

Homophony, sound changes and dialectal variations in some central Bornean languages

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Introduction

The reproduction of languages in changing and evolving forms seems more pronounced in societies based upon oral tradition. I became aware of these aspects of linguistic studies through the pluridisciplinary approaches developed by André-Georges Haudricourt. His works have been a stimulating influence, especially in regard to the related dimensions of synchronic and diachronic phonology, as exemplified by his ethno-linguistic perspective applied to a whole range of languages in the world (see Haudricourt 1961, 1968, 1972; Hagège and Haudricourt 1978).

The topic of the present article is much narrower in scope and concerns a region of Eastern Borneo (the province of East Kalimantan, Indonesia and geographically contiguous areas in Sarawak, East Malaysia). Though I am not a professional linguist, I shall consider, with limited data and space, a question which has been taken up at length by Hagège and Haudricourt (1978:67-74 *sq.* and 112-117 *sq.*). The persistence of opposition and / or the changes (phonological and morphophonemic) that have been taking place in particular languages; the related problem of homophony and its relevance in morphophonology will be dealt with only in very broad terms. By describing some sound changes in a group of related isolects and dialects of Kayanic, I will use not only synchronic analyses of phonological features or lexical variation, but also reference to extra-linguistic factors. The latter have also shaped the changes that have occurred in the course of time.

The Kayanic language group (or *subgroup* in a larger Kayan-Kenyah group, according to Hudson, 1978:28-29), is formed by three main linguistic components, the Kayan and Modang dialects and the various 'Bahau' isolects (I use the term mostly in a geographical sense,² it includes such languages as B, BT, P, Mu, see

¹ This article is based on ethnolinguistic field studies in Kalimantan and Sarawak and exchanges of views at the 'Programme pluridisciplinaire de recherche sur Bornéo' (PIBOR) at IRSEA (Aix-en-Provence, France). I am grateful to B. Sellato for making available to me his data on Merap and p. c. Many thanks to Bob Blust (University of Hawai'i) for providing the modified Swadesh word-list, and to A. Soriente for sharing with me her unpublished comparative word-lists of the Bahau-Pujungan area, and to Pak Simon G. Devung for his support.

² The Bahau-Pujungan area had been home to several Kayanic speaking groups who have scattered elsewhere in central Borneo (Bulungan, Berau, Kutai and in Sarawak, the Telang Usan or

Appendixes I and II; Guerreiro, 1988). For the sake of phonological and lexical comparison in the tables I have lumped the Kayanic isolects in two major groupings (K,B, Mu, P, (M) and MLL, MLS, PK, PM, PS, W, LW, LB, LG). These languages are part of the Western Malayo-Polynesian branch of Austronesian (see Blust 1974, 1984; Hudson 1978:1-2; Peter W. Martin (ed) 1994). At this point the distinction proposed by Hudson between *Western* (found in the Baluy, Tubau, Baram areas of Sarawak, the Mendalam and upper Mahakam in Kalimantan) and *Eastern* Kayanic (other isolects of East Kalimantan) does not present much classificatory advantage, because all these languages originated from the northern part of East Kalimantan, the Bulungan area, before the Kayan-Busang, Bahau and Modang-Menggaè subgroups scattered to other regions in central Borneo at different periods. In previous studies much attention has been given to the Kayan and closely related languages such as Murik, and Bahau Triing: ng, Pua', in contrast to the Modang isolects (Barth 1910; Blust 1974; Clayre and Cubit 1974; Cubit 1964 (1990); Devung 1981 a, b; Rousseau 1974; Sombroek, 1986; Soriente 1994; Southwell 1990). In this article I will concentrate rather on Modang. Presently, the Modang subgroups show a wide spatial distribution within the province of East Kalimantan (see Map), covering about 450-500 km from North to southwest and North to southeast (Guerreiro 1993). They have the particularity of presenting small populations in scattered communities. A rough estimation would be about 6,000 speakers for the nine languages (including the three Punan dialects of upper Berau, PK, PM, PS). The Kayan-Busang and related Bahau and other Kayanics, i.e. the Kayan-Mahakam, Merap, constitute a larger grouping, concentrated on the Mahakam and its eastern tributaries in Kutai and Bulungan, in all about 16,000 speakers in the province. Thus, it is not surprising that these isolects are currently progressing at the expense of the Modang in some areas where they have common settlements—a fact related to their common background and

Baram region). Some of them have retained the name or toponym, Bahaw, Bahao, Baho, combined with another term or ethnonym: Bahau Hwang Triing, Un Bahaw (=‘the Bahau people’), Uma' Baw, Tembaue. Other peoples such the Pua', Ngorek (Murik, Ngore'), Ga'ay (Modang) and Merap originate also from the same region (as discrete ethnolinguistic entities), however, they have maintained a specific social and cultural identity during their migrations.

Besides, they are classified as *Kayan* by Kayan and some Kenyah speakers in Bulungan and Berau, i.e., Kayan Pua', Kayan Ngurik, Kayan Bahau, Kayan Ga'ay, Kayan Merap. Because they have some linguistic as well as cultural affinities with the Kayan proper (U. Lekan, U. Laran, U. Héban, U. Apan, the subgroups living in the lower Kayan area, and before in the Apo Kayan).

Whereas in the Mahakam Basin, the same term 'Bahau' has come to designate broadly the Kayanic subgroups that have migrated from the Bahau River *through* the Apo Kayan area. The term has also taken another, narrower meaning. It functions as an emic classifier, stressing linguistic identity locally in two major geographical groupings, Bahau-*baté* (or Bahau Hwang Sa' in the middle Mahakam area) and Bahau-*ja:n* (or Busa:ng/Busang living mostly in the upper Mahakam, above the big rapids). The negatives, *baté* 'not, there is not', and *ja:n* 'no, not that', are used as ethno-linguistic markers to refer to each other. It should be noted that the common negatives do vary in Kayanic; for instance, in Bulungan the Kayan Uma' Laran (they have been referred to in previous publications as Melarang), say *beté*: 'no, not' and *am t é' nun*, 'there is not, there is nothing' while the Uma' Lekan say *jité' nun* and Uma' Lasa:n / Uma' Lasan *am t é' '* (Baluy Kayan: *jinun*); or in Bahau Sa' language, *mian t é* 'there is not' (Ujoh Halang and Long Kelian). Only in the Mahakam have the negatives become ethnic classifiers. Finally, in this region, 'Bahau' may also refer indistinctly to all 'upriver people', irrespective of their place of origin; for instance, the Bukat, Aoheng, Seputan, Penyawung living in the upper reaches of the Mahakam and Kapuas are also included in the category.

socio-political similarities—or neighbouring villages (upper and middle Mahakam, lower Kayan and Pangéan R.). I should point out that the tentative dialectal regrouping given in Appendix II is fragmentary and should be considered as a preliminary survey only.

