Deixis in Borneo: Kenyah and Punan[1]

Antonia Soriente – University of Naples "L'Orientale"

asoriente@unior.it

SUMMARY

This paper presents a description of spatial and temporal deictics in three languages of North-Eastern Borneo: Lebu' Kulit and Òma Lóngh Kenyah and Punan Tuvu'[2]. Comparison of the form and function of deictic markers in these languages reveals a complex pattern of similarities and divergences. The deictics in these languages are described in their use to localize the speech event and its participants in space and time. Then the relationship between demonstratives and other deictics is observed and so is the encoding of location in the context of the environment. In addition to describing the synchronic properties of deictic markers, the processes whereby deictic markers grammaticalized in these varieties are observed.

Keywords: *Austronesian languages, demonstratives, Kalimantan, location, environment, grammaticalization.*

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1. Introduction: Deixis in the Austronesian world

Before proceeding with a description of deixis in some of the languages of Borneo, I would like to provide a general overview of deixis in the Austronesian world. Although for a language family as vast as Austronesian, it would be difficult to give anything more than a sketchy overview of deixis, it will be useful to make some general observations about Austronesian to set the stage for a discussion of languages in Borneo. The problem of reference to space and location in the Austronesian world has become the object of study for scholars like Senft (1997), Bennardo (2002), and Ross and Osmond (2003). Moreover, the work of Himmelmann (1996, 2005) and Blust (2009) provide some of the broad, typological studies of deixis in Austronesian. Blust (2009: 305) in particular distinguishes between systems of micro-orientation, and macro-orientation. The first system includes the spatial and temporal location of referents in relation to the speaker, and the location of referents in relation to their surroundings (above, below, inside, outside, etc.). The macro-orientation system includes directional systems used to orient oneself within the wider physical environment.

Himmelmann (2005) and Blust (2009) report that Austronesian languages differ considerably in terms of the types of deictic systems they employ. The languages they

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[2] Punan Tuvu' is the ethnonym speakers use to refer to themselves and to their language when they talk among themselves. Nevertheless in the literature these people are referred to with the exonym Punan Tubu (see for instance Césard 2009 and Sercombe and Sellato 2007, Soriente 2013), mostly used by other groups when they talk of the Tubu river and of the Punan Tuvu' people. In this paper I prefer to use the endonym Tuvu'.

discuss show variation along several parameters. To give the reader a better sense of this variation, a few of the most salient characteristics of Austronesian deixis warrant mentioning. First, in many of these languages degrees of distance from the deictic reference point plays an important role in deixis. Attested systems include those, which distinguish two degrees (proximal and distal), three degrees (proximal, distal and medial)[3]. There are also more elaborate cases, where four or more degrees are distinguished (for example Malagasy, where seven degrees are distinguished). The visibility or non-visibility of the deictic referent often plays a role in such elaborate systems. Secondly, there are several salient characteristics with regard to pronominal deixis. Austronesian languages often distinguish inclusive vs. exclusive first person plural pronouns, and in some cases distinguish dual, trial, paucal and plural number. Politeness often affects the choice between pronoun and full NP for first and second person (relationship e.g. 'father/mother', expressing a name 'Ali', profession 'doctor', etc.); specifically, pronouns are avoided as a means of paying respect to the referent, a strategy that is common in Indonesian and Javanese (see Kaufman 2014). Pronominal paradigms rarely distinguish gender.[4] Demonstratives are often adnominal but in a few cases, may be pronominal. Pronominal systems also often show full vs. clitic pronouns with distinct syntactic functions (e.g. related to whether they may function as possessives or appear in argument positions). Thirdly, in many Austronesian languages demonstratives are used as markers of tense, a characteristic that is considered to be related to the fact that TAM marking is typically not obligatory. Finally, the environment plays a key role in Austronesian deixis. Adelaar (1997: 53) and Blust (2009: 312) observe that most general principle of macro-orientation in Austronesian (AN) languages is the land-sea opposition e.g. in Proto-Austronesian (PAN) *daya* means 'toward the interior' and *lahud* 'toward the sea'. This opposition with different degrees of semantic change like uphill/upstream downhill/downstream is attested in many languages across the Austronesian world. Paradoxically, in specific languages, the reflexes of these PAN terms have come to have diverse meanings (such as 'north', 'south' or 'east' 'west') depending of the deictic point of observation, therefore whether the group is away from the sea or on one side or another of an island.[5]

Weather patterns also play an important role in Austronesian deixis. In some languages, for example, as many as six terms have developed to refer to the movement of monsoons. As reported by Blust (2009: 312), cardinal direction terms ('north', 'south, 'east' and 'west') in AN language have developed from proto-lexemes with the meanings 'up', 'down', 'north wind', 'south wind', 'upriver', 'downriver' and from terms originally referring to the place of sunset or place of sunrise.

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[3] The reconstructed words indicating deixis in the Austronesian languages (Blust and Trussel 2010) are:
PAN *-ni 1pl deixis and spatio-temporal reference: this; here; now –
PAN *-Cu 2pl deixis and spatio-temporal reference: that; there, then -
PMP *-di 3p deixis and spatial reference: that, there (distant) -
PAN *si ia demonstrative pronoun and adverb: this, here; that, there -
PMP *ia demonstrative pronoun and adverb: this, here; that, there
PAN *-na 3p distal spatio-temporal deixis: that, there; then
PAN *-i-ti this, here
PAN *i-ni this, here.
[4] Contrary to this statement is the brief note of Sellato (1981) who reports of a three gender pronominal system in some languages of Central Borneo mainly belonging to the Müller-Schwaner Punan.
[5] For a detailed description of deictic terms in the Austronesian languages, see Blust 2009 (310-314) and Adelaar 1997.

After this overview of deictics in Austronesian languages, this paper describes and discusses the behavior of the deictics in three languages of Borneo providing examples and observing similarities and differences applying the distinction between micro-orientation and macro-orientation. After broadly describing the languages, their distribution and classification, the paper discusses demonstratives, location, spatial deixis ad the environment, time and manner deixis, participant deixis in Òma Lóngh, Lebu' Kulit and Punan Tuvu' respectively to conclude with a paragraph on grammaticalization of demonstratives. Summarizing, the similarities and the differences among the three languages are mainly based on degrees of distance from the deictic reference point in two, three or four distance system and the asymmetry between demonstratives and locations. The main similarities are in the employment of deictics tied to the geography and topography of the area with the opposition upstream-downstream and place of sunrise-sunset, and on the pronominal systems where dual and paucal are markedly expressed in the plural persons. A final section discusses examples of grammaticalization of demonstratives becoming grammatical items.

2. The languages of this study

The languages of this study belong to the North-Sarawak language family of the North Borneo phylum (Simons and Fennig 2017). Lebu' Kulit and Òma Lóngh are two Kenyah languages belonging to the Kayan-Kenyah subgroup of the western branch of Malayo-Polynesian and part of the North Sarawak branch, whereas Punan Tuvu' represents a branch of its own in the North Sarawak subgroup (see Figure 1). Kenyah languages are known to display a very high level of dialectal variation. Lebu' Kulit and Òma Lóngh in particular present divergent features that set them apart from the main Kenyah branch.
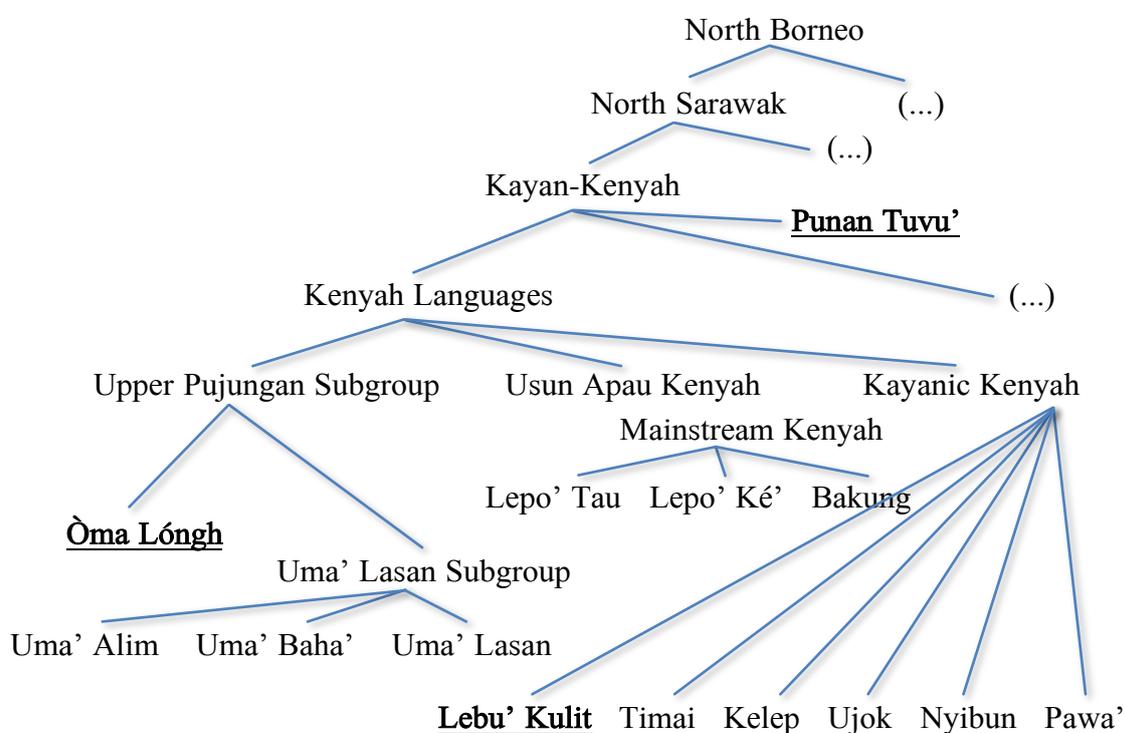

Figure 1. The position of Lebu' Kulit, Òma Lóngh and Punan Tuvu' within the Kayan-Kenyah group (Soriente 2004, 2008)

Lebu' Kulit belongs to the Kayanic branch of the Kayan-Kenyah subgroup (Soriente 2004 and 2008), also referred to as Kenyah Wahau[6] in Ethnologue (Simons and Fennig 2017, *inter alia*). Other members of the Kayanic Kenyah branch include Uma' Timai, Uma' Ujok, Uma' Kelep, Nyibun nd Uma' Pawa' (an extinct variety). Soriente (2006) provides some documentation of Lebu' Kulit, and notes that this language has 8000 speakers and is spoken in 15 villages in East and North Kalimantan, as well as Sarawak. The Lebu' Kulit data which I present below were mainly collected in Long Tungu in the Bulungan district of East Kalimantan, Indonesia (Soriente 2006).

