denoted through the use of 8 syntactic constructions. Discourse-functional factors were sought to explain the range of syntactic constructions. Four features differentiate the 8 constructions: whether the spatial referent is a directional or the locative; whether or not a noun phrase co-occurs with the spatial referent; whether the allative preposition co-occurs with a spatial referent; whether a spatial referent is used to denote movement or location.

Noun phrases co-occur with a spatial referent to provide context which is not clear in the narrative by contextualising or clarifying a specific location. A noun phrase is also used to denote a location in situations in which the speaker intends to focus on the location rather than path of movement from or to the location.

Our analysis of the function of an allative (*lo*-DIR) or a directional (DIR) to mark location showed that the former is used to mark location when a contrast is drawn between the location of the speaker and that of another key participant in the narrative. The latter construction fills two functions in signifying location: first, a directional specifies more clearly a key location in a narrative, and second, a directional serves to contrast or disambiguate the relative locations of two participants in a narrative.

Finally, we analysed the function of the locative (*lo*-LOC or LOC) in signifying movement rather than location. The analysis indicates that an allative cliticised to a locative functions to denote movement towards the narrator's location—either his or her location at the time of narrating the story, or the narrator's specific location at a particular point in the action of the narrative. We proposed two functional explanations for the use of the locative without an allative to denote movement. First, we asserted that the function of these constructions is to denote movement in contexts in which the path of movement between two locations is unknown. Second, we suggested that the use of locative to mark movement towards certain locations may have arisen through greater ease; and frequency of communication has led to an increase in shared knowledge in the community which has resulted from social change in the village.

The analysis in this paper has been based principally on discourse data, and a number of significant issues concerning the use of terms of spatial reference have emerged. It is reasonable to consider that the kind of phenomena which we have noted for Alune could also occur in other Austronesian languages. Our analysis leads us to suggest that the absence of discussion of these issues may be an outcome of the methodologies used. Descriptions of spatial reference based largely on elicited data or responses given in tests or experimental situations may be closer to a model of idealised usage than models which actually occur in discourse. Such data may conceal the full range of syntactic constructions and discourse functions associated with spatial reference.

## Appendix 1: Ambonese Malay test sentences containing spatial reference

| S# | Ambonese Malay elicitation sentence            | English translation                          |
|----|------------------------------------------------|----------------------------------------------|
| 3  | <i>Beta seng pi di Ambon.</i>                  | 'I didn't go to Ambon.'                      |
| 4  | <i>Apa tempo katong pi di Ambon?</i>           | 'When are we going to Ambon?'                |
| 6  | <i>Beta pigi di kabong</i>                     | 'I went to the garden.'                      |
| 16 | <i>Dia pi di kali (air)</i>                    | 'S/he went to the river (water).'            |
| 26 | <i>Besok katong pi di Ambon</i>                | 'Tomorrow we're going to Ambon.'             |
| 38 | <i>Ose kasi turung akang dari ujung pohong</i> | '(You) lower that from the top of the tree.' |
| 39 | <i>Ata dan Epi pi di kabong</i>                | 'Ata and Epi went to the garden.'            |

|           |                                               |                                                      |
|-----------|-----------------------------------------------|------------------------------------------------------|
| 46        | <i>Pagi-pagi katong turung dari hutang</i>    | 'Early in the morning we came down from the forest.' |
| 48        | <i>Beta kasi naik dia di ujung pohong</i>     | 'I raised him to the top of the tree.'               |
| 49        | <i>Beta pigi di gunung dan lihat babi</i>     | 'I went to the mountains and saw a pig.'             |
| 60        | <i>Beta su lama tinggal di sini</i>           | 'I've lived here a long time.'                       |
| 66        | <i>Dong seng ada di ruma</i>                  | 'They're not at the house.'                          |
| 76 (LS)   | <i>Dia pulang dari Buria</i>                  | 'S/he came home from Buria.'                         |
| 76 (LT)   | <i>Dia pulang dari kampung lama</i>           | 'S/he came home from the old village.'               |
| 76 (Mrtn) | <i>Dia pulang dari Taniwel</i>                | 'S/he came home from Taniwel.'                       |
| 79        | <i>Beta biking bakal untuk bawa di kabong</i> | 'I made a picnic to take to the garden.'             |
| 80        | <i>Ada ikang banyak di sana</i>               | 'There's a lot of fish there.'                       |
| 85        | <i>Dong balong pi di kabong</i>               | 'They haven't gone to the garden yet.'               |
| 86 (LS)   | <i>Dong pi di Manusa</i>                      | 'They went to Manusa.'                               |
| 86 (LT)   | <i>Dong pi di Kairatu</i>                     | 'They went to Kairatu.'                              |
| 86 (Mrtn) | <i>Dong pi di kali Pana</i>                   | 'They went to the river Pana.'                       |
| 89 (LS)   | <i>Beta pi di Taniwel untuk jual pisang</i>   | 'I went to Taniwel to sell bananas.'                 |
| 89 (LT)   | <i>Beta pi di Waihatu untuk jual pisang</i>   | 'I went to Waihatu to sell bananas.'                 |
| 89 (Mrtn) | <i>Beta pi di pasar untuk jual pisang</i>     | 'I went to the market to sell bananas.'              |
| 90        | <i>Kasi turung barang di sini</i>             | 'Put the things down here.'                          |
| 96 (LS)   | <i>Dong pi di Riring</i>                      | 'They went to Riring.'                               |
| 96 (LT)   | <i>Dong pi di Kamal</i>                       | 'They went to Kamal.'                                |
| 96 (Mrtn) | <i>Dong pi di kampung lama</i>                | 'They went to the old village.'                      |
| 99        | <i>Beta pi di kabong untuk tanam kasbi</i>    | 'I went to the garden to plant cassava.'             |
| 100       | <i>Dong su pinda di sana</i>                  | 'They've already moved there.'                       |

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