My approach is based on the hypothesis that the processes of linguistic and cultural differentiation are matched and that they have been determined by continuous migrations during the past centuries. The earlier separations seem to have occurred about three hundred years ago, but the last dispersion of the subgroups on a wide geographical scale, from the late 1700s onwards, has accelerated the process of linguistic change. Then, the Modang subgroups left the Apo Kayan area (upper Kayan river and Kayan uk river), the Pujungan-Bahau area, to establish themselves in the lowlands of Kutai, Berau and Bulungan (lower Kayan, Malinau). Later migrations were caused by Kenyah intrusions in the same regions. These moves and the fragmentation of communities and interactions with other speech communities (Kelabitic/Apo Duat, Kenyah) have resulted in interesting lexical and phonological variations within Kayanic, especially some rare sound changes high incidence of diphthongisation, consonantal clusters, vowel clusters, gemination. These extreme phonological changes have greatly affected intelligibility *vis-à-vis* other Kayanic speakers, even among those living in the same settlement. For instance, it is perceived by Busang speakers of the upper Mahakam when they qualify something incomprehensible as *dahun Long Gela:t*, i.e. 'the Long Gelat language', which they do not usually understand (except in the case of bilingual children of a Busang-Long Gelat couple, adopted children or some Busang village chiefs). More generally, the same can be said of the Modang in other areas, but the latter have no difficulty in understanding or learning Kayanic isolects.

The factors of change

To state briefly Haudricourt's argument, phonological opposition can be interpreted as reaction of language to the risks of confusion (as expressed by contrast in minimal pairs). What factors explain the persistence or disappearance of these oppositions? What are the consequences of frequent homophony in language? Are there any morphophonologic correlates? For instance, in regard to syllabic structure. To introduce this point, I will analyse some lexical items and their dialectal variations in East Kalimantan/Sarawak Kayanic languages, although I am not attempting here a reconstruction of the protolanguage common to one dialectal group or all Kayanic speakers. In the case of the Modang isolects, I posit that short time sound changes have been also triggered by extra-linguistic factors. The latter are not limited to Borneo; they operate in other Austronesian areas in Southeast Asia (the Chamic tongues) and the Pacific, e.g., the fragmentation of speech communities in Micronesia, Melanesia related to colonisation of new areas (Belwood 1991). The socio-linguistic and cultural factors can be summarized below:

- migrations along river-drainage basins, from upstream to downstream areas (reflecting mostly NS, NW/NE axes in East Kalimantan);
- small communities, average about 300-350 inhabitants, in marked contrast to Kenyah settlements found in the same regions;

- fragmentation of communities, i. e. fissions in two or three sections for political / ritual reasons;
- high level of differentiation of speech communities in the same river basin within the range of one or several language groupings, polyethnic settlements;
- a dominant *lingua franca* imposed on smaller groups, as well as assimilation of smaller groups of speakers (20 to 50) into larger communities causing interferences;
- temporary alliances of the minorities with other communities (caused by warfare and head hunting till the 1920s) resulting in selective borrowing of lexical items and / or sound changes within one or both languages (depending of the demographic size of the groups). This process was repeated several times in a generation span.

Finally, a social factor which may have been influential in central Borneo, as opposed to other regions of the island, the broad division of society into aristocratic (practicing village exogamy) and commoner ranks (practising village endogamy); furthermore, up to the first half of this century the presence of a slave stratum, even of limited importance, in most communities was a cause of change,³ accelerating the evolution of the language(s) in the settlement, a kind of low-scale creolisation.

The maximal spatial unit is formed by the river basin, structured by upstream / downstream oppositions (*hulu-hilir*), within this 'social space', relations between groups shape the forms in which cultural, linguistic and political elements are constructed (Guerreiro 1995). Thus, phonological and lexical markers including the ethnonyms, endonyms and exonyms for neighbouring ethnic categories or settlements—reflect the identity of a community, but also the extent of its social network in the whole area (expressed as a set of horizontal and vertical relations). Local groups are mobile and they interact, so their relationships are bound to evolve in time as a structured system binding together the various communities in a river system (swidden agriculturists, nomadic hunters-gatherers, horticulturists or the different combinations of these subsistence systems). The larger the basin, the more complex are the interactions between the communities that support the linguistic

³The Kayan Mahakam language in Long Kuling (formerly Long Blu'u, Long Paka') has passed through an internal transformation in about a century (1790-1890), because it became strongly creolised with the speech of their numerous Pin slaves (probably several dialects related to Uut Danum and other languages, see Sellato 1980). They said their original language was similar to the standard Kayan-Busang spoken as a *lingua franca* in the upper and middle Mahakam. According to their oral tradition, they came from the Apo Lalang region (?) in the Apo Kayan, where they lived side by side with Bahau and Busang subgroups. The language spoken by the Busang Uma' Pala' in Long Tuyu', a small group, curiously presents many cognates with the Long Kuling's speech. The U. Pala' (or Bato' Pala' from the name of their former settlement on top of a hill) were subjugated by the Long Gelat in the first half of the 19th century, whence their name *pala'*, 'taken, brought back (by us)'. But they may have shared a settlement with the Kayan Mahakam in the past (or with Pin related groups?). Then, the position of Aoheng (and Seputan, Penyawung) in the upper Mahakam and upper Kapuas and its relationships with other Kayanic languages remain to be analysed further (compare Barth's 500 items word-list of Long Blu' u with Busang and Penihing (Aoheng) and Long Gelat cognates, 1910: 234-279 and XII-XIII; Hudson 1978: 29, 32; Sellato 1980: 43). Because of the changes that took place (lexical and phonological), Kayan Mahakam and Busang languages are not mutually intelligible, but most Kayan Mahakam males can understand or speak Busang (see also Cense and Uhlenbeck 1957: 33-34, 38).

affiliations in the ethnic categories concerned ('Kenyah', 'Bahau', 'Kayan', 'Ga'ay' are some examples) The puzzling linguistic differentiation in the Baram-Tinjar, Mahakam, and the Kayan areas reveal also the intricate imbrication of 'newcomers' and 'original' populations in a wide area (see Blust, 1984; Rousseau, 1990). Language is linked to ethnic and social identity in several manners, and I will return later to this topic.

One could note that these phenomena have passed largely undocumented, even if the earliest reports are dating back to the 1820's-1840's for East Kalimantan. The fact is that they contain little reliable linguistic information (vocabularies, elements of grammar, language situation, settlement composition) that could support comparisons in a diachronic perspective or lexicographic studies (see the comments of Peter W. Martin 1994:IX-XII). Furthermore, widespread use of Malay language by travellers and officials (through interpreters) during the 19th century, has limited the extent of first-hand material collected in local languages.