Òma Lóngh is spoken by about 3000 people in the Malinau and Bulungan regencies of East Kalimantan, mainly in the villages of Setulang (Malinau Regency) and Pimping (Bulungan Regency), as well as Batu Kajang and in the town of Malinau. It is perhaps the most divergent and least understood of the Kenyah languages due to its highly idiosyncratic phonological (see Soriente 2006; Blust 2007) and morphological properties (cf. Soriente 2014). Indeed, it constitutes a distinct branch of the Pujungan subgroup (the other branch consisting of Uma' Lasan, Uma' Baha, and Uma' Alim, which are spoken mainly spoken in Indonesia, with a few groups of speakers in Sarawak) one of the three subgroups of Kenyah languages (see Soriente 2004, 2008). Òma Lóngh are multilingual and are able to speak other Kenyah languages, like Lepo' Tau and Uma' Lasan. In contrast, speakers of other Kenyah languages have trouble speaking and understanding Òma Lóngh. Speakers also use Indonesian in school, since it is the official language of the Republic of Indonesia. The Òma Lóngh data presented in this paper were collected in the village of Setulang in the Malinau district of North Kalimantan (Soriente 2006).

The Punan Tuvu' are the largest community of former hunter-gatherers living the Malinau Regency in East and North Kalimantan (see Sercombe and Sellato 2007:64). Their language is a sub-branch of the North Sarawakan group consisting of mutually intelligible dialects. The Punan Tuvu' may number as many as 4000 and include the Punan Tuvu' (proper), Punan Malinau, Punan Mentarang and Punan Sekatak or Punan Berusu',[7] Most speakers in this group live in in a resettlement camp (Respen Tubu), though there is also a large community spread across the upper part of the Tubu River and Malinau River in Malinau Regency, North Kalimantan. Data for this paper are taken from the Punan Tuvu' community in Respen Tubu, Malinau and from narratives collected in various villages (cf. Césard, Guerreiro and Soriente 2015). Morphologically this language shows the same basic characteristics as most of the other languages of the Kayan-Kenyah subgroup (e.g. the language exhibits a limited number of prefixes but no suffixes), and shares a number of lexical similarities with Kayan dialects. Like many other hunter gatherers in Borneo, the Punan Tuvu' are multilingual, speaking the language of the settlers they are in contact with, namely the Kayan and the Abai,[8] with

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[6] This branch corresponds to Lowland Kenyah in the classification provided by Blust (2007, 2010).

[7] These ethnolinguistic labels reveal the places where the Punan Tuvu'/Tubu live, like the Malinau, Mentarang and Sekatak rivers or with whom they interact such as the Punan Berusu'. Punan Berusu' is an exonym that identifies a group of Punan Tuvu' who live in close contact with the Berusu' in the Sekatak district of East Kalimantan. This group of people, also called Punan Dulau or Punan Sekatak should not be confused with the Berusu' people who speak a Murutic language. Berusu' itself has been mistakenly classified in *Ethnologue* (Simons and Fennig 2017) as a member of the Rejang-Sajau branch of North Borneo languages, it is indeed related to Tahol, Agabag, Abai belonging to the Murutic branch. No major differences have been recorded so far between these Punan Tuvu' dialects except for a few borrowed Berusu' lexemes appearing in Punan Berusu' due to the protracted contact between the two language communities.

[8] The Abai language is also known as Agabag and is related to Tenggalan and Tagol. They are all members of the Murutic family.

which they have close historical relations. While they speak the language of the group with which they have settled, the members of these sedentary groups do not typically speak Punan Tuvu'. With the spread of Indonesian as a national language, Kenyah and Punan speakers also communicate with neighboring populations in Indonesian. In certain official contexts Indonesian is also used between Punan speakers. Punan Tuvu' is classified as a separate branch belonging to the North-Sarawak subgroup. Figure 2 shows the approximate location where the languages discussed in this paper are spoken.

Figure 2. Map of Borneo

3. Demonstratives

3.1 Òma Lóngh

In Òma Lóngh demonstratives exhibit a binary proximal/distal contrast with respect to the distance of the referent. Demonstratives exhibit distinct singular and plural forms.[9] *Ji* indicates a singular entity proximal to the speaker, *di* refers to a plural or mass entity proximal to the speaker, *jé* indicates a singular entity, which is distal from the speaker, *dé* indicates a plural or mass entity, which is distal to the speaker. *Ji* and *jé* also change depending on the preceding words. *Ji/jé* follow any other consonant including glottal stop, *nyi/nyé* follow words ending with a nasal, and *zi/zé* follow words ending with vowels.

   Although demonstratives only show a binary distinction between distal and proximal, as we shall see later, locational adverbs exhibit a much more elaborate system which distinguishes between six different degrees of distance.

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[9] One hesitates to use the terms 'singular' and 'plural' with regard to demonstratives in Òma Lóngh, given the fact that singular vs. plural is rarely distinguished in Austronesian demonstrative systems. Further work is needed to determine whether this is an accurate characterization of the observed contrast.

	Proximal	Distal
Singular	*ji*	*jé*
Plural/Mass	*di*	*dé*

As I discuss in section 4.1.1, these forms are actually bimorphemic, and consist of an initial demonstrative morpheme slot (occupied by *j-* 'singular' vs. *d-* 'plural/mass') and a second morpheme slot, occupied by the morphemes *–i* 'proximal and *–é* 'distal'.

These demonstratives may also be used gesturally (i.e. when the referent is visible) or symbolically (i.e. when the referent is not visible) (cf. Fillmore 1997). Follow some examples.

1. *zi   laminy-ki*
   this   house-1SG
   'This is my house' (pointing at the house).   (Kasing)

2. *zi   nyen   ghi*
   this   close   2SG
   'This one near you'.   (Kasing)

3. *jé   ghé*
   that   there
   'That one over there'.   (Kasing)

4. *a'eng   kuva'an   étó   zé*
   NEG   like   seen   that
   'No! Not like that'.   (Kasing)

5. *nya   kuva'an   étó   zi*
   yes   like   seen   this
   'Yes indeed, it's like this. ('Thus it is')'.   (Kasing)

Demonstrative pronouns frequently occur with the relativizer *de'* as in the following example (6).

6. *de'   jé   betaeng   dé   ji?*
   REL   that   or   REL   this
   'That one or this one?'   (Kasing)

From a phonological standpoint, the demonstratives *ji* and *jé* behave as clitics when they occur as adnominals or as the pronominal object of the preceding word. This is evidenced by the fact that the sound */j/* undergoes assimilation to preceding word and occurring as */ny/* and */z/*. For example, *nyi/nyé* follow words ending with a nasal (ex. 7-8), *ji/jé* follow any other consonant including glottal stop (ex. 9-10) and *zi/zé* follow words ending with vowels (ex. 11).

7.   *kelónény-nyé*   'that person'
8.   *énem-nyé*   'what's that?'
9.   *udek-ji*   'this dog'

10. *ana'-jé*   'that child'
11. *tasa-zé*   'that time'

Likewise, the plural forms *di* and *dé* display the variants *ri* and *ré*. These *r*-forms appear after a word ending in a vowel (ex. 12), in structures where the demonstrative occurs as an adnominal or as the pronominal object that word. The plural deictic forms are a peculiarity of Kenyah Òma Lóngh, as plural demonstratives are rarely found in other languages of Borneo. In Lebu' Kulit some plural deictic forms have been reported, but their use is limited.

12. *dae-ré*   'those sounds'

There are disyllabic 'independent' forms for each demonstrative. These forms are considered by speakers to be more formal. They tend to be used in pronominal positions, but they may also occur in adnominal position.

   izi   proximal demonstrative singular- formal
   idi   proximal demonstrative plural- formal
   ézé   distal demonstrative singular- formal
   édé   distal demonstrative plural- formal.

When demonstratives are coreferential with a noun or a noun phrase in the previous discourse, they are anaphoric. Demonstratives in Òma Lóngh exhibit special 'echo' forms, which optionally appear in contexts where the demonstrative is used anaphorically, and the speaker chooses to emphasize the discourse salience of the demonstrative referent. Phonologically, the derivation of these optional forms involves the addition of a syllable to the right of the basic form. This syllable consists of a glottal stop followed by a copy of the vowel found in the basic form of the demonstrative, that is *ji'i* and its variants and *jé'é* and its variants and *di'i* and *dé'é*.

   The form *ji'i/ zi'i* seems to refer to something which the speaker wishes to bring to closer attention or to topicalize, *di'i* if it refers to some plural subject previously mentioned, *ri'i* is its phonological variant. They refer to referents that cannot be pointed at but are present in the mind of the speaker. The form *jé'é/zé'é* and its variants (singular and plural) indicate something which the speaker observes from a greater distance or probably belong to a farther point in the speech. The following examples 13-15 show the anaphoric use of the deictics.

13. *te   zi'i tè   nya   ate'   tepeng   fu'eng   éle*
     LOC   this   go   FILL very   ancestor old   1PL.INCL

     de'   Ncò-zé   le
     REL   Nco=that   PRTCL
     'This one was definitely our old ancestor, Ncau'.   (Kirit)

Here the anaphoric *zi'i* is referring to somebody mentioned in the previous discourse and of which the interlocutor has a clear knowledge of.

14. *mii   étó   bezu   de'   zé'é*
    like this seen   big   REL   that
    'That thing it is obviously as big as this'.   (Sima)

In (14) the deictic *zé'é* is definitely referring to an animal indicated in the previous discourse whereas in (15) below the plural deictic *di'i* is anaphoric because it recalls a plural object mentioned in the previous utterance.

15. *di'i-ku   ngkiny*
    those＝2SG   bring
    'You bring these ones'.   (Kasing)

3.2 Lebu' Kulit

Lebu' Kulit exhibits demonstrative forms for proximate, medial and distal referents. The free forms for these demonstratives are *ini, inyé, iti,* respectively. These forms also exhibit bound monosyllabic variants: *ni, nyé,* and *ti.* The independent forms occur more often in pronominal positions. Lebu' Kulit also exhibits a fourth demonstrative, *irai,* which seems to occur only in anaphoric positions and which is much more restricted in its distribution. When asked about the difference between free and independent demonstrative forms, speakers say that the independent forms are more formal.

