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# KV(N)KV- KINSHIP TERMS IN THE AUSTRALIAN ABORIGINAL LANGUAGES

## FIRST PART: KAKA ‘MOTHER’S BROTHER’

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*Here, I report the pervasive distribution in numerous Aboriginal language groups all over Australia, of kinship terms with similar phonetic shapes and meanings, such as kaka MB, FZH, EF. It is argued that this distribution is consistent with the antiquity of this term in the language families in which it is found. Further, its pervasive presence in non-Pama-Nyungan (non-PNy) as well as in Pama-Nyungan (PNy) languages, is consistent with inheritance from a higher taxonomic level, possibly Proto-Australian, and beyond, and even possibly from the proto-language spoken by the first modern men who colonized Sahul. Likewise, the assumed existence of Kariëra-like terminologies in the higher nodes in the Australian language phylum is consistent with the claim that the Proto-Australian kinship system was Kariëra-like.*

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**Abbreviations:** P ‘parent,’ G ‘grand,’ M ‘mother,’ F ‘father,’ Z ‘sister,’ B ‘brother,’ U ‘uncle,’ A ‘aunt,’ E ‘spouse,’ e/y ‘elder/younger,’ W ‘wife,’ H ‘husband,’ C ‘child,’ S ‘son,’ D ‘daughter,’ Sib ‘sibling.’ Other relationships are obtained by combination of these primary symbols: MB ‘mother’s brother,’ FZ ‘father’s sister,’ etc. The symbols ♀ (or w) and ♂ (or m) found before kin type abbreviations indicate the sex of the person speaking; P-: ‘Proto-’; dial.: dialect; lang.: language; PNy: Pama-Nyungan; non-PNy: non-Pama-Nyungan; C: consonant; V: vowel; G-0: ego’s generation; G+1: first ascending generation; G-1: first descending generation etc.; syn.: synonym; AM: Alain Matthey (de l’Etang), pers. comm.: personal communication; Gur.: Gurindji.

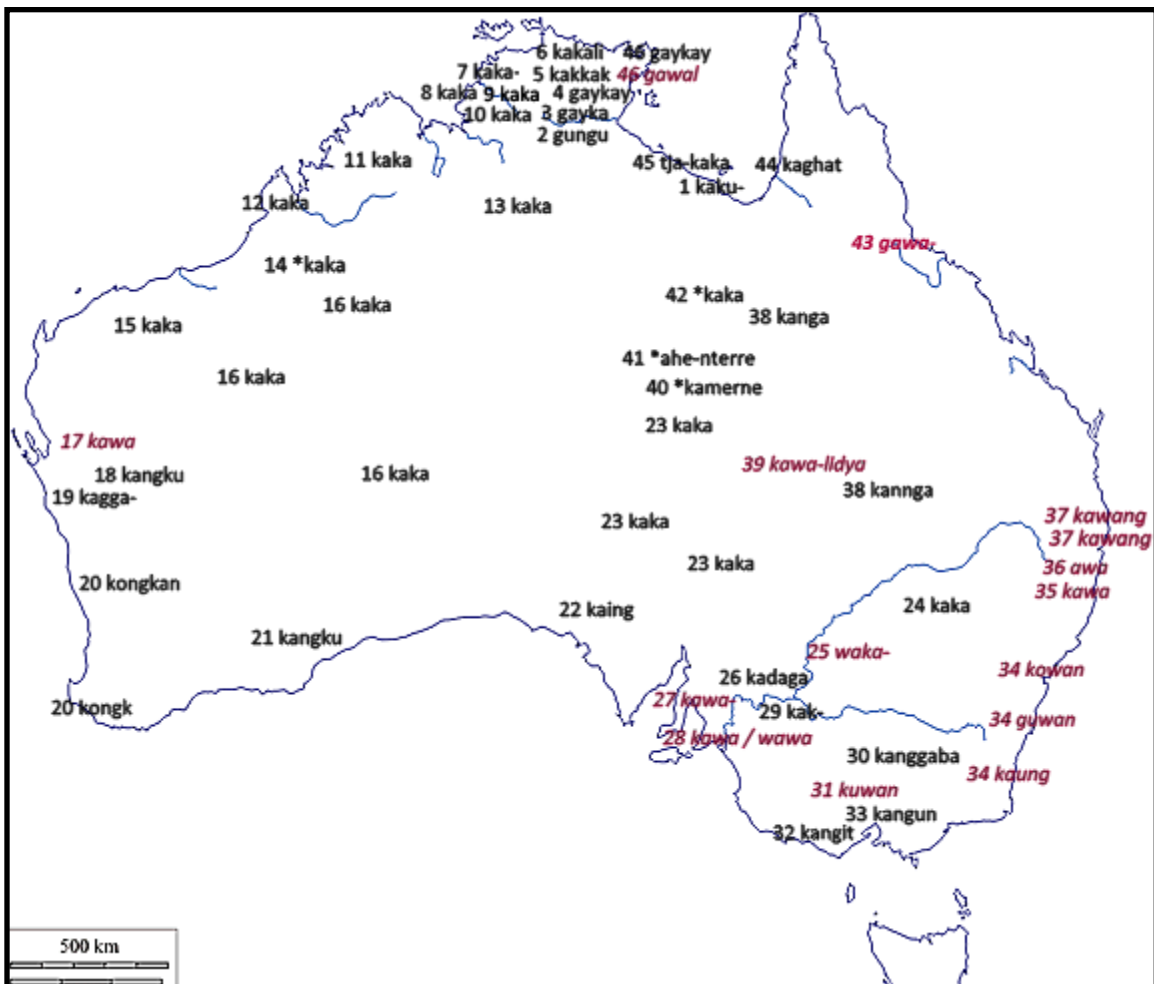
### **Introduction**

Among the goals that the AustKin project<sup>1</sup> has set out is the reconstruction of the Pama-Nyungan kinship system. McConvell & Keen (2011: 103) stress the fact that

this is being done by collecting all the kin terms in Pama-Nyungan and other languages where relevant, together with other vocabulary items that appear to be re-

lated to kin terms. Each root is then reconstructed with a form and probable meaning (including its probable polysemy or equations). Eventually—a stage not reached yet—a hypothesis about the full terminology of Proto-Pama-Nyungan will be produced.