In such a situation, the boundaries between language and dialect fluctuate, and in many cases it is not easy to decide on immediate affiliations or larger regroupings (see Ngau 1989; Sellato 1991; Soriente 1994:6). Difficulty is added by the fact that socio-cultural and historic processes have been running parallel to structural changes in *both* Kayan and Modang isolects after their separation(s), as shown by regular phonological correspondences, morphophonological features and lexical innovations (non-cognate lexemes). Some characteristic features can be noted for Modang (probably also for Merap) in contrast to other Kayanic isolects, Kayan and Bahau:

- deletion of initial vowel in bisyllabic nouns, producing consonant clusters in most isolects;
- widespread phenomenon of diphthongization, occurring not only in word-final but also in word-medial and word-initial positions;
- high incidence of vowel clusters, i.e. succession of two vowels (and often metathesis, from one isolect to the other);
- lengthening of vowels in open syllables (both in monosyllabic and bisyllabic words);
- gemination of consonants, usually in word-medial position (interestingly, this feature is also exhibited by the Pua' isolect; see tables for examples).

Dialectal variations in Kayanic

However, the main phonological opposition between Modang and other Kayanic languages is marked by the non-occurrence in the former of /r/ or <r>, a dental alveolar flap or trill, or the uvular <R>. In Modang, the alveolar lateral fricative <l> is realised in all environments (word-initial, word-medial, and word-final positions):

/long/ 'river'; /heluk/ 'boat' 'dugout'; /ol/ 'upper reaches of a river' (W)
It corresponds usually to /r/ in the Kayan isolects of Sarawak and Kalimantan (K, KB, K1, K2, K Me):

/maring/ /marieng/ vs /mahling/ W /mahaleny/ LG 'new'
/haruk/aruk/ vs /heluk/ W /haläwk/ LG 'boat' 'dugout'

or sometimes to /d/:

/madang/ /mada:ng/ vs /mléang/ W /meliang/ LG 'to fly'

In Kayan-Busang final /-r/ alternates also with /-n/ and /-l/ in dialectal variations: /anyor/ /anyon / /anyol / 'to drift' 'drifting' (For the Baluy area see Rousseau 1974; Barth 1910; Sombroek 1986 for the Mahakam). Furthermore Kayan-Busang presents also free variation between /r/ and /l/; this can be seen in intervocalic position in the first syllable (CṾVCVCVC):

'star' /kerawing/ ~ /kelawing/

'offering tray made of plaited bamboo' /baraka'/ ~ /balaka'/ /belaka'/

In Kayan-Busang (K, KB, K1, K2, K Me), it seems that /r/ is neutralized in word-initial position, but there are exceptions to this rule (see Barth 1910:193; Southwell 1990:367). It is obvious in loan-words from Malay-Indonesian or English. On the other hand, this feature does not appear in other Kayanic isolects such as B, BT, Mu, P, and also M (see tables 2, 3, 4, 5 for examples).

The other phonological feature which distinguishes Modang dialects within Kayanic, is the occurrence of the phoneme [tʃ] /c/ a voiceless palatal affricate, articulated sometimes as a pre-palatal affricate [tʃ̟], in the Modang isolects of Berau (MLL, MLS, PK, PM, PS and I suspect it is the case also in the Bulungan Mengga' ay). Whereas the voiced palatal affricate [dʒ] /j/ is present in all Kayanic languages. In a previous publication (Guerreiro 1988:177), I proposed the hypothesis that the phoneme /c/ in MLL and MLS was a borrowing from a Punan language. (The Punan of the upper Kelai came from the Apo Kayan area, Kejen or Kejin in Modang, following some Menggaè when the latter entered Berau in the early 1800s. In the past, they formed only one local group which has split now into three subgroups, respectively, on the upper Kelai, Mahkam and Segah rivers.) One could remark that comparison of cognates in Merap and MLL, MLS, PK opposed to LG shows regular correspondences; this is particularly striking in monosyllabic nouns in word-initial position:

'one' /ncey/ M /ci'/ PK, MLS vs /si'/ LG

'rain' /câe/ M /ci:n/ PK, MLS vs /sûyn/ LG

Thus, rather c > s, than the other way around. The same sound change seems to have affected other words, such as the verb 'to be, to exist' /cè'/ MLS, PK, /té' èa:ng / LG / tè / W; c > t. For these items Kayan and B, BT, P show some regularity: /ji'/ /ji/ and /nji'/; c > j/ nc > nj. Besides, Pua' presents a rare occurrence of /c/ in medial position, the verbal compound 'to lift' /mencu/ formed by the verbal prefix /me-/ on the base /ncu/, also a monosyllabic noun.⁴

⁴ In Sa'ban Clayre attributes the production of this cluster as the others (/nt/, /nd/, /ns/, /nj/, /nr/, /nw/) to vowel deletion. It appears, for instance, in word-initial position in the 2nd singular pronoun /ncéh/ (Clayre 1994: 214, 220). One could note that in Pua', however, /c/ seems to be neutralised in word-initial position as demonstrated by the realisation of the Kenyah loan-word 'animal' /çen/ > /sen/ P (Soriente 1994: 12 and items 234-235). Similar sound changes have occurred in Modang (Kutai) and Kayan, generally for Malay-Indonesian loans: 'enough', 'sufficient' çukup > sukup, 'example' çontoh > suntoh (on this point see Cubit 1964 (1990): 472).

Generally, in Modang the phenomenon of vowel deletion in bisyllabic words produces monosyllabic words (from bisyllables in cognate Kayan-Busang lexemes):

'bush-knife' /malat/ /mala:t/ (K, KB, K1, K2, K Me) > /mlaèt/ W 'iron'
 (note: /malat/ 'iron' P) > /mlèak/ LW 'iron' (metathesis of aè ~èa)
 'night' /malam/ (K,KB, K1, K2) > /mlam/ 'night' (in counting only, otherwise /maèdam/ 'night')

This feature appears also in bisyllables:

'to train (or learn)' /pekalé/ /pekaley/ (K, KB, K1, K2) > /peklaè/ W (base: /kalé/ or /klaè/, the prefix /pe-/ indicating reciprocal, mutual action, forming a reciprocal verb; in some cases vowels, p̄a or p̄e, can be dropped, see Clayre and Cubit 1974:81)

However, it has not happened in LG: /meli:t/ 'iron'; a similar feature can be noted for another item in Modang, but in this case without sliding in the semantic field: 'live, 'living' /bela:m/ LG /belam/ LB > /blom/ (MLL, MLS, PK, W). It seems that in some cases sound changes from Kayan (or other Kayanic isolects?) towards Modang are also related to semantic derivation, but these remain to be studied carefully with a larger sample.

Phonological change in Kayanic can be checked further from the comparison of selected lexemes, for instance, those showing the reflexes of PAN *J and PAN *D. In Bornean languages in general they are characterized by the 'Blust phenomena' (see Hudson 1978:16-18, 31-32 for Kayanic). These reflexes give indications of irregular sound changes in Modang and other isolects (B, BT, Mu, P) as opposed to Kayan (K, KB, K1, K2, K Me). PAN *J is reflexed by /r/ in 'nose', 'name', 'padi' and by /d/ in 'day', while PAN *D is reflexed by /d/ in 'two', 'blood', 'leaf' (see tables 2 and 4, 5).