16. *"daau-lu   kumé-a   ini   sé   balei,   balu!"*
    voice＝1PL.INCL   say＝3SG   this one ghost   EXCLM

    mengini   daau   tira'-tira'   releu   o
    this.way   voice   RED-talk   3PL   PRTCL
    'We said that this is a ghost, yes, this is what they said'.   (Tulung)

17. *ini   niya'   tegen   ileu   kuva'   irai*
    this   this＝REL   feel   1PL.INCL   IRR＝want   that

    o   ini   tiya'   tegen   ileu   kadep   rai
    PRTCL   this   that＝REL   feel   1PL.INCL   intention   that
    'This is apparently what we wanted, this is apparently what we really wanted'
                                                                             (Aran)

In the examples (16) and (17) above, *ini* is used as a deictic pronoun in a direct speech. In (17) the pronoun *irai* is anaphoric and refers to a series of things mentioned in the previous discourse.

18. *iti   daleu-daleu   belua'   alemti*
    that   RED-in the middle   middle   night＝that

    releu   sekening   daau   tawéti   di'
    3PL   hear   voice   laugh＝that   PRTCL
    'That's what they heard in the middle of the night, a laughter'   (Tulung)

In example (18) above the distal deictic *iti* is in pronominal position whereas the demonstrative adjective *ti* is attached to the noun *alem* 'night' and *tawé* 'laughter'.

The same is displayed in the examples (19) through (21) where the medial deictic *(i)nyé* is employed. In (19) it functions as a pronoun in its full form, whereas in (20) is an adjective in adnominal position in its full form, and in (21) in its clitic form phonologically attached to the noun *isiu* 'word'. It is interesting to notice that in (19) and (21) two different deictics (the distal *nyé* and the proximal *ni* are employed in the same sentence. The difference can be explained with the fact that in (19) *inyé* refers to some customs possessed by the Lebu' Kulit people in the past, whereas when the speaker talks of Lebu' Kulit considers it a real and present reality. The same explanation can be used for example (21) where *isiu-nyé* refers to a story that goes back to a past that is not so far (medial distal deictic) whereas *Sega'ti* refers to the river Segah that is indeed far from the location of the speaker on the Kayan river.

19. *inyé sé dité adet adet Lebu' Kulitni*
    that one seen RED-customary law village bark＝this
    'Actually that is only one of (our) Lebu' Kulit customary laws'.   (Pifung)

20. *uripé' daleu inyè sé pulu' uman daleu*
    life＝1SG in the middle that one ten year in the middle

    sepuk da ngetana'a aki' da
    grandmother＝1SG PRTCL AV-tell＝3SG 1SG PRTCL
    'My age at that time was 10 years, when my grandma told me that'.   (Pifung)

21. *uvan nai na isiunyé pavi' ko' Sega'ti no'o*
    RES come PRTCL story＝that arrive LOC Segah＝that PFCT
    'That story has arrived until to Segah there'.   (Tulung)

In Lebu' Kulit the forms *bini, biti, binyé, birai* are reported and explained as referring to plural or mass names. Their occurrence is more limited though.

3.3 Punan Tuvu'

The demonstrative system in Punan Tuvu' distinguishes four degrees of distance: proximate (close), medial (near), distal (far), distal-medial (further) and distal-distal (furthest). These are *inih*, *irih*, *iréh*, and *inah*, respectively. Much like Òma Lóngh and Lebu' Kulit, these free forms exhibit bound or clitic variants: specifically, *nih*, *rih*, *réh*, and *nah.* These forms appear when the demonstrative occurs in adnominal or object positions, following a host (as in (22)). *Inih, iréh* and *inah* are also used anaphorically with *inah* more frequently used than the others:

22. *hén éngang kun unan bo' nyan nih*
    3SG bring food with drink at this
    'He brought food and drinks here'.   (Amat)

When the speaker refers to something that is felt very close in discourse and/or is visible, the demonstrative *inih* is used. If the referent is far, the speaker will use *iréh* or *inah*. While it is clear that *inah* refers to an entity which is further removed in space as compared to an entity referred to by *iréh*, when these terms are used to refer to entities

in the discourse, the two terms seem to be interchangeable and speakers have trouble expressing what the contrast between them is. The medial *irih* is rarely used to refer to discourse referents, whereas *inah* is frequently used. In some cases, entities referred to by *inah* are felt to be definite; whereas those referred to using *irih* and *iréh* are felt to be indefinite, vague or indeterminate.

These demonstratives are also frequently used to orient events in time. In example (24) below the adverbial *kenah* (which is derived from the preposition/particle *ke-* + distal demonstrative *nah*) refers to something in the past (also indicated by *uron* 'in the past') and therefore far away in comparison to something in the present referred to as *inih.* The final *nah* is referential, and refers to a child already previously mentioned in the discourse.

23. *ovi' ne hok ngami kou kenah uron*
    NEG then 1SG AV-hope 2SG that.way before

    ovi' nih kén an nak hén nah
    NEG this say-3SG at child 3SG that
    'I can't believe you were like that, not this, he said to the child'.   (Baya')

In example (24) the teller is repeating the words of an old lady he met in a dream who told him to perform a sacrifice. Since the referent appeared in a dream, the speaker feels it is appropriate to employ *inah* 'that far'.

24. *kou ketop kenah jadi' urah da' hén inah*
    2SG cut that.way therefore splatter blood 3SG that
    'You cut her in such a way as to splatter her blood (everywhere)'.   (Baya')

In contrast, in example (25) *inih* is used because the sentence is pronounced while looking at the river and talking about the weather.

25. *inih ungéi nih réh melau' tapi lou inih seniom*
    this water this that warm but day this cold
    'The water here is warm but the day is cold'.   (Dollop)

The following examples illustrate the referential function of the distal demonstratives *inah* and *irih/ iréh,* and the fact that the choice between these forms can be used to indicate definiteness. In example (26) *inah* is not demonstrative (because the fruit is not visible), but, rather, referential, and indicates that 'the fruit' has been mentioned in the discourse. In (27), in contrast, both the medial distal and distal-distal demonstrative (*rih* and *réh*, respectively*)* function referentially. These forms refer to a job that was done poorly. Here, 'job' is felt to be a vague or indefinite thing.

26. *hok déh la' bua' an kabun, bua' inah mih*
    1SG go take fruit LOC garden fruit that sweet
    'I took a fruit in the garden; the fruit is sweet'.   (Amat)

27. *ano' réh rih réh ti' jét-jét lekah*
    later that that that make RED-bad work

    réh kenah kubat réh kenah noh
    that that.way light.work that that.way PRTCL
    'Then he did his job very bad, it was just a light job'. (Amat)

Inih, inah and *iréh* can also appear in forms containing the emphatic particle *ne* (which occurs elsewhere as a marker of emphasis), as in *ninih, ninah* and *niréh*. This is illustrated by example (28) below, where the form *ninih* is felt to be emphatic.

28. *inih réh njuk an rin ninih tat rin ngenong*
    this that AV-give at 3SG.POSS PRTCL-this from 3SG.POSS AV-genong

    kou tat rin téi nyan kou kén an rin
    2SG from 3SG.POSS go towards 2SG say.3SG at 3SG.POSS
    'This one, give this thing to him if he sees you, if he approaches you'. (Baya')

4. Location

4.1.1 Òma Lóngh

The basic location adverbs are bimorphemic. The initial morpheme indicates whether, in general, whether the location is proximal (*gh-*), medial (*t-*) or distal (*k-*). The second morpheme adds additional specification, indicating whether, within the general category referred to by the first morpheme, the referent is proximal or distal. In other words, the proximal morpheme *gh-* appears in two forms, *ghi* and *ghé*, the former is used to refer to an entity which is very close (i.e. proximal-proximal), while the later is used to refer to an entity which is not quite as close in comparison (i.e. proximal-distal). Notice that like the demonstratives, that exhibit special 'echo' forms, which appear in contexts where the demonstrative is used anaphorically, also for location adverbs are found forms that involve the addition of a syllable to the right of the basic form. This syllable consists of a glottal stop followed by a copy of the vowel found in the basic form of the demonstrative, that is *ti'i* 'nearby not as close' (medial-distal) and *té'é* 'nearby not as close' (medial-distal).

ghi	here, right here (proximate-proximate)
ghé	here, in the immediate vicinity (proximate- distal)
ti	nearby close (medial-proximal)
té	nearby not as close (medial-distal),
ki'i	over there, closer (distal-proximal)
ké'é	over there, distant (distal-distal).
ti'i	nearby close (medial-proximal)
té'é	nearby not as close (medial-distal).

These local deictics can be combined with the particles *ne* or *te* (e.g. the form *ghi* proximal-proximal can appear as *ghi-ne* 'here at this exact point' or *ghi-te* 'here at this (vague) point'). These particles (which combine with other morphemes in the language) can express a spatial contrast between proximal (*ne*) and distal (*te*). They can also function

as evidential markers, in which case *ne* expresses that the speaker has a greater degree of certainty regarding a referent, and *te* expresses a lesser degree of certainty. I suspect that these particles are historical remnants of a directional system, and are derived from the same etymological source as the verbs for 'go' *tè* and 'come' *nè.*
The nominal phrases (20-32) below show some of the possible combinations where a demonstrative and a location deictic are employed:

29. *kempèny-nyé ghé-ne*   'that picture here' (a bit distant but definitely visible)
30. *kempèny-nyi ghi-ne*   'this picture here' (it can be touched)
31. *facény-nyi ti*   'this papaya there' (it can be easily reached)
32. *ude' jé té'é-te*   'that dog over there' (it can be seen but not touched)

As we have seen above, basic location deictics are composed of two morphemes. The morphemes which appear in these two slots are not restricted to location deictics alone. They also combine with other morphemes. The morphemes which occupy the initial slot i.e. the medial and distal morphemes *k-* and *t-*, for example, appear in the locative prepositions *ke* 'in/at/to' and *te* 'at'. Moreover, the morphemes which appear in the second slot, the proximal and distal *–i* and *–é*, also occur with with the demonstrative morphemes *j-* 'singular' and *d-* 'plural/mass' (see section 3.1). The same morphemes also occur with the locative preposition *cin* 'from' which indicates proximal and distal movement. The morpheme *n-* in this construction is probably a reduced form of the verb *nè* indicating movement towards the deictic reference point.

   cin-né   'from there' towards the speaker
   cin-ni   'from here' away from the speaker

It is interesting to note that the demonstratives *ji and jé* only distinguish two degrees of distance, whereas locational adverbs distinguish three degrees of distance, each of which has a proximal and distal form.
   In example (33) the speaker is talking about the place where he lives and where the utterance was produced, that is the village of *Tolangh* (Setulang) that is referred as 'here'.