Among the kin terms that have been reconstructed so far are *\*kami* MM, FFZ; *\*ɲatyɪ* MF, FMB; *\*papi* FM, MFZ; *\*mayi-ri/li* FF, MMB; possibly *\*ka:l(a)* MyB, and *\*tyam(p)V* MF (Alpher 2004b, Peterson et al. 2005, McConvell & Keen 2011: 105, McConvell 2013b). In this paper, I present evidence for the existence all over Australia of kin terms with the phonetic shape *kaka*, or forms phonetically likely derived from *kaka* and most generally referring to MB, and I suggest that their distribution in Pama-Nyungan and non-Pama-Nyungan languages (henceforth PNY and non-PNY) is consistent with their inheritance from a higher-level Australian linguistic group. Likewise, I suggest that the patterns of



**Map 1: Distribution of *kaka*, *kawa(ng)*, *kangku*, *kongk* etc. MB (EF, FZH, MBSS):** Figures on the map refer to the languages enumerated in Table 1. Red italics highlight terms including an intervocalic semivowel *w*. [Maps of Australia are from d-maps.com.]

semantic extension attached to *kaka* MB point towards the existence of an original Australian Kariera-like kinship terminology.

This study will, I hope, be a contribution to resolving the thorny problem as to whether the Kariera-like systems were primordial in Australia (McConvell & Keen 2011: 101; Keen 2013a: 132; Godelier 2011: 492), a fact that if demonstrated, would be consistent with the idea of unidirectional changes from Kariera/Dravidian-like systems into other system types (Allen 1986, 2011; Ives 1998; Kryukov 1998; Hage 2001; Godelier 2011; see also McConvell 2013a: 13-14; 159-61; Matthey de l'Etang in prep. a.; Matthey de l'Etang & Bancel in prep.). For a definition of Kariera see McConvell and Hendery (to appear).

### ***Kaka* MB in Australian Aboriginal Languages: An Appraisal**

A series of kinship terms, generally presenting a phonetic shape *KVKV-* or *KV(D)KV(D)-*,<sup>2</sup> and most of the time displaying the reduplicated form *kaka* but also frequently actualized as *kawa-*, *kangk-*, *kang-* etc., referring to MB with frequent extensions to FZH, FMBS, FFZS, EF, MBS and MBSS, occurs in 9 non-PNy language families,<sup>3</sup> and 24 PNy subgroups (see Table 1, Map 1).<sup>4</sup>

The wide distribution of *kaka* MB, along with that of other kin terms; e.g., *kami*, *ngandri*, *nupa*, was noted by Fry (1959: 14) for Southern and Southwestern Australia. Subsequently, Elkin (1970: 709) widened the scope and recognized the continent-wide distribution of *kaga* MB. He also reported (1970: 709) the extensive distribution of some second-generation kin terms such as *kami* (*kamad*) and *djami* (*tami*). In 1997, McConvell discussed the widespread occurrence in Australia of second ascending and descending generation *ka(ng)ku* kin terms, thus pointing to ancient connections, notably between Tangkic (non-PNy) and early Western PNy *ka(ng)ku* forms and between Mirndi (non-PNy) and Ngumpin-Yapa (PNy) forms (1997: 227-9). In 2002, Bancel & Matthey de l'Etang (Bancel & Matthey de l'Etang 2002, Matthey de l'Etang & Bancel 2002), and building on Ruhlen 1994, reported on worldwide evidence for *kaka* terms referring to MB, EF, eSib, GP. Among them was an important series of phonetically close terms collected from the Australian ethnological records, but the authors did not distinguish at that time those specifically referring to MB from those referring to Sib, parallel GP and GC. Because the semantic patterns of these latter forms are not easily shifted to the MB kin type, except by Crow skewing eB > MB (see below), because they also display most of the time a vocalic pattern different from what is found in the *kaka* MB series, and because, finally, of the presence in intervocalic or even word final positions of the velar nasal stop *ng* [ŋ] or the homorganic cluster *ngk* [ŋk], these terms are not considered in the present paper. Instead, they will be the subject matter of the second part of the study dedicated to the Aboriginal Australian terms having a *KV(D)KV-* phonetic shape; i.e., those referring to parallel GP, eSib, GC (Matthey de l'Etang in prep. a.) It will be shown that we are likely dealing with at least two different etyma.