In the second grouping in table 3, regular correspondences in sound changes between A and B can be noted, e.g., 'name' PAN *ajan > /aran/ and PAN *ngajan > /ngelan/. In B correspondences are regular for 'nose', with the exception of PK /yung/, probably a loan from Menggaè (MLS ?, MLL ?), the lateral alveolar fricative /l/ being articulated as a front close semi-vowel /l/ > y.

In Table 5, an interesting feature can be noted. Kayan exhibits regular sound correspondences while Bahau and Pua', Murik, and Merap have different reflexes of 'two' vs 'blood' or 'leaf'; in the selected Modang isolects PAN *D is reflexed by /l-/ in blood but the other items show some discrepancies: /s/ /c/ /u°/ in 'leaf' and /a/ /e/ /l/ in 'two'; these differences will be analysed in a forthcoming publication.

Homophony, sound changes and lexical innovation

According to Haudricourt, phonemic and morphophonemic cycles are linked. Short words are starting to sound more and more alike and cannot be distinguished anymore. In turn this trend would explain the increase in sentence

length and the 'simplification' of the vocalic system (but I wonder that this later feature is not relevant in *all* occurrences of the process; see Haudricourt, 1968: 298). In the case of a polysyllabic language, with short vowels such as /i/, <I>, /u/ or unstressed vowels /e/ are dropped, then the evolution towards monosyllabism is present (Hagège and Haudricourt 1978:81-83). In this respect, Modang shows a similarity with Eddê or Radé (a Chamic language spoken in the highlands of central Vietnam):

	Malay *	Cham Radé
'night'	<i>kelam</i>	<i>kelam tlam</i>
'bone'	<i>tulang</i>	<i>tulang klang</i>

* probably a dialect from Peninsular Malaysia (source: Hagège and Haudricourt 1978:82).

The changes that have occurred at word-initial position $k > t$ or $t > k$ are characterized by vowel deletion, /e/ and /u/. Radé, like Modang, exhibits also a rich consonantal system, a diphthongisation process and a strong tendency for evolution from polysyllabic words to monosyllabic words (like the neighbouring Jörai isolect). However, in these Austronesian languages of Vietnam the processes of change at phonemic and syllabic levels have not resulted in the development of tones (for such an alternative in a Chamic related language on Hainan, Huihui, see Shibatani, 1991; or the case of Paaci in New Caledonia, Hagège and Haudricourt 1978:119-122).

To return to the Borneo situation, in Modang a succession of two vowel clusters as demonstrated by Wehèa (/aé/ /éa/ /aè/ /a: è/ /èe/ /ea/ /i.u/ /ui/ /ie/ /ia/) in different environments is found beside diphthongs (/aw/ /ew/ /uy/ ay/ /ey/ /oy/ /oè/ /oeè/ /ow/), distributed in word-final position or even triphthongs in the Long Gelat isolect.

Interestingly, a similar phenomenon of vowel deletion has been described by Clayre (1994) for Sa'ban (known as Saben in the Bahau area of Kalimantan). Sa'ban language found in the upper reaches of Baram and Bahau belongs to the Apo Duat language group (the related isolects are: Lun Bawang, Lun Dayeh, Kelabit, Tabun, Tring / Long Terawan and those still undocumented in the tablelands and mountainous regions along the Sarawak - Kalimantan - Sabah borders). The place of origin of Sa'ban as a distinct ethnolinguistic group seems to be the Bahau Basin. Then, they may have had prolonged relations with Kayanic speakers, such as Murik, Bahau and Modang, besides the Kelabit-Lun Bawang in the North to whom they are linguistically related, when living in the upper Bahau. Now, the closest neighbours of the Sa'ban in both areas are Kenyah speakers (see Blust 1984:116-121; Clayre 1994; Murang 1989:185-187; Soriente 1994). Clayre's study has also underlined the grammatical aspects of change in the morphology of Sa'ban in contrast to Lun Bawang, with the development of auxiliary verbs, loss or petrification of some prefixes, processes which can be noticed to some extent in Modang isolects.

In Long Gelat, at the western extremity of the Modang dialect chain (upper and middle Mahakam), homophony produced some extreme phonological changes, causing semantic derivation or lexical innovation from Kayan, and presumably Bahau, to Modang. In Table 2 comparisons are given for other dialects in Berau and Kutai; LG 'head' /daw/ # /diä/ 'day'; *en-daw* 'to sleep' (lit. 'to recline the head'). This should avoid the risks of confusion in speech, as exemplified by the lexemes for 'hand' and 'rattan' *gù*. It should be noted that presently phonological opposition is maintained between 'swidden' /maw/ and 'five' /ma:w/ (Table 4), but the tendency of the language towards homophony, especially in monosyllabic nouns may cause a further evolution.⁵

On the other hand, some Modang isolects exhibit lexical conservatism, particularly those of Berau which have been isolated from other Kayanic speakers for a long period. In Table 4 the words for 'head' /takhung/ (MLL) and /tekhong/ (PK) seem to be cognates of the Kayan lexemes, *kuhung*, *kohong*, *kahung* and one may add to the list *kong* (P). Penihing (Aoheng) shows also the word /tekohong/ 'head', obviously a cognate of PK/MLL (Barth 1910:250). Should it be interpreted as a loan or as a shared item with PK? It appears that the loss of the initial prefix /te-/ or /ta-/ in Kayan, is paralleled by the vowel deletion in the second syllable in MLL and PK /ku-/ /ko-/ /ka-/, while P has reached an extreme phase: *kohong* > *kong* by both deletion of vowel /-o-/ and loss of glotal fricative /h-/. Merap *ténga* is rather intriguing, as it may be related to the Kayan lexeme *telunga*' (K) 'facing', by contraction with /-lu-/ being lost (Southwell 1990:406). In Modang, except Long Gelat, the process of vowel deletion has resulted in the development of a whole range of word-initial consonant clusters (/pl/, /bl/, /tl/, /ps/, /ml/, /mn/, /mt/, /ms/, /mw/, /sl/, /sw/; these are mostly bilabial plosives and nasals while /pt/ and /bd/ are labio-alveolar fricatives). Some examples are given below:

	K, B, M	W	
'heart'	/pusu/	/ptsu'/	/pt/*
'sago flour'	/bulung /	/blung/	/bl/
'eye'	/mata//mata-n/ **	/mtan/	/mt/
'bone'	/tulang/	/tluang/ ***	/tl/

* /ptsu'/ # /tsu'/ 'seven'; but /ps/ is also distributed in word-initial position, e.g. /psaè/ 'paddle'

** *mata* 'eye' is one lexical item that fuses with the possessive pronouns: *matak*, *matam*, *matan* /*matan-na*' (1st, 2nd, 3rd person singular in Kayan-Busang; Guerreiro 1983)

***/tuang/ has been also recorded in some villages.

The perception of these features by Modang speakers themselves has led them to define their respective languages by stressing three linguistic criteria:

i) lexical paucity (many lexemes have polysemic value according to context,

W /du'/ 'head', /du'/ 'messenger' /du'/ 'leader, chief'; /bu'/ 'to grow' /bu'/ 'smell, perfume',

⁵In order to avoid too much confusion (and this is related to the larger number of speakers living in the same areas), Kayan isolects have maintained the opposition between the following items: 'swidden' /luma'/ vs /lima'/ /lima/ 'five'; 'rattan' /uwé/ /ué/ vs /usu/ /usu:/ 'hand'; 'stairs' (notched log) /san/ /sa:n/ vs /usan/ /usa:n/ 'rain'.