33. *bezu-le-te   aneng-le   tane' be-le   ghèmet   tene*
    big=1PL.INCL=PRTCL   have=1PL.INCL land if=1PL.INC think   PFCT

   disi-disi re   mudij   ke   Tòlangh   ghi-ne
   RED-way   people INTR-life to   Setulang here
   'The land we have, if we think about, is big, after people came to live here in Setulang'.   (Kayang)

In contrast, in example (34), the spatial reference is *ki'i* (there) a place not too far from the *origo* of the action, whereas in (35), the place, Long Sa'an referred to as *Saèny ghéte* is considered as far away. It is indeed the original place from where the Òma Lóngh moved before settling in different villages downriver.

34. *ki'i tè-ki   abi   he-ve-sóngh sadiny   aeng Jendam*
    there go=1SG   until IRR-RECP-meet younger.brother have Jendam
    'There I went until I met the younger brother of Jendam'.   (Kirit)

35. *méé   jétó-jétó   fe-nòsa   le   mudij*
    that way   RED-aspect   CAUS-AV-difficult   1PL.INCL   INTR-life

    ke   Sa'èny ghéte
    LOC   Sa'èny   there
    'Like those where the difficulties when we lived over there in Long Sa'an'.

    (Kayang)

4.2 Lebu' Kulit

In the case of Òma Lóngh, we observed that there is an asymmetry between the demonstrative and locational adverb systems: specifically, demonstratives only displayed binary distinction between proximal and distal, whereas locational adverbs distinguish three distinct distances (that associated with the particles *ne* and *te* become six). Lebu' Kulit does not exhibit such an asymmetry. Both the demonstrative and locational adverbs systems exhibit a tripartite distinction consisting of proximal, medial and distal. Recall that the three demonstratives in Lebu' Kulit are *ini, iti, inyé.* The locational adverb paradigm is constructed via the combination of these three forms with the locative preposition *ko'* 'in, at' (which is optionally reduced to *k-*). The full paradigm for the basic location adverbs is shown below.

kini/ko' ini	here close, in the immediate vicinity (lit. at this) (proximal)
kinyé/ko' inyé	there (but still in sight); (lit. at that) (medial)
kiti/ ko' iti	over there (lit. at that) (distal).

Examples (36)-(39) illustrate the use of locative adverbs in naturalistic speech. Moreover, in examples (37) and (38), *kini* can be interpreted as both a locative and a temporal adverb (i.e. with the meaning 'now').

36. *nga   ke-nai-ra   po'o nai   pit   teleu kini o*
    only.then   IRR-come=3PL   also   come   add   1TRI   here   PFCT
    'Only then they came to increase our number here'.   (Aran)

37. *ni   ko'   ini   o   kulu   di'   tai tisen upeng-lu*
    this   LOC   this   PFCT   EXCLM   PRTCL   go   know   pest=PRTCL
    'We know here (now) that this is rice pest'.   (Pifung)

38. *bang aki' lu'   ya'   urip tama-k   da   ko'   ini   di'*
    only 1SG   PRTCL   REL   life   father=1SG   PRTCL   LOC   this   PRTCL
    'I am the only one who is still alive from my father here (now)'.   (Pebaun)

39. *nyé sé   amen   nuyau   k-inyé   tei   apui néé*
    that   one   omen   AV-voice   LOC-there   make   fire   this-1SG

    aring ép   kala'   bavui   téé'
    initial EXCLM   IRR-take   wildboar   that=1SG
    'That was an omen telling me to make fire there first and I would get a wildboar'.

    (Pifung)

13

In addition to the locative adverbs derived from demonstratives, there are also two additional locative adverbs: *ka'a* 'there' and *nenga* 'there'. These forms are bimorphemic, and they are composed of a preposition followed by a 3rd singular clitic pronoun *–a*. *ka'a* is composed of *ko'* 'in' + 3SG, and *nenga* is composed of *neng* 'at' + 3SG. The use of the form *ka'a* is illustrated in example (40).

40. *nyé   ta   liang-a   ko' Jelarai na   ka'a*
     that TA   graveyard = 3SG LOC Jelarai NA   there
     'That one is buried there in Jelarai'.   (Pebaun)

Lebu' Kulit employs the particles *na* and *ta*, which, like the particles *ne* and *te* in Òma Lóngh, express a spatial contrast between proximal (*ne*) and distal (*te*). It is likely the case that these particles are from the same etymological source as the verbs for 'come' *nai* and 'go' *tai*. There are also metaphorical extensions to this contrast. For example, these particles can express the degree of a speaker's involvement or familiarity with a referent. In example (42) for example, *na* is used with the referent 'our village,' which is more familiar to the speaker, whereas *ta* appears with 'Lepo' Tau people' who the speaker considers to be less familiar.

41. *iré ya' aki' bara'ni   daau un   ta   udo' bateu*
     3PL REL 1SG   inform = this voice exist TA   mask stone

    ledo   dué-nyé   ko' alo Pejungan na
    woman 3DUAL = that LOC flow Pujungan NA
    'They whom I said are stones statues of the two women are on the
    Pujungan river'.   (Pebaun)

42. *kancau na   lebu' ileu-ni   no'o ngiri   ta   Lebu' Tau*
    arrogant PRTCL village 1PL.INCL = this PFCT like.that PRTCL village Tau
    'Our village became arrogant and so did the Lepo' Tau people'   (Pifung)

Moreover, *na* and *ta* appear to function as evidential markers, where *na* expresses that the speaker has a greater degree of certainty regarding a referent, and *ta* expresses a lesser degree of certainty. Examples (41) and (42), illustrate the use of *na* and *ta* as evidential markers in naturalistic speech. In (41) *ta* is used to refer to stones which people claim to be petrified women i.e. the speaker is expressing a lack of certainty regarding the nature of these stones. In contrast, in the same sentence, the Pujungan river, which is a real object about the existence of which the speaker has no doubts, is referred to using the particle *na*. In sentence (42) where the speaker, a Lebu' Kulit speaker, refers to his village as *na*, therefore an entity closer to him, but to another people, the Lepo' Tau as *ta* an entity necessarily considered far.

4.3 Punan Tuvu'
As discussed in section 3, demonstratives in Punan Tuvu' express four degrees of distance: proximal, medial, distal and far distal. Location adverbs are morphologically derived from these demonstratives, and therefore they express the same four degrees of distance. The forms are *tanih* 'here', *tanah* 'there (far away)' *tarih* 'there (medial)' and *tarèh* 'there (distal)'. Of these, the most frequently used is *tanah*.

The two examples below illustrate the use of the location adverbs: in (43) *tanah* indicates a location out of the view, as can be inferred by the fact that the event happened in the past. In (44), *tarih* refers to a place quite far but still visible.

43. *tanah   iro   péti'   lou'ah   ti'   lou'ah*
    there   3DUA   RECP-make   day = that   make   day = that
    'There the two of them did that to each other, that day'.   (Baya')

44. *levu'   a'   wo' vi'   kun   tarih   néi   ayo'*
    house   person   REL   possess   food   over.there   earlier   big
    'The house of the person who has a food stall over there (visibile) is big'. (Amat)

4.4 Spatial deixis and the environment
Spatial deixis terms are often closely related to the environment where a language is spoken. Therefore, understanding the topography of the place where a given language is spoken can be crucial to understanding that language's system for marking spatial deixis. On the island of Borneo, most populations in the interior live alongside rivers and use rivers for transportation and trade. Thus, it is not surprising that rivers act as an important reference point with regard to deictic systems in languages throughout the region and the most important orientation axis is the downriver-upriver opposition (see for example Inagaki 2014:72).

Traditionally, the Kenyah people resided in longhouses positioned along one bank of a river. Although the Punan, gathered in small bands, wandered the forest, rivers acted as an important referent, orienting these groups as they moved. In the languages of both of these groups as well as Punan Tuvu', cardinal directions are not used, rather the main directional deictic terms refer to the position of the speaker with the respect of the river. Despite many differences in the deictic systems of the three languages discussed in this paper, there are surprising similarities in the directional systems.

In the two Kenyah languages there are specific terms for going upriver and downriver. There terms are distinct from the directional terms meaning 'upriver' and 'downriver.' Two other important spatial terms include 'across the river from the village,' 'further inland/away from the river'. Òma Lóngh and Lebu' Kulit also has cognate terms for 'go upriver' and 'go downriver,' the basic directional terms 'upriver' and downriver, as well as the terms meaning 'across the river from the village' and further inland/away from the river.' Punan Tuvu' also has cognates for these same term, and additionally, has a specific terms for 'walk upriver' and 'walk downriver.'

Òma Lóngh	Lebu' Kulit	
sa'o	*so'o*	go downriver
meti'	*medik*	go upriver
kaba	*ko' ava/kava*	downriver direction
ke razó	*ko' déé*	upriver direction
réfa/ke seha'-te	*ke dipa*	across the river
sadóvai	*saré bengaai*	rivershore
kusen	*kusun*	up, away from the rivershore, generally the hill
	ko' daai	inland

15

Punan Tuvu'

ricu'	go downriver
murik	go upriver
decu'	upriver
deva', liva'	downriver
méno	walk upriver
macah	walk downriver
ripa	across the river
jujun	rivershore
ridai	up away from the rivershore, generally the hill
lau'	inland

The deictic point of all these directional terms is the position where the speaker is located with respect to the river and its direction of flow. The directions left *(kabiengh, kaving, buléi)* and right *(ta'e, taau, ta'uh)* in Òma Lóngh, Lebu' Kulit and Punan Tuvu' respectively are frequently used together with terms referring to the direction or the river's flow i.e. whether he is going upriver or downriver. In other words, in Òma Lóngh *kabiengh kaba* means 'direction left side going downriver' and *ta'e kaba* 'right direction downriver'. Similarly in Lebu' Kulit the phrase is *kaving ava* 'left downriver' and *ta'au ava* 'right downriver'.