**Table 1: Distribution of kV(η)kV- MB Terms in Australian Language Families**

Language <sup>a,b</sup>	N	Term <sup>c</sup>	Kintypes
<b><i>Non-PNy families and languages</i></b>			
Tangkic	1	* <i>kaku-thu</i>	MB,(♀MBSS, ♂DH)
Mangarrai (Mangarrayic)	2	<i>gunju</i>	MB, MBSS
Ngalakgan (Rembarngic, Gunwinyguan)	3	<i>gayka</i> ~ <i>kayka</i>	MB, MBSS
Ngandi (Eastern Gunwinyguan)	4	<i>kaykay</i> ~ <i>gaykay</i>	MB
Wulwulam (Western Gunwinyguan)	5	<i>kakkak</i>	MBS
P-Gunwinyguan	6	* <b><i>kakali</i></b>	E
Worgaits = Patjijamalh (Anson Bay Daly)	7	<i>kaka-balluk</i> / <i>kukka</i>	♀MB, HF/♂MB, WF
Western Daly	8	<sup>#</sup> <i>kaka</i>	MB, FZH, EF
Matngele (Eastern Daly)	9	<i>kaka</i>	MB, WF
Southern Daly	10	<i>kaka</i> ~ <i>ake</i>	MB, FZH, EF
Worrorran	11	<sup>#</sup> <i>kaka-</i>	MB, (MF, MBS, MBSS) <sup>d</sup>
Nyulnyulan	12	<sup>#</sup> <i>kaka-</i>	MB, FZH, WF, HF
<b><i>PNy family</i></b>			
Ngumpin subgroup	13	<sup>#</sup> <i>kaka</i>	MB, MBSS
Marrngu subgroup	14	* <i>kaka</i>	MB, FZH, EF
Ngayarta subgroup	15	<sup>#</sup> <i>kaka</i>	MB, FZH, EF?
Wati subgroup	16	<sup>#</sup> <i>kaka</i>	MB
Southern Yinggarda (Kartu subgroup)	17	<i>kawa</i>	MB
Kartu subgroup	18	<sup>#</sup> <i>kangku</i>	MB
Nhanda (Kartu subgroup ?)	19	<i>kaga</i> ; <i>kaggajee</i> ; <i>kag-gajittee</i>	FZ, MBC, FZC, ZS <sup>e</sup>
Nyungar subgroup	20	<sup>#</sup> <i>kongk(an)</i>	MB
Mirminy subgroup	21	<sup>#</sup> <i>kangku</i>	MB
Wirangu (Thura-Yura subgroup)	22	<i>kaing</i>	MMBS
Karnic subgroup	23	<sup>#</sup> <i>kaka</i>	MB, (EF), FZH, MBSS
Worjaibon (Wiradhuric subgroup)	24	<i>kaka</i>	eB, FF
Baagandjic subgroup	25	<sup>#</sup> <i>waka</i>	MB
Daraltu (Ngaralda, Lower Murray subgroup)	26	<i>kadaga</i> <sup>f</sup>	MB
Thura-Yura subgroup	27	<sup>#</sup> <i>kawa/kauwan-</i>	MB, WF
Lower Murray subgroup	28	<i>kawa</i> / <i>wawa</i>	MB
Wadi-Wadi (Piangil dial.) (Kulin subgroup)	29	<i>kak-</i>	FZH
Yorta Yorta (Yotayotic subgroup)	30	<i>kang(g)a-ba</i>	‘uncle’
Djadjawurrung (Kulin subgroup)	31	<i>kuwan</i>	‘nephew’ <sup>g</sup>
Colac (Kulin subgroup)	32	<i>kangit</i>	‘uncle’
Woiwurrung (Kulin subgroup)	33	<i>kangun</i>	MB
Yuin-Kuric subgroup	34	<sup>#</sup> <i>kowan</i> / <sup>#</sup> <i>kauan</i>	MB, (MZH)
Gumbaynggir (Gumbaynggiric subgroup)	35	<i>kawa</i>	MB, FZH, EF, ZC

Yaygir (Gumbaynggiric subgroup)	36	<i>awa</i>	MB, FZH
Bandjalangic subgroup	37	<i>#kawang</i>	MeB, MM
Maric subgroup	38	<i>#gannga/kanga</i>	MB
Wangkumara (Karnic subgroup)	39	<i>kawa-lidya</i>	MB
P-Arrernte	40	<i>*kamerne<sup>h</sup></i>	MB
P-Arandic	41	<i>*ahe-nterre<sup>i</sup></i>	WF, ♂DH
Wagaya-Warluwaric subgroup	42	<i>*kaka</i>	MB
Djirbalic subgroup	43	<i>#gawa-</i>	MB
Kok-Nar (South-West Paman, Paman subg.)	44	<i>kaŋa-t̪</i>	‘uncle’
Yanyuwa (Yanyuwan subgroup)	45	<i>tja-kaka</i>	MyB
Yolngu dialects	46	<i>#gaykay ~ kaykay / kawal</i>	MB, MBSS

<sup>a</sup>I have eliminated the numerous Northern-Paman *koko* forms that were present in Bancel & Matthey de l’Etang’s (2002) appendix. They appear to derive from the Paman form *\*mukur* MeB (see Hale 1964 and Alpher 2004b: 471-474).

<sup>b</sup>In brackets are the names of hypothetical language families or groups to which the languages supposedly belong: non-PNy families or groups and PNy subgroups.

<sup>c</sup>The symbol \* means that the form is not a reconstruction, properly speaking, but instead indicates that most forms/meanings in the comparative series from the concerned language group are close to the form reported in the table (see Blench 2008: 204).

<sup>d</sup>Extensions from MB to MF, MBS, MBSS (Omaha skewing) in Worrorran occur as a contextual overlay (see McConvell 2012 and references therein).

<sup>e</sup>These extensions are difficult to deal with if they originate from *kaga* MB. Some of the equivalences displayed by *kaga* in Nandha are found separately in various languages; e.g, Marra (non-PNy) FZ = FZS, McArthur River (PNy) FZC = ZC. Anindilyakwa (non-PNy) has FZS = MB (see McConvell 2012 for these skewed [and non-skewed] equivalences). Membership of this form in the etymological series *kaka* MB is uncertain.

<sup>f</sup>Radcliffe-Brown mentioned (1918: 225) that he reported Aboriginal terms using the “Anthropos alphabet of Father Schmidt,” thus *kaḍaga* MB in Ngaralda (Radcliffe-Brown 1918: p. 243), with an inverted breve under the *d* consonant; i.e., ḍ. Unfortunately, I did not have full access to the articles of P. W. Schmidt in *Anthropos*, 2, 1907 dealing with this alphabet, so I am unable to transcribe this ḍ into the IPA. *Kaḍaga* is transcribed by AustKin as *kawaka*, a form matching the *kawa-* paradigm.

<sup>g</sup>Extension from MB to niblings occurs in Gumbaynggir; i.e, *gawa* MB, ♂ZC, by alternate generation equivalence. Besides, a vowel alternance u/a for a *kVkv* form also occurs in Patjtjamalh (Worgaits, non-NPy) and in Karangura (Karnic, PNy); i.e., respectively *kukka* ♂MB, WF, and *kukka* MB.

<sup>h</sup>See p. 139.

<sup>i</sup>See pp. 133-134.

Because of the pre-eminence of the reduplicated form *kaka* for MB in Australia, and also the likely derivation of a number of other forms from it, this lexical series will henceforth be referred to as the *kaka* etymological series.

### ***Phonetic Forms Defining the Kaka Etymological Series***

Among the forms displaying a *KV(I)KV(I)* shape and referring to MB in our database (Matthey de l’Etang & Bancel 2015), four particular forms prevail: *kaka*, *kawa(ng)*, *kangku* or *kongk* and *kaŋa*.