- ii) homophonic features and complex sound clusters (vocalic and consonantal),
- iii) syntactic intricacies, especially in elaborate or literary speech forms.

Furthermore, they comment that these features make the learning or even understanding of Modang arduous for outsiders. This seems particularly true for speakers of related languages such as Kayan - or Busang as indicated above - and Kenyah, more than Malay actually. However, Bahau speakers in the middle Mahakam or lower Kayan are said not to have much difficulties in understanding Modang isolects. Thus, according to these statements, ethnicity is closely linked to language, reflecting also cultural and *adat* affinities.

Some occurrence of gemination in word-medial position is noticeable for Modang in contrast to Kayan generally:

'body hair'	/bulu/ /bulu'/ K, K B, /bulun/ Mu 6	/bello:n/ LG
'open ground in front of the longhouse or the chief's house or apartment'	/latan/ K, KB, K 2 /lata:n/ K Me	/lettan/ W
'padi'	/paré/ KB, K2 /paray/ K, K1	/pellè:/ LG

From the borrowing of the Kayan lexeme for 'boat', 'dugout' /arok/ by Kejaman, a geographically contiguous language (belonging to the Kajang complex of the middle Baluy, Sarawak), Blust has reached the conclusion that this item would be probably ancestral to Proto-Kayan-Murik-Modang (Blust 1974:158; based on Ray's 1913 data, and other sources; see Table 6 A.). The reflexes for 'boat, dugout' such as M /lunuk/, seem to be related closely to the Modang word, *heluk*, *helok*, *haläwk* (because of the change that took place, $\underline{r} > \underline{l}$ in word-medial position and the loss of glottal fricative /h-/ in M; a metathesis of nu- ~ lu- ? in M). Proto-Kayan-Murik-Pua', Merap and Modang share a distinctive innovation in contrast to Kenyah isolects which exhibit /alut/ 'boat' (Soriente 1994:13, item 172); the Kelabit word /alud/ 'boat, dugout' is a cognate (Blust 1993:153).⁶

If basic lexical items, such as 'small' and 'big' are considered (table 6 B), one is struck by the limited innovation among the Kayan-Murik-Pua' as in Merap

⁶ According to Blust (1974:180), based on a lexicostatistical study of 180 items, Murik has 65% cognates with Kayan dialects in Sarawak, Uma Juman (Baluy) and Long Atip (Baram); respectively UJ-Murik 65.6% and LA-Murik 65.0% while UJ-LA have 83.9%. If my diagnostic is correct, one would expect similar percentages, say about 80% and 60%, respectively, between Pua' and Murik and Pua' and Kayan, especially if the Kayan dialect is geographically the closest, in Bulungan and Kutai, Uma' Lekan/U. Lasa:n. Furthermore, this isolect has been exposed to Kenyah linguistic influence while in the Apo Kayan. In the Mahakam some speakers of this isolect have come to be included in Bahau Sa' category, the Uma' Taliba' - the settlement is called Mataliba' - people in the Pari river, while in the Belayan R. they are still known as Kayan Uma' Lasan (the village of Long Lalang). Another group, the Uma' Talun, was perhaps related to them. Now the latter are 'Orang Kutai' living in the settlement of Tuana Tuha, downstream on the Belayan R. (*kec.* Kahala).

and Modang. In the latter subgroup, MLL/MLS are distinguished by the lexeme /ngan/ 'big' which may be a loan (from Kenyah Lepo' Taw? /ngan/ 'with, and'), but still *pehong* is more commonly used. Only LB produces an obvious innovation with both lexemes for 'small' and 'big', respectively *emauk* and *ekaw*'.

Conclusion

In this short article, I have pointed out some phonological and lexical processes of change that have occurred within the proposed 'Kayanic' group of languages. They should be investigated also from the standpoint of grammar and morphology. In this regard Clayre remarked that in Sa' ban, the processes of sound change have been faster and more extreme than in the other languages of the Apo Duat grouping (1994:215). This fact is also expressed by short time dialect variation in Sa' ban. If such a small population of about five hundred persons in Sarawak (Murang 1989:188) is already split into six dialects localized in a relatively small geographical area (however, they might be unknown groups in Kalimantan besides the seven speakers of the upper Bahau), larger populations who have dispersed over wide distances should exhibit even more linguistic variations.

Before any tentative reconstruction of Proto-Kayan-Modang can be attempted, the position of Merap and Merap-related peoples in Bulungan who are not yet described should be clarified. From the limited data available now on this language (Sellato 1993) and also on 'Bahau' and related groups of the lower Kayan and Malinau areas (Tombaue, Un Bahaw, Uma' Baw), it seems that Merap constitutes the 'missing link' between Kayan-Murik-Bahau-Pua', on the one hand, and the Modang isolects on the other hand. The geographical location of the Merap people in *kec.* Malinau, northeast of the Bahau - Pujungan, and just north of the lower Kayan (*kec.* Long Peso), close to the main migration routes from North central Borneo to South and West: *via* the Kat river to Apo Kayan or the Kayan uk to the Kelai, the Pengéan to the Segah, is significant. This linguistic isolate represents the northern extension known of Modang.⁷ Then they would be closer to the probable sites of separation of the Kayanic peoples in northern Bulungan (or to one of these places where the various ethnic components coalesced before the start of the migratory waves to the south). That would explain their large population, about 2,000 persons, compared to the other Modang subgroups (Sellato p.c.). As concerns ritual practices, they show a feature not found *presently*

⁷It is significant that Merap exhibits also the complex diphthongs and vowel clusters which are characteristic of Modang isolects:

/lakay/ < aj > 'husband'

/hây/ < âj > 'yes'

/kow/ < o^u > 'grandparent'

/nyaué/ < au^e > 'body'

/séa:/ < ea: > 'eight'

/téie/ < ei^e > 'that'

(source: Sellato, 1993)

A feature which is important to the study of Modang is the phonemic value of nasalisation in Merap: /hây/ 'yes' ≠ /hay/ 'who'. In other Modang isolects the phonemic value of nasalised vowels seems lost because of the lengthening of vowels in word-medial and word-final positions.

among other Kayanics, the practice of secondary burials. In a not too distant past, the Ngurek and related groups, the Kayan Uma ' Laran, U. Héban, the Ga'ay, the Long Gelat would also observe the same ritual procedures (reserved for the chiefly strata among the latter as the prestigious rock-cliff burial). In historical perspective, it seems that the Merap like some other Kayan, Bahau and Modang came out of the Bahau-Pujungan Basin (or Pejungan), when the Kenyah subgroups started to move in the region from the Apo Da'a, the upper Baram. The original inhabitants of the Bahau would be related to the Kelabit and Lun Bawang, such groups as the Ngorèk (Ngurek, Murik), Nyibun, and Sa' ban (Sitsen 1932; Walchren 1907). From a linguistic point of view, they have assimilated Kayanic influence before being in contact with the Kenyah; nevertheless, they have maintained a distinct social identity, even if their ethnicity has changed recently with inclusion in the Kenyah category, but other cultural features show discrepancies (Murang 1989:191-192; Ngau 1989:167; Soriente 1994).