Example (45) from Lebu' Kulit discusses the location of two people, one of whom has a rice field on the right side of a river from the perspective of someone going upstream and the other who has a rice field on the left side of the river seen from the perspective of someone going upstream. In example (46) the Lebu' Kulit speaker is talking about a man going upriver on the left side of the river. Similarly in the example (47) from Punan Tuvu' the location of a village is explained as being on the right side from the perspective of someone going upriver.

45. *sé basé ta'au medic sé base kaving medik*
    one side right go.upriver one side left go.upriver
    'One was on the right side going upriver and the other on the left side going upriver'. (Pebaun)

46. *kaving so'o neng tegu' lirung Kayan ti di'*
    left go.downriver at meet calm.river Kayan that PRTCL
    '(He) was going downriver on the left side of the river where it met with the Kayan river'. (Tulung)

47. *tat kou déh genong nuh tukung ayo' ba' ta'uh*
    IF 2SG go see 2SG village big side right

    Murik rin ninah
    go.upriver 3SG.POSS PRTCL = that
    'If you go, have a look at the big village on the right side, going upriver, over there'. (Agat)

The Lebu' Kulit example in (48) below describes a place downriver where one can live under better conditions. The same downriver vs. upriver opposition is displayed in the Òma Lóngh examples (49) and (50). In (49) a Òma Lóngh elder is explaining that in the

past, people lived upstream, and had a better life than they do in the modern day village, which is located downstream. In example (50), the speaker is describing the route that villagers took when they decided to move away from the village.

48. *nenga*   *mengiti*   *dité* *ileu*   *kesedep*   *kumé* *di'*
    at-3SG   way-that   seen 1PL.INCL NMNLZ-will say   PRTCL

    sui   *tiga*   *nilu*   *tai*   *murip*   *kava*   *ti*
    more good this-1PL.INCL   go   INTR-life downriver that
    'At that point actually came our desire to make a better life downriver'. (Paran)

49. *tè* *ku* *ke* *razò*   *lèngò*   *re*   *ke*   *razo*   *keci*
    go 2SG LOC upriver shadowed person LOC upriver say=1SG

    me   *zó*   *kabate*
    towards 3SG   downriver=PRTCL
    'Go upriver, there it is not so hot (it is very shadowed), I told him
    when he came downriver in Malinau'.   (Kirit)

50. *nè* *sa'ó*   *bai*   *nya* *Baò*   *sa'ó*   *Kazèny*
    come go.downriver riverbank yes Bahau go.down Kayan

    ngkiny *édé*
    bring   that
    'We came going downriver on the Bahau, going downriver on the
    Kayan they took us'.   (Kirit)

The terms, which originally meant 'uphill from the river,' 'downhill toward the river' have taken on the more general meanings of 'up' and 'down.' This is illustrated by the Òma Lóngh example (51), where the term *kuseng* 'direction uphill' is used to mean 'up'.

51. *ta* *kuseng* *langij* *te*   *óé*   *je*   *taghek* *te*   *be*
    go up   sky   PRTCL EXCLM because fear   PRTCL IF

    bate *zé* *ketè*   *mòghèj* *cèny* *zé*   *ngane*
    stone that IRR-go go.up   ladder that with=3SG
    'He went up to the sky, yes, because he was scared, so he took the stone
    as a ladder to climb'.   (Ipui)

As mentioned above, there are no dedicated native cardinal direction terms. This being said, the terms literally meaning 'place where sun rises' (*tè lebèj tò* in Òma Lóngh, *dau sek* in Lebu' Kulit, *lou muit* in Punan Tuvu') and 'place where sun sets' (*tè nyelèj tò* in Òma Lóngh, *dau maya* in Lebu' Kulit, and *lou memboh* in Punan Tuvu') may indicate cardinal directions, yet this use is very infrequent.

    This means that Kenyah and Tuvu' languages do not have any absolute spatial reference terms. Their orientation is mostly egocentric (left or right) or makes reference to the position of the river and its direction of flow. Intrinsic spatial e.g. referring to houses are also attested, and include 'back side' (*lighek* in Òma Lóngh, *likut* in Lebu' Kulit, *urin* in Punan Tuvu') and 'front side' (*jumé* in Òma Lóngh, *jawéi* Lebu' Kulit, *juma'* in Punan Tuvu'). According to speakers, in a situation where Kenyah or Punan

people are lost and trying to orient themselves (e.g. while wandering in the jungle), one would try to locate the highest point nearby in order to spot a river. Having located a river, one would use the direction of flow and position of the sun to orient themselves.

5. Time and manner deixis

Time and manner deixis is expressed using the spatial deixis system. Cross-linguistically, there is a general tendency for languages to use the metaphor of space to refer to time. As Lakoff and Johnson (1980) have described in depth, the space-time metaphor is one in which a tangible expression for space is used to refer the more elusive experience of time. In this way, in the Bornean languages discussed here, as in many other languages of the world, time deixis is expressed by using the inventory of two or three deictic terms or by using phrases where the deictic terms are used in adnominal position (like the English 'today' = 'this day' or *dau ni* in Lebu' Kulit and *lou'ih* in Punan Tuvu'). Time adjuncts are typically deictic in the sense that their meaning depends on the context and an understood reference point. As has been pointed out by Ross et al (2007:297), some lexical items used in time expressions refer to parts of cycles. In the case of the language discussed in this paper, these cycles include the day, the week, the season, the month and the year. The day is obviously a unit that depends on the time the sun rises. A day is generally divided into subparts, which include very early day, the time when the sun is near its highest point, late afternoon and night. Speakers also may make reference to the time of the day when particular insects make sounds e.g. in Punan Tuvu' the term *tugi* 'an insect that buzzes at 6 pm' can be used to refer to 'dusk', and *nét-nét* 'a bug which buzzes at dawn' can refer to the time 'dawn'. 'Yesterday' and 'night' are usually expressed using the same term or a morphologically related term (e.g. Oma Lóngh *menalem* 'yesterday' and *alem* 'night'; Punan Tuvu' *maleh* 'yesterday' *malom* 'night'). Other units depend on natural phenomena e.g. horticultural, floral/faunal, meteorological or lunar terms. Seasons are marked by natural events like the rainy of dry season, or the presence of a particular animal e.g. people commonly refer to the season when pigs swim along rivers, which generally also coinciding to the ripening of fruits and horticultural harvest season (although these seasons do not have well-defined boundaries). The days of the week are simply referred to with ordinal numbers from the 'first' to 'seventh' starting from what is Monday in the Gregorian calendar. The same is true for the months of the year i.e. months are referred to by ordinal numbers from 'first' to 'twelfth' where the cycle starts from January. In all these languages and in most Austronesian languages the same term is used for 'moon' and 'month'. Terms for the phases of the moon represent a very traditional system of knowledge related to time. These phases are important for the agriculture cycle and for the collection of forest products. In many languages in Borneo phases of the moon are named, though these terms differ considerably from language to language. They may be named after an animal or fruit the shape of which resembles the moon at a given phase. Some examples include 'hornbill', 'bear', or 'seed of a fruit'. The lunar cycle in some languages begins with the appearance of the crescent moon, in other languages it begins from the full moon. Therefore, the new moon can is referred to as 'the very first quarter of the moon' in some languages, whereas for other languages it is referred to as 'the days of darkness'. Speakers are unable to provide precise durations for each phase. It unclear whether this is due to a loss of local knowledge or

whether, these phase terms simply do not have precise boundaries, as Ross et al (2007: 315) notes is the case for English moon phases.

5.1 Òma Lóngh

Spatial deixis terms are morphologically related to temporal deixis and manner deixis terms. The ending *–i*, which we saw in the proximal deictic *ji*, is metaphorically extended in the temporal deictic *mi'i* 'now' (which refers to a temporally proximate event) and the manner deictic *mii* 'in this way' (which refers to a manner which is also in a sense proximal). Likewise, the distal ending *–é*, seen in the distal deictic *jé* 'that', is occurs in the distal temporal term *mé'ére* 'at that time' and the distal manner deictic *méé* 'that way'. As we have seen, there is also a medial deictic, *ghi-ne*, in which *ghi-* indicates medial distance. Only a few instances of the medial temporal term *nighi* (< *ni* + *ghi*) 'in the past but not too long ago' were found in the text. To summarize, location in time with respect to the speech event is expressed in Òma Lóngh with the use of temporal location nouns and some aspect markers, as in the list below.

mi'i-le	now
nighi	in the past (but not too long ago)
mé'é-re	in the past (a particular moment in the past)
beghoère	very long time ago
ubi	then, later
kena	before
pó	until

In all the time adverbials mentioned above, with the exceptions of *ubi*, *kena* and *pó*, the morphological relationship with spatial deictics is clear. Some words incorporate temporal references that can only be interpreted by reference to extralinguistic features of the situation of an utterance (see Anderson and Keenan 1985: 300). In the following elements, except for the adverbial *tò-zi* 'today' that is expressed through the nominal phrase *tò zi* 'this day', which contains the proximal demonstrative 'this' *zi/ji* the reference is due to the properties of the lexical items. The adverbial 'yesterday', for example, is *benyèa*, which is not morphologically related to a demonstrative form. So is the case of other time adverbials. Conversely the names of the days of the week and the months of the year are deictic as they refer to the cycle of seven days of the week and of the twelve months of the year so are numbered based on these cycles.

tòi/tò-zi	today
benyéa'	yesterday
menalem	yesterday
alem	night
benyéa' có-re	the day before yesterday
nempam	tomorrow
ó'ó nempam	the day after tomorrow
tò kecó	Monday
tò kedevó	Tuesday
bólèny có	January
bólèny devó	February

The category of tense is not expressed grammatically but pragmatically or through the use of time adverbials like the ones just mentioned and the more vague *ó'ó* 'later' and *ó'óre* 'earlier'. The aspect of the action is often marked lexically by the following aspect markers:

tene	perfective
lepó	perfective
òbèny	resultative
daò	imperfective
ke-	inchoative

5.2 Lebu' Kulit

In Lebu' Kulit, I have shown that spatial deictics express three degrees of distance. These three dimensions are mirrored in the manner deictics, which are indeed derived from the demonstratives *ini* (this) *inyé* ('that/medial') and *iti* ('that/distal'). In addition, there is a manner deictic derived from the referential term *irai* 'the aforementioned'.

mengini/mekini	like this
menginyé/mekinyé	like that
mengiti/mekiti	like that
mengirai	like that

The temporal dimension does not reflect the tripartite distinction of the demonstratives, as can be seen in the temporal adverbs below, where only the term *nakini* is derived from a demonstrative:

nakini	now (< *na* + *kini*)
mena'a da	in the past (from men + ka'a)
aring da	at the beginning, long time ago
bo'o	in the future
bo'o da	just happened

Nevertheless in many cases the temporal dimension is expressed through spatial adverbs like in the following sentences. In examples (52) and (53) (which I have cited above as (37) and (38)) the adverbial *ko' ini* 'here' means 'now' in Lebu' Kulit. Similarly, in example (54), the adverbial *daleu iti* 'in the middle of that' actually means 'then' or 'at that time'.