- a. The form *kaka*:** It is by far the most pervasive form referring to MB in both PNy and non-PNy languages. In PNy subgroups, this particular form is massively present except in Eastern Australian languages where different, although phonetically close,

forms prevail. Besides, there is a limited number of forms respecting the *KV(D)KV(D)* phonetic shape and, displaying other vowels than *a*, such as *\*kaku-thu* MB, MBSS, a form suffixed with the first person oblique clitic *-thu* presumably in Proto-Tangkic (non-PNy) (Evans 1995: 193, see also section Endings below). This form is phonetically identical to the common paternal parallel GP or Sib term *#kaku* (Matthey de l’Etang in prep. a.) found in many Australian languages. One can also mention the form *kukka* ‘uncle’ (MB) in Karangura (Karnic, PNy) and in Worgaits (Wadyiginy, Anson Bay Daly, non-PNy). According to Spencer (1914: 67-68) *kukka* is the term employed by Wadyiginy (Worgait) male speakers to refer to their MB or their WF, whereas female speakers use *kakaballuk* for MB and HF. It seems unlikely though, that these two terms reflect different roots. In turn, the form *kukka* MB in Karangura, in the absence of detailed information, should be interpreted as an irregular reflex of *kaka*.

Finally, it should be mentioned that 2 different forms for (e)B, ‘grown up’ and sometimes FF are found in the dialects of the Wiradhuri and the Wangaaybuwan-Ngiyamba languages (Wiradhuric subgroup, PNy), showing the phonetic shapes *kukka* ~ *kugga* or *kaka* ~ *kaga* ~ *kagan* (*kaakampa* for FF in Wonjaibon). There is no reason to believe that *kaka* eB, in these dialects, results from a semantic shift of *kaka* MB > eB, all the more since it is found in a region where alternate generation equivalences (FF, eB, SS) frequently occur (McConvell & Hendery: to appear). Rather, the first vowel change is likely due to allophonic realization. The phonetically close forms *kakka*, *kakkak* *kokkok* also designate parallel grandparents or Sib in some non-PNy languages (see section *kaka* MB in the non-PNy language groups).

- b. The form *kawa(ŋ)*:** The forms *kawa* ~ *kaway* ~ *gawal*, but also *waka* and *wawa*, all referring to MB, occur in a number of PNy subgroups: Yolngu, Djirbalic, Bandjalangic, Gumbaynggiric, Yuin-Kuric, Kulin, Lower-Murray, Thura-Yura, Baagandjic, Kartu, and also in the Wangkumara dialect of Karnic, all together describing a nearly complete coastal turn of Australia—with some inland presence—beginning in Northeast Arnhem Land and finishing close to the mouth of the Wooramel River in the south of the Gascoyne region (Western Australia). Alpher (2004b: 430) putatively derives Yugambeh *kawang* ‘uncle’ (MB) from *\*kalnga*. McConvell & Keen (2011: 114 & note 6) identifies the Yolngu term *gawal* MB as “possibly related to the term *\*kaala* and to variants of it: *galnga*, and *gawa* farther south in Queensland.” One could suggest *ka:la* > *kawa* by sound change *l* > *w*. Both forms (*gawal* and *galay*) co-occur in some Yolngu lects, but with different meanings, respectively MB and MBC (E), the latter resulting from Omaha skewing of *\*kaala* MB (McConvell 2011: 112, 114, McConvell 2012: 252-55). In Yugambeh *kawa-ŋ* and *kala-ŋ* also co-occur, but both of them refer to MB. These latter kin terms end with *-ng*, in the manner that this occurs after word-final vowels in this language, notably in nouns with CVCV forms (Alpher 2004c: 571). This latter feature and its linguistic occurrence

have been noted by a number of authors, e.g., Capell 1956: 70, Dixon 1980: 211-212, Alpher 2004c. Thus many of the *kawa* forms, notably in a number of PNY languages of Southeast Australia, display a final nasal *-ng*.

Let me also mention the existence of two forms that could be related to *kawa* MB. In the first place, there is the form *waka-*, found in the languages of the Baagandjic subgroup (PNy), which could result from metathesis; i.e., *kawa* > *waka*. Secondly, there is the form *wawa* MB, occurring in Ngayawung from the Lower-Murray language subgroup (PNy), while Yaralde from the same subgroup has *kaw* or *kawa*. *Wawa* could result from lenition of the initial stop to *w*: *kawa* > *wawa*, but this is speculative and further research is needed.

One should finally consider the fact that the *kawa* forms display an intervocalic semivowel *w* presumably reflecting an earlier velar stop *g* or *k*, and thus postulate a phonetic change *\*kaka* > *kawa* by lenition of the stop to *w*. The distribution of *kawa* appearing on Map 1, although somewhat discontinuous,<sup>5</sup> suggests possible diffusion into many of the languages spoken along the Australian coast, but whose source and direction of spread is not easy to detect. This distribution, limited to the PNY language group, indicates a PNY-internal phenomenon;

**c. The forms *kangku*, *kongk* and *kongka*:** These forms display an intervocalic or final nasal homorganic cluster, appear to be primarily distributed in the Kartu, Nyungar, Mirniny-Ngatjumaya subgroups (PNy), located in Southern and Southwestern Australia, and are interpreted by Koch (2011: 4) as an innovation in these subgroups.<sup>6</sup> A close phonetic form *kangun* U is found in Woiwurrung (Kulin). The phonetic form *kangku* is apparently not derived from *\*kaka*. McConvell (1997), Koch (2011: 4)—see also data in Matthey de l’Etang & Bancel (2015)—point out that a phonetically similar form is widespread in other Australian languages and refers to FF. Furthermore, it has also been noticed (McConvell 1997: 228, Koch 2011: 5) that *kangku* occurs in Central and Western Australia, and notably in two neighbouring PNY subgroups, namely Wati and Marrngu, either suffixed with *-ru* (Wati) or without it (Marrngu), both referring to eZ. One might speculate whether *kangku* was once present in the Kartu, Nyungar, and Mirniny-Ngatjumaya PNY subgroups with the meaning eSib and then underwent a Crow skewing eSib > MB, although McConvell (pers. comm.) indicates that Western Arnhem Land is the sole region, to his knowledge, where Crow skewing has been found so far. The particular phonetic form *kongk* in Bibbulman, a southern Nyungar dialect, is explained by the loss of the final vowel (Dench 1990) characteristic of the dialects from this region, giving: *\*kongka* > *kongk* MB.<sup>7</sup> In this case, the homorganic stop *ngk* survives in the final position.