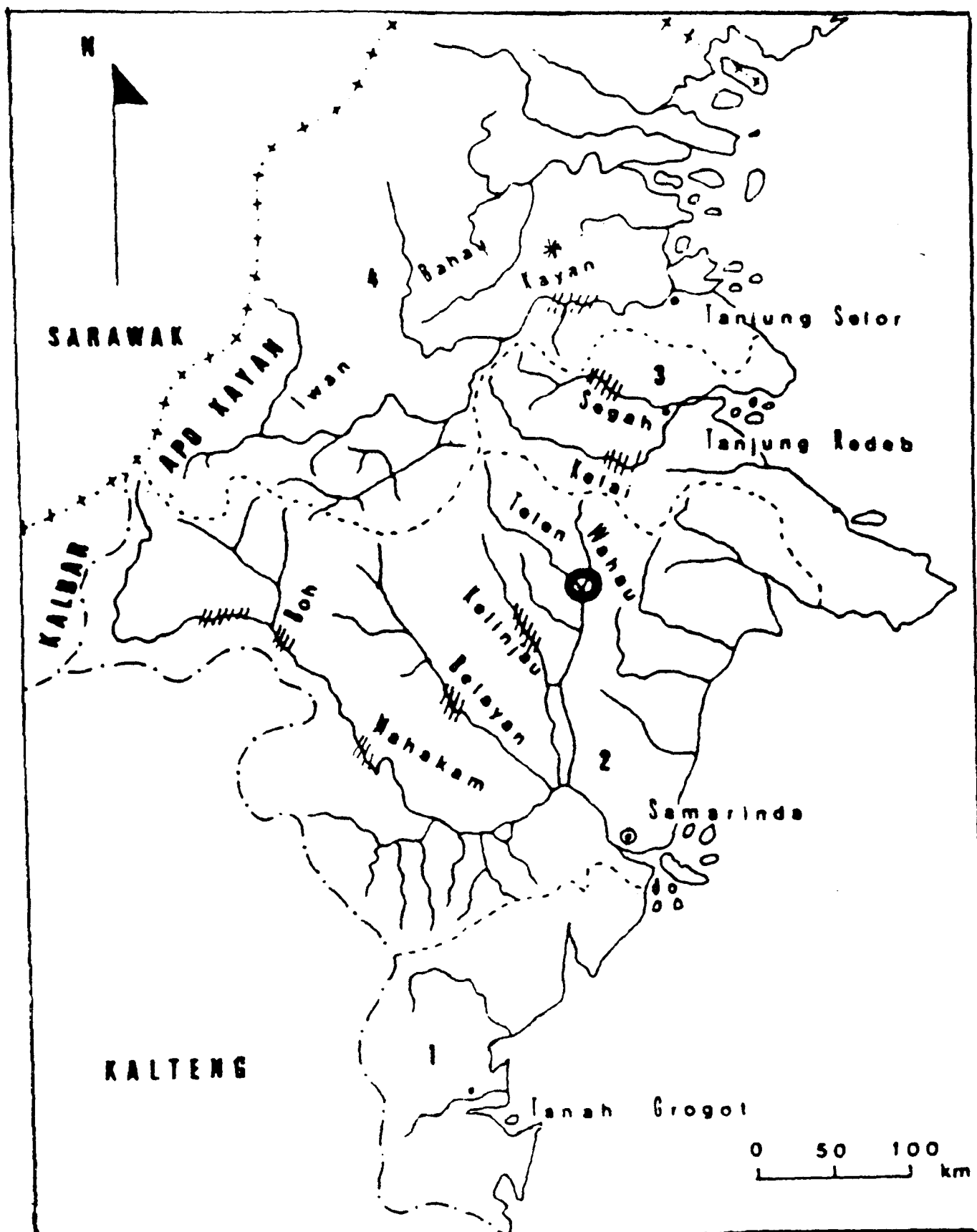
In any case, a finer synchronic description of these languages will be a preliminary step to further reconstructions of Proto-Kayanic phonology, morphology and lexicon. In the meanwhile, the position of Kayanic *vis-à-vis* Kenyah and Apo Duat language groups remains to be explained satisfactorily. The comparative investigation of the areas located along the Sarawak-Kalimantan-Sabah borders and Bulungan, which have been neglected in past studies, should not be limited to linguistic and sociolinguistic phenomena, but should include as well settlement patterns and demography, technology, *adat* and ethnicity, in order to uncover the complex articulations of cultural traits and the differentiation that took place in this inner region of central Borneo.