52. *ni   ko'   ini   o   kulu   di'   tai   tisen   upeng-lu*
    this LOC this PFCT EXCLM PRTCL go   know   pest = PRTCL
    'We know here (now) that this is rice pest'.   (Pifung)

53. *bang aki' lu'   ya'   urip tamak   da   ko'   ini*
    Only 1SG PRTCL REL   life father = 1SG PRTCL LOC this
    'I am the only one to continue my father's descendance now'.   (Pebaun)

54. *naa*   *mpei tiga dité alo Kayan-ni daleu*
shallows＝3SG   NEG   good   see flow Kayan-this in the middle

    iti   *nu'un* *o*
    that noy yet PRTCL
    'The shallows on the Kayan river was not good yet at that time'.   (Tulung)

As already mentioned in 5.1, some words incorporate temporal references that can only be interpreted by reference to extralinguistic features of the situation in which a sentence is uttered (see Anderson and Keenan 1985:300). This is the case of words like 'yesterday' or 'tomorrow' whose reference only depends on the properties of such lexical items.

menalem	yesterday
alem ini	tonight
dau ni	today
mesut	tomorrow
dau sé	the day after tomorrow
dau kesé	Monday (the first day)

We can see that some temporal expressions contain a demonstrative form (e.g. *dau ni* 'today' ('this day') and *alem ini* 'tonight' (this night)), whereas other terms are morphologically or syntactically derived (e.g. 'yesterday' is the night in the past (*menalem = mena' alem* 'in the past + night')); *dau sé* 'day one = the first day after tomorrow')), or dedicated lexical items (e.g. tomorrow is *mesut*). Like English, the week consists of seven days. The names of these days contain ordinal numbers (e.g. *dau kesé* 'first day'), wherein the first day corresponds to Monday in the Gregorian calendar. The months of the year are also counted with numeral terms (e.g. *bulan sé* 'month one' i.e. 'January'; *bulan dué* 'month two' i.e. 'February'), and there are a total of 12 months.

Generally time adverbials are function to localize the speech event in time; however, other TAM markers also exhibit the same function, such as the following:

o	perfective
lepek	perfective
uvan	resultative
daleu	imperfective
ke/ka	inchoative

It is worth noting that two of these TAM markers also locative adverbials: *ke/ka* 'in' and *daleu* 'in the middle' (see Soriente 2013).

5.3 Punan Tuvu'

In Punan Tuvu' spatial deixis terms are also employed to a limited extent in the temporal and manner deixis systems: *-nih* is a proximal spatial deictic which occurs in the temporal deictics *bénih* 'now' and *unih* 'earlier', as well as the manner deictic *kenih/jainih* 'this way'; the distal spatial deictic *–nah* is employed to refer to temporal deixis in *unah* 'at that time' an archaic form that is now commonly replaced by the form *uron* 'in the past' and *lou'ah* 'that day, then' and *kenah/jainah* 'that way' (a term which is widely used also as a connector among sentences). Example (55) illustrates the use of

the proximal demonstrative *nih* as a temporal deictic whereas (56) that of the distal deictic *nah,* which appears in the truncated for *-ah* in *lou'ah* 'that day, then'.

55. *Pak   Lih iné' téi nyan Tepian Buah nih?*
     father Lih cause go   at   Tepian Buah this
     'Mr Lie, what are you going to Tepian Buah for?'   (Dollop)

56. *doh ke   dorén doh inan   iro   mena' vi'   jainah   lou'ah*
     3PL IRR seen 3PL mother 3PL.DUA do   many like.that that.day
     'They were seen by their mothers while they were doing that'.   (Baya')

Location in time with respect to the speech event is expressed using temporal location nouns as well as aspect markers. The temporal location nouns seem to mirror the tripartite distinction in three location domains; however, there are additional terms, which are not derived from the deictics, and which express more specific temporal distinctions. In the list of temporal expressions below, forms derived from spatial deictics are easily recognizable.

bénih	now
lou inih/lou'ih	today
uron	in the past (a particular moment in the past)
lou'ah	that day/that time
unéi	earlier
lulung	very long time ago, before
kinah	then, later
lemok	until
maléh	yesterday
tovun	tomorrow
lou mon	the day before yesterday
lou ji'	the day after tomorrow
loucai	two days after tomorrow

5.4 Cyclic times
Cyclic events in nature can be used to create terms to demarcate periods of time. For many such terms, the time period, which they refer to, does not have definite boundaries. In particular in these Bornean languages, the day is divided into several parts based on the position of the sun. The same term is used for 'sun' and 'day': *tò* in Òma Lóngh, *dau* in Lebu' Kulit and *lou* in Punan Tuvu'. Important parts of the year include the rainy season and the dry season, as well as the fruit season or the period when pigs swim. The following are some expressions marking cyclic time in Punan Tuvu'.

lou	day, midday, sun
nyuap	dawn of the day
a'up	early morning
tekerong	midday
lebi	afternoon, twilight
canén	rainy season
malom	night

tengalan	season
taun	dry season
inou bavui nyatung	swimming wild boars season
lou keji'	Monday
bulan duoh	February

5.4.1 Phases of the moon

The moon plays an important role in the system of traditional temporal terms in Bornean languages. Its position is a deictic temporal reference frame which is taken under consideration when planning agricultural activities. The elaborate terminology used to describe the phases of the moon in Kenyah and Punan speaks to how important the phases of the moon were to measure time and plan traditional activities. Nowadays this terminology is only familiar to a few elders, and the more common 7 day/12 month system is used as already mentioned in 5.1, 5.2 and 5.3.

The names of the phases of moon in Punan Tuvu' refer to the shapes the moon goes through its various phases using the names of animals, plants, etc. (e.g. *butit alap* 'the belly of a fish', *ku'ung pi'ang*, the shape of the pit of a special fruit, the Pangium, *tebengang*, the beak of a hornbill).[10]

1	*turong*	full moon
2	*butit alap icit*	waxing gibbous (the belly of a fish) small
	butit alap ayo'	waxing gibbous (the belly of a fish) big
3	*ku'ung pi'ang icit*	waxing gibbous (the seed of a Pangium fruit) small
	ku'ung piang ayo'	(the seed of a Pangium fruit) big
4	*tebengang icit*	first quarter (the shape of a hornbill beak) small
	tebengang ayo'	(the shape of a hornbill beak) big
5	*belaung icit*	waning crescent (the shape of an elongated ear lobe) small
	belaung ayo'	(the shape of an elongated ear lobe) small
6	*ndom*	new moon
7	*ndom otuh icit*	new moon (dark moon with a ghost) small
	ndom otuh ayo'	(dark moon with a ghost) big
8	*lihit icit*	crescent small
	lihit ayo'	big
9	*utok bowang icit*	third quarter (the head of a bear) small
	utok bowing ayo'	(the head of a bear) big
10	*kibi'*	waning crescent

6. Participant deixis

Participant deixis is a general term, which refers to both personal and social deixis. Personal deixis has to do with the choice and use of personal pronouns, which typically takes into account the communicative relations between speech participants.

In the following section I provide a detailed description of the personal pronouns which all share a number of properties. Like most other Austronesian languages,

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[10] Names for the phases of the moon are widespread also in Kenyah and Kayan languages (Soriente, n.d.)

gender[11] is rarely marked, and only sporadically social rank and there are both inclusive and exclusive forms for the first person plural. There is also polymorphemic dual and trial pronouns for the plural persons. Dual generally refers to exactly two persons whereas the trial can be defined as a paucal referring to a group of three or few more people. In few cases were elicited pronouns that referred to four people.

6.1 Personal pronouns
Personal pronouns belong to two sets: independent and dependent forms. The dependent forms mark the possessive and the subject of verbs. Their host can belong to any word class.

Table 1. Pronouns in Òma Lóngh and Lebu' Kulit Kenyah

	Òma Lóngh Set I		Lebu' Kulit Set II	
1SG	aghi	-ki	aki'	-é'
2SG	ighu	-ku	iku'	-o'
3SG	jó/zó/nyó	-e	ié	-a
1PL.EXCL	ami	-mi	ami'	-mé'
1PL.EXCL.DUA	mévó	mévó	mé'é	-mé'é
1PL.EXCL.TRI	ami tele	-ami tele	mé'teleu	-mé'teleu
1PL.INCL	éle	-le	ileu	-lu
1PL.INCL.DUA	tò	-tò	tua	-tua
1PL.INCL.TR	éle tele	-le tele	teleu	teleu
2PL	égham	-kam	ikam	kam
2PL.DUA	kavó	kavó	kam ué	kam ué
2PL.TRI	égham tele	-kam tele	kam teleu	kam teleu
3PL	é'ó	é'ó/-dó	iré	-ra
3PL.DUA	évó	évó	dué	dué
3PL.TRI	é'ó tele	é'ó tele	rateleu	rateleu

Impersonal

de/re/ne 'person'   dulu 'person'

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[11] One of the very few exceptions is represented by a group of languages spoken in Kalimantan: Sellato (1981) reports a three gender pronoun system in the Müller- Schwaner Punan (Seputan, Kereho and Aoheng).