**d. The form *kaja* and other forms displaying an intervocalic *ŋ*:** Forms like *ganŋa* MB in Margany (Maric, PNY), *kanga* in Guwa (also possibly Maric), *kang(g)a-ba* U in Yota-Yota (Yotayotic, PNY) could be derived from *\*kaka* by a putative sound change *k* > *ŋ*. On the other hand, these forms may also be, and more likely are, explained by the deletion of an *l* from a form such as *kalnga* occurring in Maric lan-

guages and Kuku-Yalanji, itself appearing as a *\*ka:la* form augmented with the suffix *-nga* (McConvell & Keen 2011: 112). All these forms, collected in Eastern Australia close to where the *kalnga* forms are found, have been eliminated from the *kaka* series and allotted to the *\*ka:la* series (see section *Reconstructing the term for MB in Proto-Pama-Nyungan*);<sup>8</sup>

- e. Finally, other forms like *kangit* U in Colac (Kulin, PNY), *gungu* MB in Mangarrai (Mangarrayic, non-PNY), having more in common with *kangku* or *kanga* than with *kaka* have also all been eliminated from the *kaka* series. So much for the terms such as *kaNa* MB in Wunumara (Mayabic, PNY) and Nyamal (Ngayarta, PNY).

### **Endings**

McConvell (2008) published a paper dedicated to the origin, in PNY languages, of a number of suffixes (productive or not) attached to kin terms, notably referring to kin relations of the second ascending or descending generations and widely distributed in this language group. He stresses the importance of studying them in order to better understand their original functions and how they can provide evidence of genetic relationships among languages. Of particular interest here is the distribution of *kaka*-like stems suffixed or augmented with similar segments, sometimes present beyond the limits of particular language families, for which the question of common inheritance or borrowing is asked. The most salient endings and suffixes found after the *kaka* MB stem are:

- a. The nasal *-ng*, which has already been discussed above.
- b. The final (and sometimes intervocalic) *-y*, present in some Yolngu (PNY) kin terms such as *gaykay* ~ *kaykay* MB, *galay* W, and *dhuway* ZH.<sup>9</sup> The form *gayka(y)* MB is also found in a number of neighbouring non-PNY languages, e.g., Ngalagkan (Rembargic) *gayka* MB, Ngandi (Eastern Gunwinyguan) *gaykay* MB (see section *kaka in the non-PNY language groups*).
- c. The final *-t*, which is attached to most kinship terms in the nominative form in Kok-Nar (South-Western Paman), e.g., *kaɣa-t* U (Breen 1976: 247). According to McConvell (pers. comm.), this ending is, no doubt, a form of the kin suffix *-ju* widely distributed within the PNY languages (McConvell 2008: 318-321, 325). It is notably found in a number of Paman languages under the forms *-dh*, *-thu*, *-cu* (McConvell 2008: 320). Following Koch, McConvell (2008: 325) states that “It seems probable that this (*-ju* -AM) was originally an enclitic form of *\*ngaju* the first dative pronoun.”
- d. A phonetically similar suffix; i.e., *-ju* ~ *-tyu* ~ *ɬu* (*-ju* after high vowels *i* and *u*, and *ɬu* after *a*) occurs in Tangkic languages (non-PNY) ending most kin terms; e.g., *kaku-ju* MB (Keen 1983: 290-11, Evans 1995: 192-3). Evans (1995: 193) argued that: “diachronically... there is good evidence that it originated as a suffixed first person possessive pronoun (cf. the Yukulta first person clitic = *thu*). Absorption of first person possessive affixes into kin terms (so that the word ‘my kin’ comes to mean just ‘kin’ and can then be combined with any possessive pronoun) is widespread in Aus-

tralia—see Koch (1983a).” It could be that the Tangkic (non-PNy) and the PNy clitics, having the same form *-ju*, are related.

- e. The suffix *-tya* often occurring on kinship terms of the Baagandjic dialects (PNy), e.g., *waaka-tya* MB *kaaku-tya* B, *kanyi-tya* MM etc., is phonetically similar to the “proprietary” (having) suffix (Hercus 2005: 34-5). This latter suffix is generally used to mark alienable possession, but Hercus (2005: 35) mentions that “it could be used for inalienable possession, i.e. body parts, particularly if a not necessarily permanent situation was implied.” So it is not sure if we are dealing with the same form. A phonetically similar suffix is also found, ending kin terms, to some degree in Malyangapa (Yarli, PNy): *kaku-tya* B, *kan-tya* MM. On the other hand, the four kin terms that we know from the Wadikali language (also Yarli) hardly confirm Elkin’s supposition (1938: 41), based on the “few scrap of information” that he obtained (provided that it was “reliable”), that the Wadikali kinship system was “similar in terminology to that of the Wilyakali” (Baagandjic, PNy). Finally, the Wangkumara kinship terminology (Karnic, PNy) also displays this form; e.g., *ngama-tya* M, *kawali-tya* MB, *ngari-tya* F. These observations do not claim to be exhaustive with regard to the linguistic distribution of *-tya*; thus in the current state of my knowledge, I would rather consider the nature of this suffix to be a pending question.
- f. The suffix *-li*, found in Gunwinygic (non-PNy); e.g., *kakka-li* E, but lacking in the closely related family, i.e., Marran (non-PNy) *kakka* ‘cross-cousin’. In Warray and Wulwulam (Western Gunwinyguan, non-PNy) we find *kaka-k* H, MBS, which is the form referring to FF(Z), MM(B) and GC in most languages belonging to the putative Macro-Gunwinyguan (Arnhem) phylum.
- g. In Worrorra (non-PNy), *-nja* is a feminine suffix: *gara-nja* M, *ngawa-nja* Z, *abi-nja* eZ, *iba-nja* FZD, *gula-nja* FZSD, etc. (Lucich 1968: 54-74, Capell & Coate 1984: 83), while masculine kin terms end most of the time in *-a* or *-ia*: *ira-i-a* F, S, *iba-i-a* S, *ab-i-a* B, *gula-i-a* FZH, *gaga-i-a* MB, *gadja-i-a* MMB, etc.