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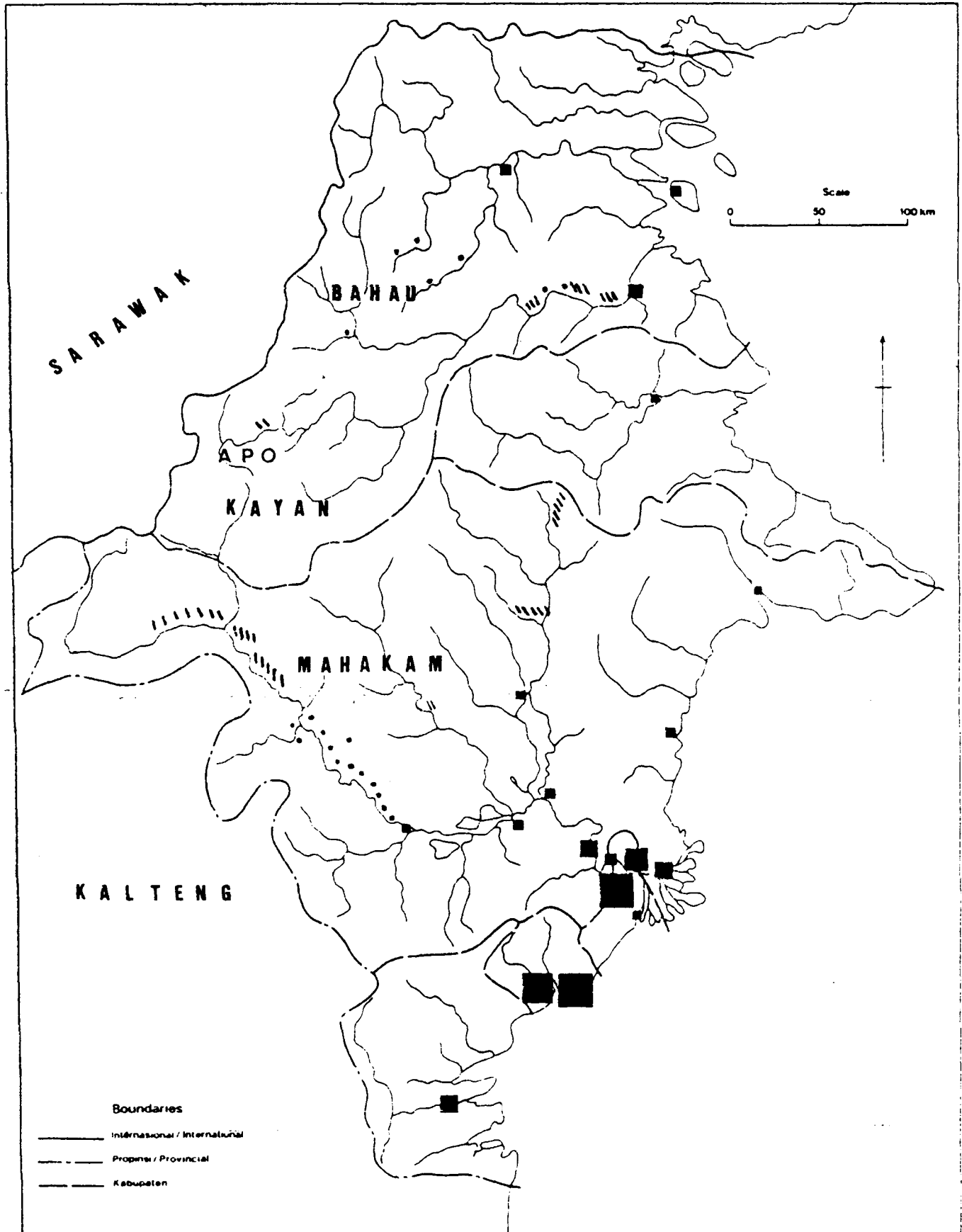





Map 1. The province of east Kalimantan

Regencies: 1. Pasir 2. Kutai 3. Berau 4. Bulungan
(*Kabupaten*)

Modang subgroups: //// - Modang Wehèa O

Localisation of Merap people: *



Map 2: Distribution of Kayan-Busang and Bahau in east Kalimantan
 Kayan-Busang  Bahau  Urban centers 

Appendix I: Abbreviations used for languages (only main lexical sources are indicated)

1. **B** ('Bahau' = Un Bahaw, Un Baw, Uma' Baw of *Kec. Long Peso*, Bulungan; source: Hudson 1978)
2. **BT** (Bahau Hwang Tri:ng, Kutai; source: Devung, 1981 a, b, 1984)
3. **K** (Kayan Baram, Sarawak; source Cubit 1964 (1990); Southwell 1990)
4. **K 1** (Kayan Baluy, Sarawak; source: Rousseau 1974, Blust 1977)
5. **K 2** (Kayan U. Lekan, U. Lasa:n, U. Lasan, Kutai, Guerreiro field notes)
6. **KB** (Kayan-Busang of Kutai; source: Barth 1910, Guerreiro 1983 and notes; Sombroek, 1986)
7. **K Ma** (Kayan Mahakam, Kutai; source: Barth 1910, Guerreiro field notes)
8. **K Me** (Kaya:n Menda:lam, Kapuas Hulu; source Ngo 1988, Guerreiro field notes)
9. **LB** (Long Belah, Kutai; source: Guerreiro field notes)
10. **LG** (Long Glit/Long Gelat/Long Gla:t, Kutai; source: Barth 1910, Guerreiro 1982 ms., 1983)
11. **LW** (Long Way, Kutai; source Guerreiro field notes 1983, Revel 1982)
12. **M.** (Merap, Bulungan; source: Sellato 1993)
13. **ML** (Mengga'ay Long La'ay, Berau; source: Guerreiro field notes; Korn 1957 under 'Segai')
14. **MLS** (Menggaè Long Lesan, Berau; source: Guerreiro 1985 and notes)
15. **Mu** (Murik, Sarawak; source: Blust 1974)
16. **P** (Pua', Bulungan; source: Soriente 1994)
17. **PK** (Punan Kelay/Pnan, Berau; source: Guerreiro 1985 and notes)
18. **PM** (Punan Mahkam/Pnan, Berau; source: Guerreiro field notes)
19. **PS** (Punan Segah/ Pnan, Berau; source: Guerreiro field notes)

Appendix II: Localisation of Kayanic languages in Kalimantan Indonesia**A. East Kalimantan isolects****1. Bulungan Regency**

- 1.1 Merap (*kec.* Malinau: 2,000 speakers)
- 1.2 'Bahau' (upper Malinau and Tubu Rivers, lower Kayan R.: Tembaue, Un Baw, Uma' Baw: ?)
- 1.3 Pua' (Pujungan and lower Kayan Rivers: 250 ?)
- 1.4 Mengga'ay/Kayan Ga'ay (lower Kayan R.: 350)
- 1.5 Kayan (Apo Kayan, lower Kayan R.; U. Lekan, U. Laran, U. Apan: 700 ?)

2. Berau Regency

- 2.1 Punan Segah/Pnan (middle and upper Segah R.: two local groups, 118)
- 2.2 Punan Mahkam/Pnan (upper Mahkam R.: 85)
- 2.3 Punan Kelay/Pnan (upper Kelay R.: 750)
- 2.4 Mengga'ay (upper and middle Segah R.: 600)
- 2.5 Menggaè (middle Kelay R.: 400)

3. Kutai Regency

- 3.1 Kayan (Wahau-Telen-Merah Rivers and Belayan R.: U. Lekan, U. Lasa:n, U. Lasan: 3,350)
- 3.2 Wehèa (Wahau-Telen R.: 2,300)
- 3.3 Long Way/Medang (Kelinjau R.: 750)
- 3.4 Long Belah/Medéang (Belayan R.: 300)
- 3.5 Long Glit/Long Glat (middle and upper Mahakam R.: 50 and 550)
- 3.6 Bahau Sa' Hwang/Hoang Sa' (middle Mahakam R.: Hwang Tri:ng, Hwang Siraw, Hwang Dalih: 4,000)
- 3.7 Busang/Busa:ng (middle and upper Mahakam R.: U. Suling, U. Tepay, U. Tuan, U. Mahak, U. Wak: 3,000)
- 3.8 Kayan Mahakam/Kayan Lung Kuling/K. Apo Lalang (middle and upper Mahakam: 1,600 and Busang Uma' Pala' in the village of Long Tuyo': 40)

B. West Kalimantan isolects**1. Kapuas Hulu Regency**

- 1. Kaya:n Menda:lam (Mendalam R.: U. Aging, U. Pagong, U. Suling; 1,900) *U* = *Uma'*/*Uma* (lit. 'house')

Note: The data are based on various published sources and personal surveys, all speakers' figures are approximations that have been rounded up.