Table 2. Punan Tuvu' Pronouns

	Set I	Set II	Set III
1SG	hok	ku	-'
2SG	kou	nuh	-m
3SG	hén	rin	-n
1PL.EXCL	katou	katou	
1PL.EXCL.DUA	karo	karo	
1PL.INCL.TRI	tero	tero	
1PL.INCL.DUA	tou	tou	
2PL	ketou	ketou	
2PL.DUA	kevo	kevo	
3PL	detou	detou/doh	
3PL.DUA	iro	iro	

All the 1st person plural pronouns listed above distinguish between inclusive and exclusive, and have a form for dual and trial/paucal. The forms for dual, trial/paucal and in some isolate cases for quartal is represented in different degree in all the plural forms. This feature is widespread in most of the Kenyah variants and in other Borneo languages (see Soriente n.d. and Smith 2015). In Punan Tuvu' the pronouns can be preceded by particles *ne*, *pe* and *ke*. The difference in meaning in these pronouns can be explained pragmatically; therefore the particles *ne* and *pe* can have an emphatic function, whereas *ke-* can function also as an information structure device.

In Òma Lóngh, as already mentioned, plural forms often distinguish dual vs. trial as well as inclusive vs. exclusive. From the three tables above it is apparent that the dual and trial/paucal forms are derived from forms, which contain the numeral *devó* 'two' and *tele* 'three', which are consistently used to mark the case of two people in the plural.

In the examples that follow, the dual is obligatorily marked, i.e. for the third plural person *évó* (57), the second plural *kavó* (58), the first plural exclusive *mévó* (59) or first dual inclusive (60).

57. *tè Mencalèny tè ta'èny évó fadi ba'an ne te*
    go Mencaleny go see 3DUA sibling say people towards

    laminy évó ta'èny
    house 3DUA see
    'Mencalèny went to see the two siblings at their home'. (Iwan)

58. *có ènem kavó zi? kónyó ti'i zé me évó*
    one what 2DUA this say=3SG there that towards 3DUA
    'What's the matter with you? He said to them'.

59. *é rae mévó neghene'*
    PRTCL voice 1PL.INCL.DUA AV-tell a story
    'We were telling the story'.

60. *tè tó nótóngh é Buzu kenae Mpé*
    go 1PL.INCL.DUA AV-burn PRTCL Buzu say-3SG Mpé
    'Let's go burn it, Buzu, said Mpe'. (Sabo)

As far as the trial/paucal *tele* is concerned, it is mostly used to refer to groups of three or more but actually it often used to refer to a small group of people. In (61) the term refers to a group of Òma Lóngh people. The speaker, the priest Loli Dongo, tells the story of a group of Òma Lóngh who decided to move from their original village upriver to another village located downriver. Here the first inclusive pronoun *éle* is employed in the same sentence with the numeral *tele* 'three' and shows the exact same function.

61. *bezu sai   tele òbèny ngkiny éle   raam*
    big   happy 1TRI RES   take   1PL.INCL inside

    fulu òmèny de' tè felafó   neghi   re
    ten   year REL go CAUS-pass PRTCL-this people
    'We feel very proud because we took 'our people' down here in ten years'.
                                                                (Kayang)

The use of pronouns derived from numerals can also be seen in Lebu' Kulit. We can see this in examples (62) and (63), where the numerals *dué* and *teleu* are identifiable in the third dual person to which it corresponds (see the example (62)) and in the first and second dual where the forms *me'é* and *kam ué* where the numeral *dué* is obviously recalled. The inclusive form *tua* is a fusion of the Austronesian first inclusive pronoun **kita* and the numeral **dua* (see Blust 2009:318). An example sentence of the first inclusive dual *tua* can be seen in (63).

62. *turo   na   tua   ko' umé   ni   ken dué*
    spend.night PRTCL 1PL.INCL.DUA LOC ricefield this say two

    o   di'   turo   na   dué o
    PFCT PRTCL spend.night PRTCL two PFCT
    'Let's spend the night at the ricefield here, they said and so the two
    of them did spend the night there'.   (Pebaun)

63. *un   na   ketai maya   dau o   di'   nteng na*
    exist PRTCL IRR-go slanted day PFCT PRTCL don't PRTCL

    tua   sa'   tai uli'
    1PL.INCL.DUA forced go go.home
    'Since it is already afternoon (the sun has set), let's avoid going home'.   (Pebaun)

On the other hand the Lebu' Kulit numeral *teleu* 'three' corresponds to the' first trial inclusive and exclusive personal pronoun. In some cases it occurs as a replacement of the inclusive pronoun, as in the examples below, where *teleu* is used as a pronoun that identifies the group of Lebu' Kulit, as opposed to the other people. It is indeed the most commonly used inclusive plural first person pronoun. It is the only pronoun found in recordings in situations where the Lebu' Kulit people talk about themselves as opposed to others, as in examples (64) and (65) where *teleu*, the trial/paucal person indicates a plural and is actually referring to the Lebu' Kulit people when they decided to start their moving from the original village. The fact that a paucal pronoun, corresponding to the numeral 'three', is used to become a default first person plural pronoun can be explained with the fact that it refers to a limited group of people. In this very specific case the

group of people in question was indeed small, a part of a community; in the past when people moved, it never happened altogether, but by small groups of people. In (64) *teleu* functions as a full pronoun, whereas in (65) it is preceded by the first plural exclusive pronoun.

64. *mbei teleu tu'é ketai kempei-kempei un*
    NEG 1TRI can IRR-go RED-LOC-mpei exist
    'We could not go anywhere'. (Paran)

65. *asat mé' teleu neng janan da da di' sé*
    path 1PL.EXCL 1TRI at road PRTCL PRTCL PRTCL one

    bulan teneng-teneng lu' mé' teleu
    month RED-exact PRTCL 1PL.EXCL 1TRI
    'Our trip took us exactly one month on the road'. (Paran)

In Punan Tuvu' the dual and trial are forms probably derived from two fused morphemes; however, the numerals *duoh* and *toluh*, which they contain, are hardly identifiable as a result of phonological reduction. The form *tero* 'we three' indicating the first plural inclusive person refers to a group of three persons and often becomes the first plural inclusive per default when it refers to a limited group of people like in example (66). The dual forms *karo, tou* and *kevo* are employed in examples (67) through (69) and in none of them the numeral *duoh* 'two' is easily identifiable. The form *karo* has a very low occurrence and can indicate an exclusive first plural pronoun that has a paucal meaning referring to a group of two, three of few persons.

66. *tero inih rih tero morip jét*
    1PL.INCL.TRI this there 1PL.INCL.TRI INTR-life bad

    iné' hén inih
    because 3SG this
    'We definitely… we had a difficult life because of that'. (Kasim)

67. *uvaq nén déh togon karo lemok*
    new 3SG go while 1PL.EXCL.DUA come
    'He just went and we two came back'. (Kasim)

68. *tou kah nyapai?*
    1PL.INCL.DUA go where
    'Where shall we two go?' (Amat)

69. *pékan kevo lulung kah*
    RECP-eat 2DUA first go
    'You two eat first and then you go'. (Amat)

The use of plural number is sometimes used to indicate social relationship. As a form of respect toward the interlocutor, the plural form can be used in place of the singular, as illustrated by the example (70) from Òma Lóngh. In this example, the speaker is

talking to an older man and he is addressing him with the plural form *kam* instead of the singular form *ku* or *cu*.

70. *nya   ngèny mate   amen   kam   re   fetó'   méé*
    hmmm   with   N-dead deceased father   2PL   person RECP-link like.that
    'Hmmm, with your deceased father, like that'.   (Iwan)

6.2 Social deixis
The kind of social deixis hereby plural forms of the pronouns are employed in place of the singular, is also sometimes used in Lebu' Kulit and Punan Tuvu'. Actually the real form of social deixis is the use of nominal expressions for an addressee (sometimes also an addressor) that is not referred to by a pronoun, but rather by a kinship term or a common name. This feature implies that the addressee is referred as a father, a mother, a younger brother, an uncle, depending on the relationship of the addressee and the addressor regardless they are relative or not. It is interesting to notice that the use of pronouns substitutes refers not only to the addressee but also to the addressor. This phenomenon widespread in Indonesian (Kaufman, 2014) and in many languages of South-East Asia as a feature of pronoun avoidance (see Helmbrecht, 2013, Collins, 2014) is explained by Blust (2009: 316) as 'de-individuate personal deixis and functions to create a system of what might be called 'insinuative reference' rather than one of determinative reference'. The nouns that replace personal pronouns change following events of life like the fact that a person has become a widow or an orphan or has become a granddad or the father of a son or a daughter. Kinship terms and a complex system of appellation involving teknonyms, necronyms, gerontonyms is widespread in many parts of Borneo where these names are used as forms of address and are extended in some cases to non relatives. It is therefore appropriate to address anybody of the age of parents as *Amai, Amè or Mé'* 'father', somebody older as *Pui, Pe* or *Adu* 'grandfather',[12] or a widow as *balu, bale, baluh* in Lebu' Kulit, Òma Lóngh and Punan Tuvu' respectively. In example (71) below from Lebu' Kulit, the interlocutor is simply addressed with the pronoun substitute indicating a grandfather instead of the second singular person as a form of respect being him a senior in comparison to the speaker.

71. *Pui,   mpei mé'   uva' un!*
    grandfather NEG   1PL.EXCL want exist
    'Thanks, sir we do not want it!'   (Tulung)

In Punan Tuvu', a particle generally located at the end of an utterance that indicates the relationship between the interlocutors, is also extensively used. More specifically persons who are personally intimate end the utterance with *toi* if the two are males (ex. 72) and *boh* if the they are females or if they are husband and wife (ex. 73).[13]

72. *kou déh nyan umoh   lou inih toi?*
    2SG go   at   ricefield day this PRTCL
    'Are you going to the ricefield today?'   (Amat)

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[12] A detailed description of the system of appellations among the Kenyah is in Whittier, P. (1981), and other ethnographic descriptions like Whittier, H.L. (1979), Rousseau (1990) and the Punan Tuvu'/Tubu in Césard (2009).
[13] This feature was not recorded in Òma Lóngh and Lebu' Kulit but in other Kenyah languages like Uma' Lasan and Uma' Alim spoken in the Pujungan district in North Kalimantan (Soriente fieldnotes, n.d.).