### **Kaka MB in the non-Pama-Nyungan Language Groups**

*Kaka* MB is widely distributed in the non-PNy families; i.e., 9 families, (or groups) to my knowledge, from the northern part of Australia (Map 1): Daly language families *#kaka* MB, FZH, EF, Nyulnyulan *#kaka* MB, FZH, EF, Worroran *#kaka* MF, MB, (WF), MBS, MBSS, Gunwinyguan *\*kakkali* E (see Map 1). The Tangkic form *kaku-* is phonetically similar to the common Sib form *kaku-* (Matthey de l’Etang in prep. a), which is found in the West Barkly and Garrwan (non-PNy) neighbouring language groups, as well as in many other, geographically more distant, PNy language subgroups. Finally, the kinship terminology deemed Jaminjung by Warner (1933: Chart I), and for which he reported *gaga* MB, is very likely that from the Murin’bata language.

Other than the widespread presence of *kaka*, there seems to be another form of general phonetic shape *-ɟaɟa- ~ -caca-* for MB in numerous non-PNy languages.<sup>10</sup> Harvey (2003a: 234) reconstructs *\*cacac* for MB back to Proto-Gunwinyguan, a root which looks like a palatalized form of *kakak*. Because there is no means at the moment to show

that the former derives from the latter, this form has not been retained in the etymological series *kaka*.

Still in Gunwinyguan (non-PNy), one finds two languages displaying *kaka*-like forms for MB: Ngandi *gaykay* MB, MBSS, and Ngalagkan *gayka* MB, MBSS, but, as we already mentioned, similar forms and meanings also occur in some geographically close Yolngu (PNy) languages; e.g., Ritharngu, Djinang, Yan Nhangu, Dhuwal, all having ~ *gaykay* MB, MBSS. Heath (1981: 345-8), speaking of the presence of this term in both Ngandi (non-PNy) and Ritharngu (PNy), argued that this resulted from diffusion, but was not specific about the direction of borrowing:

in cases like A<sub>1</sub> Y<sub>1</sub> (Ngandi and Ritharngu) *gaykay* ‘MoBr’ we are almost certainly dealing with long-standing semantic categories in which one language has lost its old term and borrowed a new term from its neighbor.

In Gunwinyguan, as just mentioned, one also find forms showing a geminate intervocalic velar stop such as *\*kakkak* referring to MM(B), FF(Z), sometimes to MBS/H, and *\*kaka-li* referring to E, MBC. Both are reconstructed by Harvey (2003a: 235, 2003b: 297) in Proto-Gunwinyguan. The form *kak(k)a(k)* extends beyond Gunwinyguan in some branches composing the putative Macro-Gunwinyguan (Arnhem) phylum: it is found with parallel grand-parental meanings in Gagudju (Gagudju), Maningrida, Mangarrayic.<sup>11</sup> For its part, the term *\*kakkali* E could derive from *\*kaka* MB through an Omaha-type semantic shift: MB > MBC > E, but this proposal is merely speculative.

### ***Kaka in the Pama-Nyungan Family***

The form *kaka* MB *stricto-sensu* occurs in 12 PNy subgroups geographically covering a huge part of the Australian continent (Map 1). In his presentation of the research project dedicated to the evolution of kinship terminologies in Western Australian (PNy) languages, Koch (2011) presented various tables displaying the most common *kaka* kinship forms occurring in these subgroups<sup>12</sup> and considered by him as

tentative proto-forms reconstructible for the various subgroups.

In Koch’s Table 2 (2011: 3) displaying the kin terms for F, M, MB, FZ, one finds *kaka* in the Ngumpin-Yapa,<sup>13</sup> Marrngu, Ngayarta, Kartu PNy subgroups, to which we must add Wati (Western Desert). The same author (2011: 4) indicates that *\*kaka* was in Proto-Marrngu and argues that this distribution makes sense if *kaka* has been

inherited from a higher-level proto-language.

He does not develop his argument any further in his draft paper, but we can make the assumption that Nyungic could be this higher-level proto-language.<sup>14</sup> Nyungic or South-West is a putative PNy language grouping tentatively comprising the Ngayarta, Kanyara, Mantharta, Kartu, Nyunga (Nyungar), Mirniny, Wati, Marrngu, Ngarrga, Ngumpin, Nangga (Wirangu), and Yura subgroups (O’Grady, Voegelin and Voegelin 1966, quoted in McConvell & Laughren 2004: 151-52).<sup>15</sup>

Beside the four subgroups mentioned by Koch, plus Wati, *kaka* occurs, and has been reconstructed, in the Thawic sub-branch of the Wagaya-Warluwaric PNY subgroup, including the Bularnu and Warluwarra languages (Curran 2002). The presence of this term, though, appears not to be restricted to Western and Southwestern Australia, and this is of considerable importance as it extends its geolinguistic presence far beyond the area of the Nyungic phylum. Thus, *kaka* pervades the Karnic subgroup in which it was likely the proto-form for MB, and it is also likely that the first segment of the reconstructed Proto-Arandic form *\*ahe-nterre* WF, ♂DH is derived from *\*kaka* as Koch (2013: 178) suspects:

The “father-in-law” term I have reconstructed for pArc (Proto-Arandic–AM) as *\*ahenterre* is suspected of being originally a compound: *ahe-nterre*. The *h* probably reflects *k* after an original long vowel (cf. Koch 1997b), hence *\*CVVKV*. Semantically a WB (WF?–AM) is typically regarded as a kind of MB. So I suspect a MB term behind *ahe-*. The term *kaka* is widespread in the Pama-Nyungan languages: it is conceivable that behind *\*ahe-* is a variant with a long vowel *\*kaaka*.