Appendix II: Continued

Kayanic groups of the Mahakam

Bahau Sa' (Hwang / Hoang Sa') 1

H. Anah
 H. Dalih
 H. Hurey
 H. Laham 2
 H. Long Hubung 3
 H. Pata' 4
 H. Siraw
 H. Taliba' (U. Taliba')
 H. Talun (U. Talun; extinct)
 H. Temha (Temaha)
 H. Tri:ng

Bahau - Busang/Busa:ng

U. Asa
 Bang Kelaw (U. B. Kelaw)
 U. Huwat (? extinct)
 U. Lekwé (Manok Kwé) 5
 U. Luhát (extinct)
 U. Mahak 6
 U. Pala' (Bato' Pala')
 U. Palo'
 U. Sem
 U. Suling 7
 U. Tepay (Tepé)
 U. Twan (Tuan)
 U. Urut
 U. Wak

-
1. Hwang / Hoang, 'people', Uma' lit. 'house' (= subgroup).
 2. They are known as Kayan Uma Laham in the Baluy (at Long Murum).
 3. The Modang Long Hubung (Long Way) have almost merged with the Bahau; in other places the Long Way (at Long Way or Long Wey Lung) and Keliway are already assimilated, as the Long Gelat (Bahau Long Gla:t) in Tering Lama.
 4. The H. Pata' or Long Patak came from Telang Usan or Baram. They are a component of H. Tri:ng (Tering Lama), and H. Muyub; most of the Bahau Hwang Sa' come from Telang Usan.
 5. From the name of the pheasant in Busang, / kwé / *Argusianus argus*.
 6. In Mamahak Tebo' (a village of *kec.* Long Iram), they live with Hwang Siraw and other Busang. However, their main settlement is Mamahak Aya' far upstream (*kec.* Long Bagun); they are found in the *hilir* part of the settlement, Bekumpai people are in the *hulu*.
 7. Demographically, the more important group in *kec.* Long Pahangai.

Appendix III: Symbols used for phonemic transcription

/è/	:	[ɛ]
/ɛ/	:	stands for the schwa [ə]
/é/	:	[e]
/ù/	:	a central high close vowel
/ö/	:	[œ] front half-open rounded vowel
/ä/	:	a short central vowel between [e] and [ɐ]
/u°/	:	[U]
/û/	:	ũ (nasalised)
/â/	:	ã "
/ô/	:	õ "
/iä/	:	[iəɔ]

the sign: after a vowel indicates vowel length : a:, i:, ê:

/ ' /	:	[ʔ] glotal stop in all positions
/c/	:	[tç] and [tʃ]
/ny/	:	palatal nasalised stop
/ng/	:	velar nasalised stop

Other symbols used are:

@	:	alternate with
>	:	change to
#	:	contrast with

TABLE 1: EXAMPLES OF OPPOSITION AND SOUND CHANGE

K /KB/ K1/K2/K Me	P	M	MLL	W	LG
'salt' henyà'/hnyà'/ hennyà'/	hiyá'1	hée	seje'	heje'	sejaw
'river' hungè/hungey/ 'name' aran/are:n	kata' 2 aran	hò'ey 2 aré:n	nguy 3 ngelan	henguy ngelan	hânguy ngelin
'iron' tité/titey	malat	n.r.	mlaèt	mlaèt	meli:t

1. Note **Mu ia'** (Blust 1974: 166).

2. **P.** uses also the lexeme *hungé* / *hongé* in other contexts: *lirin hungé* 'riverbank' and *hongé i'uk* 'small river', confluent is *long* (Soriente, 1994: 23-24, items 316, 325, 326). **M** exhibits also the lexeme *kata'* 'water'. **Mu** /ungé/ 'river'; Kayan-Busang, **K1, K2**: *ata'* 'water'.

3. The word for 'river' has also the meaning of 'water' in the Modang dialects (**LB, LG, LW, W, MLL, MLS, PK, PM, PS**). Besides, the lexeme *long* can be used to indicate a river or even a confluent. In Wehèa, the compound *lebõng long* specifies the confluent.

TABLE 2

A.	M	P	K	K2
'DAY'	raw 1	ro	do	dow
	MLL	PK	W	LG
	daw	daw	dèa / dia	diä
B.	MLL	PK	MLS	W LG
'HEAD'	takhung	tekhung	du'	du' 2 daw
	M	P	KB	K2
	ténga	kong	kuhung	kanong

1. Merap shows a high incidence of homophony: /raw/ 'day', /raw/ 'nose', /raw/ 'women'. 2. The lexeme *kuhung* in W applies to a human skull, formerly obtained during head-hunting forays.

TABLE 3: REFLEXES OF PAN *J IN KAYANIC ('Blust phenomena')

A. Kayan-Pua'-Bahau- Merap subgrouping

	M	P	BT	K/KB/K1/K2
'nose'	raw	urung	uru: ng/dun ¹	urung/urong
'name'	aré:n	aran	ara:n	ara: n/aran
'padi'	peray	paray	para:y	paré/paray

B. Modang subgrouping

	MLL	PK	W	LG
'nose'	gulung	yung	(guang)lung ¹	(gông) lûng
'name'	ngelan ²	ngelan	ngelan	ngelin
'padi'	plaè	plaè ³	plaè	pellè:

1. The word for 'nose' is formed by a compound with *guang* lit. 'cavity, hole', thus 'hole of nose'. It is contracted in MLL and was lost (or not borrowed?) in PK. BT *dun* seems close to Lepo' Bem *ndung* (Hudson 1978: 31).

2. Probably derived from a petrified verbal affixe *nge-lan* 'to be named, to have a name'; usually Kenyah isolects exhibit the cognates *ngadan/ngaden* or /nd/ in some cases (compare with Hudson 1978: 31; Soriente 1994: 11, item 139).

3. A loan from either MLS or W.

TABLE 4: HOMOPHONY AND NEAR HOMOPHONY IN KAYANIC

	M	MLL	LG
'SWIDDEN'	me	me'	maw'
'FIVE'	mé'	me'	ma:w
'FATHER'	may	mam	ma:y
'RATTAN'	n.r.	guy	gùi
'HAND'	n.r.	guy	gùi
'STAIRS'	n.r.	ci:n	hasûyn
(notched log)			
'RAIN'	câe	ci:n	sûyn

TABLE 5: REFLEXES OF PAN *D

A. Kayan-Bahau-Merap-Murik-Pua'

K, KB, K1, K2, K Me	B 1	BT	M	MU	P
'two'	dua'	dua'	wa/wa'	lua'	rua
'blood'	daha/daha:' (K Me)	la	ra:'	ra	nda
'leaf'	da'un	itun	da'o:n	la'un	da'un

B. Modang

	MLL	PK	W	LG
'two'	age'	ago'	lege'	enggaw
'blood'	leha'	le'a	leha	léhè:
'leaf'	cung	cong	aun/sung	u:n

1. Bahau of Lepak Aru, lower Kayan R., Bulungan (Hudson 1978:32).

Received: 2 June 1995

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