73. *pén   nuh   ungéi   yé'   boh*
      take   2SG   water   for.me   PRTCL
      'Take some water for me!'   (Amat)

7. Comments on grammaticalization

It has been widely noted in the literature that demonstratives frequently undergo grammaticalization becoming grammatical markers. As Diessel (1999: 114) notes,

> crosslinguistically demonstratives provide a common historical source for a wide variety of grammatical items such as definite articles, relative and third person pronouns, copulas, sentence connectives, complementizers, number markers and possessives.

The demonstrative systems discussed in this paper also show clear evidence of grammaticalization in the three languages studied here.

As discussed in section 3.1, the demonstrative forms *ji/jé* in Òma Lóngh are bimorphemic, and consist of an initial demonstrative morpheme slot (occupied by *j-* 'singular' vs. *d-* 'plural/mass') and a second morpheme slot, occupied by the morphemes *–i* 'proximal and *–é* 'distal'. The demonstrative morpheme *j-* (and its variants *z-* and *ny-*) are also the base for the 3SG pronoun in its independent form *jó* (see Table 1 in section 6.1). The same happens for the plural demonstrative form *di/dé* that becomes the base for the impersonal form *de* and the relative pronoun *de'*. Anaphoric demonstratives derive historically from exophoric demonstratives: the anaphoric forms *ji'i* and *zi'i* are related to the exophoric demonstratives *ji* and *zi*. The same process explains most of the manner and time deictics where the binary spatial opposition seen in the demonstratives between *ji* and *jé* is extended to the temporal deictic *mii/méé* and the manner deictic *mi'i/mé'é*.

Grammaticalization process can explain the polyfunctional 3SG clitic pronoun *–e* that is often used as a determiner or associative marker beyond its use as a pronoun and a possessive marker. It is worth noting also that the demonstrative particles *ne* and *te* have developed an evidential function. Diachronically it is likely that these particles were directionals that marked the opposition "towards the speaker" and "away from the speaker", deriving from the deictic verbs for 'come' *nè* and 'go' *tè*.

In a parallel way we can see how Lebu' Kulit demonstratives are the source of other grammatical functions like pronouns, anaphora, relative pronouns, manner and time deictics. Lebu' Kulit also shows evidence of a morphological relationship between deictic and pronoun systems. The three independent deictics in Lebu' Kulit, which are *ini, inyé* and *iri*, appear to share the same stem, *i-*, with the 3SG'and 3PL independent pronouns *ié and iré*. Among the three demonstratives, the medial deictic *inyé* is the most closely related to 3SG pronoun *ié*. The demonstrative stem *i-* is also part of the anaphoric deictic *irai* that that is combined with the adverbial *rai* 'earlier' Although the opposition between singular and plural is not marked in the demonstrative pronouns, it is marked however in the relative pronouns *iya'* and *ira'* that contain the stem *i-* shared by the 3SG pronoun and the demonstratives. As seen in 4.2, demonstratives and location adverbs exhibit the tripartite distinction consisting of proximal, medial and distal. The same distinction is mirrored in the manner deictics, whereas only the proximal deictic *ini* is

the source of the time deictic *nakini* 'now'. Exactly like in Òma Lóngh, the polyfunctional 3SG clitic pronoun –*a* is used as a determiner or associative marker beyond its use as a pronoun and a possessive marker. The demonstrative particles *na* and *ta* have developed an evidential function based on the opposition "towards the speaker" and "away from the speaker", deriving from the deictic verbs for 'come' *nai* and 'go' *tai*.

In Punan Tuvu' a grammaticalization process can explain the similarity between the medial distal demonstrative *irih* and the 3SG pronoun *rin* that also functions as a possessive. The distal demonstrative *inah* is mostly used anaphorically and in its short form *nah* corresponds to the copula and existential verb *nah*. The proximal and distal demonstratives *inih* and *inah* occur in the temporal and manner deixis such as *lou'ah* 'that day, then' and *jainah* 'that way', as explained in 5.3.

8. Deictic expressions calqued in the contact language: *Bahasa Indonesia*

As it is well known, the national language *Bahasa Indonesia* is exerting considerable pressure on the local languages of Indonesia, replacing local languages in many domains of language usage. Needless to say, Indonesian has affected the way that local languages are spoken, and in many cases, local languages affect the way in which local colloquial Indonesian is spoken. I would like to point out that some important features the languages discussed in this paper have been transferred into the Indonesian spoken in Borneo. For example, the local colloquial Indonesian employs a dual pronoun, which most certainly is a calque from the local languages. Example (74) produced by a Punan Tuvu' speaker shows how the first singular inclusive pronoun *kita* is followed by the cardinal numeral *dua*. This form functions as a dual pronoun (a form which is obligatorily used in Lebu' Kulit). The Indonesian numeral *dua* is very often employed by Lebu' Kulit and Òma Lóngh speakers when speaking Indonesian. Punan Tuvu' speakers use similar forms when employing plural personal pronouns that refer to two persons, animals or things.

74. *ayo   kita   dua   makan!*
    EXCLM 1PL.INCL   two   eat
    'Let's eat!' (the two of us)   (Amat)

Direction terms offer another example of interference from local languages on Indonesian. Speakers of local Indonesian use frequently use the terms 'upriver' and 'downriver' to express location in contexts where the use of these terms would be otherwise infelicitous in Indonesian. As we have seen, the upriver/downriver opposition plays an important role in languages like Òma Lóngh, Lebu' Kulit and Punan Tuvu', since the speakers of these languages traditionally depended on rivers to survive.

In example (75), where a Lebu' Kulit speaker who is referring to Jakarta (which is nowhere near downriver regions of the Kayan river) uses the expression *milir* 'downriver'. Example (76) produced by a Òma Lóngh illustrates how the village of Setulang, in a position upriver with respect to the sea, is considered the place where to go back to, 'upriver'.

75. *kapan   milir   ke   Jakarta?*
    when   go downriver to   Jakarta
    'When are you going (downriver) to Jakarta?'   (Tulung)

76. *kapan   mudik   ke   Setulang?*
    when   go upriver   to   Setulang
    'When are you coming back (upriver) to Setulang?'   (Kirit)

Similarly in example (77) below, a Lebu' Kulit lady at a market asks whether the rice she intends to buy is local rice. Here, she uses the expression *dari hulu* 'from upriver' because generally this is the place where the rice fields are located, whereas she refers to imported rice using the term *hilir* 'downriver' (78).

77. *ini   beras   dari   hulu?*
    this   rice   from   upriver
    'Is this rice from upriver?' (referring the village as asked in the big town).
                                                                   (Pebaun)

78. *beli   di   hilir?*
    buy   LOC   downriver
    'Did (you) buy (it) in town?' (lit. downriver) (referring to Tarakan or also
    Jakarta, any big town at the estuary of the river).   (Pebaun)

The opposition upriver-downriver *hulu-hilir* has taken on a broader metaphorical meaning. *Hulu* 'upstream' has come to refer to local/village life. In contrast *hilir* has come to refer to big towns, particularly those located at the river estuary (like Tarakan, a large island which is one center for commerce in the region, and which located at the mouth of the major rivers flowing through the region of the Kenyah and Punan people).

9. Conclusions

As I have demonstrated in this paper, the deictic systems in Kenyah Lebu' Kulit and Òma Lóngh and Punan Tuvu' exhibit core similarities, but also diverge from one another along various grammatical dimensions. Comparison of Òma Lóngh, Lebu' Kulit and Punan Tuvu' reveals that at the level of micro-orientation, Òma Lóngh demonstratives distinguish two degrees of distance, whereas Lebu' Kulit and Punan Tuvu' demonstratives exhibit three-way and four-way distinctions respectively. In Òma Lóngh there is an asymmetry between the demonstrative and the locational adverb systems, whereas the Lebu' Kulit and Punan Tuvu' systems are symmetric in the sense that for adverbial expressions they exhibit three-way and four-way distinctions respectively. The same three-way distinction seems to be a common feature in many languages of Borneo.[14] The demonstratives in all of these languages are distance oriented and are employed in pronominal and adnominal positions.

    If we look at the macro-orientation distinction, in all the languages the expression of spatial deixis is closely tied to the geography and topography of the area where the

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[14] Blust (2009: 306), for example, reports the same system for Uma Juman Kayan and Long Lamai Penan (Western Penan) and Mukah Melanau.

language is spoken i.e. since each of these languages are spoken in areas close to rivers, the opposition between upriver and downriver plays and important role in the expression of location. Indeed this distinction has also carried over into the regional version of Indonesian.

As far as person deixis is concerned, all these languages differentiate plural from dual and paucal number. Deictics moreover are used metaphorically to mark closeness or distance in time.

Finally demonstratives in the three Bornean languages studied here undergo grammaticalization becoming grammatical markers. The languages employ anaphoric demonstratives that are strictly dependent on the exophoric ones. In all three languages third person pronouns are derivationally related to demonstratives and so are the time and manner deictics. In Òma Lóngh dependent demonstratives and independent 3SG pronoun share the same stem and the same opposition between singular and plural. In Punan Tuvu' the copular verb *nah* 'to be' can be derived from the distal demonstrative *inah.*

Abbreviations

1 2 3 personal pronouns, AV actor voice, CAUS causative, DUA dual, EXCL exclusive, EXCLM exclamation, INCL inclusive, INTR intransitive verb, IRR irrealis mode, LOC locative, NEG negator, NMNLZ nominalizer, PFCT perfective, PL plural, POSS possessive, PRTCL particle, RECP reciprocal, RED reduplication, REL relativizer, RES resultative, SG singular, TRI trial.

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SOMMARIO

Questo contributo presenta una descrizione dei deittici spaziali e temporali in tre lingue indonesiane del Borneo nord-orientale cioè nelle lingue Kenyah Lebu' Kulit, Kenyah Òma Lóngh e in Punan Tuvu' appartenenti alla famiglia linguistica austronesiana. Il confronto di forma e funzione delle marche della deissi nelle tre lingue rivela una serie di somiglianze e differenze. La descrizione dei deittici in queste lingue permette di localizzare gli eventi linguistici e i partecipanti in spazio e tempo oltre a mostrare il rapporto tra dimostrativi e deittici dal punto di vista spazio-temporale e la codificazione del luogo nel contesto dell'ambiente circostante che lo caratterizza. Alla descrizione delle proprietà sincroniche delle marche deittiche si aggiungono anche delle preliminari riflessioni sui processi che hanno determinato la grammaticalizzazione di alcuni di questi deittici nelle tre lingue oggetto di studio di questo contributo.