As I have already mentioned, the evolved form *gaykay* MB is consistently distributed in Yolngu dialects spoken in Northeast Arnhem Land. One also finds *kaɣa-t̩* U in Kok-Nar (Southwestern Paman) spoken close to the Southwest coast of the Cape York Peninsula, while in the opposite (south) side of Australia, one finds the evolved form *kadaga* MB (transcribed as *kawaka* by AustKin) in Daraltu (Ngaralta, Ngarinjeri-Yithayithic subgroup, PNY), and *kak-* FZH—a kintype consistent with MB—in Wadi Wadi Piangil (Kulin subgroup) (see AustKin and Map 1). For his part, McConvell (2013b: 223) mentions *kaka* MB, FZH for Wadi Wadi:

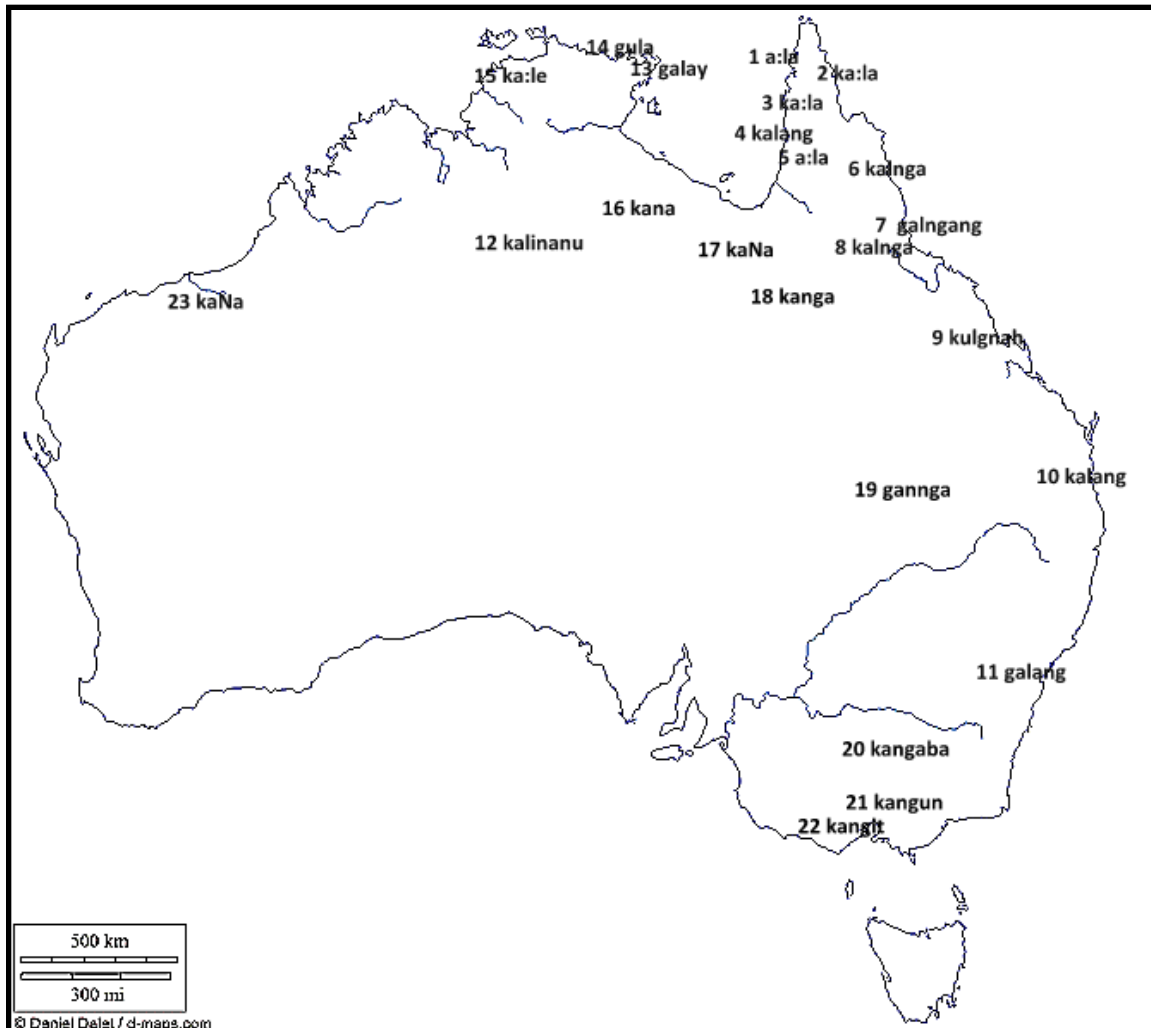
As I have already said, the form *kawa* MB can be interpreted either as deriving from *kaka* by lenition of intervocalic *k* to *w*, hence *\*kaka* > *kawa*, or deriving from *ka:la* by a sound change *l* > *w*, hence *\*ka:la* > *kawa*. Depending on which solution is correct, it extends the distribution either of *\*kaka* or of *\*ka:la* to the coastal regions.

### **Reconstructing the Term for MB in Proto-Pama-Nyungan**

There seems to be a consensus now about the proposal that *\*ka:la* originally meant MB in Proto-PNY. Alpher (2004b: 430) reconstructs *\*ka:la* for MyB in Proto-Paman. McConvell & Keen (2011: 112) hesitate between MyB and MB as the original meaning of *\*ka:la* in Proto-Pama-Nyungan. The fact that *\*mukul* can be reconstructed with the meaning of MeB in this family,

would tend to argue for the MyB meaning, however, the latter (*mukul*) does have meanings along the lines of ‘old,’ which could be the original meaning, and might point to *kaala* being MB early in PNY.

In addition, the same authors also point out that in some Central-Paman languages (Oykangand, Kunjen) and Maric languages, to which must be added Yir Yoront (South-



**Map 2: The distribution of *ka:la* forms and possibly derived forms *kanga* in PNy languages and in some non-PNy languages.** 1. Northern Pama #a:la MyB. 2. North-Eastern Pama #ka:la MyB. 3. Middle Paman #ka:la MyB. 4. Yir Yoront *kalang* MB. 5. Central Pama #a:la MB. 6. Kuku Yalanji (Yalanjic) *kalnga* MB. 7. Dyirbal (Dyirbalic) *galngan* 'stepfather'. 8. Gugu Badhun (Maric) *galnga* 'uncle'. 9. Biri (Maric) *kulgnah* 'uncle'. 10. Yugambah (Banjаланjic) *kalang* MB. 11. Kattang, Thangatti (Yuin-Kuric) *galang* E. 12. Warlpiri (Ngumpin-Yapa) *kaliñanu* E. 13. Yolngu *galay* MBS (E). 14. Burarra (Arnhem, non-PNy) *gu'la* MB, MBSS. 15. Daly languages (non-PNy) #kala- M. 16. Jingulu (Eastern Mirndi, non-PNy) *kana* MB. 17. Wunumara (Mayabic, PNy) *kaNa* 'uncle'. 18. Guwa (Maric, PNy) *kanga* MB. 19. Margany (Maric, PNy) *ganja* MB, EF. 20. Yorta-Yorta (Yotayotic) *kang(g)aba* 'uncle'. 21. Woiwurrung (Kulin, PNy) *kangun* MB. 22. Colac (Kulin) *kangit* 'uncle'. 23. Nyamal *kaNa* (Ngayarta) MB, FZH.

western Paman), Kuku Yalanji (Yalandjic), Yugambah (Yugambah), this term only refers to MB.

The distribution of this root appears to be restricted primarily to the eastern and northern subgroups of PNy (Map 2). To the languages already mentioned, one has to add

the form *galang* E in Kathang (Worimi, Yuin-Kuric),<sup>16</sup> and other *kala*-shaped kin terms having similar meanings in Ngumpin-Yapa: Warlpiri, Mudburra, and Ngarinman *kaliñanu* E. In the Yolngu dialect group, this root refers to MBC or E, which is interpreted as a semantic shift from MB through Omaha skewing; i.e., MB > MB = MBS > MBC (E) (McConvell & Keen 2011: 107, 113).<sup>17</sup> One thus finds (Warner 1933) Murngin *gal'-le* MBC, MMBSSC, Dai *gal'-le* MBC, MMBSSC, Barlamomo (?) *gal'-le* MBC, MMBSSC, Yanhangu *gal'-li* MBC, MMBSSC, Ritharngu *gäl'-le* MBC, MMBSSC (Alpher 2004b: 430, *galay*), Gupapuyngu *galay* MBC, and Dhuwal (also mentioned in Alpher 2004b: 430) *galay* ♂W, WB, BW, MMBDC.<sup>18</sup>

Alpher (2004b: 429-30) also takes into account the forms ending with *nga* like Gugu Badhun (Maric) *galnga* MB, Kuku Yalanji (Yalanjic) *kalnga* MB, Djirbal (Djirbalic) *galngan* ‘stepfather,’ all appearing like *ka:la* forms ended by an “old suffix” *-ŋa* (*nga*) (McConvell & Keen 2011: 112). One should take into consideration the fact that these *-ŋa* endings possibly reflect the first segment of the putative PNY first person pronominal form *\*ngaju* (McConvell 2008: 321). This form occurs throughout Australia: *\*ngay-* or *\*nga-*, has been reconstructed either as a free pronoun form or a prefix in Proto-PNy and possibly Proto-non-PNy (Dixon 1980: 344, Blake 1988: 6-7, Harvey 2003c: 490, 500). As already mentioned, Alpher (2004b: 430) also suggests that *kawang* MB, found in Yugambah<sup>19</sup> (along with *kalang* MB), could possibly be derived from *\*kalnga*. Although phonetically possible, I would reiterate the idea that the form *kawa* that is currently found along the east coast line is also phonetically consistent with a derivation either from *\*kaka* > *kawa* (in which case *kawa* and *ka:la* appear as reflecting different roots), or a derivation from *\*ka:la* > *kawa*.

I have also argued that the forms *kana* ~ *kanka* and perhaps *kana* MB, presented on Maps 1 and 2 (e.g., in Maric, Yotayotic, Mayabic) could be derived from *kalnga* by deletion of the interior *-l*, and so I added them to the *\*ka:la* series. McConvell (pers. com.) assumes that *kana* and *kalna* are different roots, in which case, as I already suggested in note 19, *kana* may reflect a non reduplicated form *\*ka* MB ended with the first segment of *\*ngaju*; i.e., *ka-ŋa*. In any case, the overall estimated number of PNY subgroups having MB terms putatively matching the *\*ka:la* paradigm reaches 14, but perhaps considerably less if we consider that all Paman groups; i.e., Central-Paman, Northern-Paman etc., altogether constitute a single PNY subgroup.

### ***Other Widespread Terms for MB beside ka:la and kaka in Pama-Nyungan***

When dealing with the situation in PNY and the perspective of reconstructing the original Proto-PNy MB term, we must take into account the existence of other MB forms beside *ka:la* or *kaka* and their putative derivatives. A few of these forms do show a distribution crossing linguistic boundaries.<sup>20</sup>

The first one is *mimi*. It is found in the Kanyara and Ngayarta-Mantharta subgroups (PNy), and is interpreted by Koch (2011: 4) as a possible innovation, which “could characterize a Pilbara subgroup.” The same author (2011: 4) remarks that *mimi* also occurs as a grandparental term in other Australian languages. In fact, it is found in

PNy as well as in non-PNy languages: Nuylnyulan, Worrorran, Garrwan (all non-PNy families), and Yanyuwa, Paman, Injilandji, Wagaya, Warluwarra, Gumbaynggir, Dadi-Dadi (PNy languages) (see Curran 2002: 70).

A second series of forms such as *ngamirni*, displaying a suffix *-rni* whose origin is not known to me<sup>21</sup>, and more rarely *ngama*, all referring to MB, is more important for our concerns here. Their distribution in Australia, reported in Alpher, (2004b: 487-8), is very significant, notably in PNy languages: Mayi-Kulan, Mayi-Kutuna, (Mayabic) *ngamirn* MB, EF (sense questioned), Bugandidj (Bugandidj) *ngami* MB, Mudburra(Ngumpin-Yapa) *ngamirni* MB, Adnyamathanha (Thura-Yura) *ngamarna* MB, Yantruwantha (Karnic) *ngama* MB etc.<sup>22</sup> All these forms are phonetically very close to the terms meaning either mother, breast, or milk, e.g., *ngama* ~ *ngami(ni)* ~ *ngamu(n)* in numerous PNy languages<sup>23</sup>, making Koch (2011: 4) speculate that such MB forms

could be derived, perhaps independently, from either *ngama* M or *ngama* ‘breast,’ being a relative “on the breast side”, i.e., maternal, and conceptualized as a kind of male mother.

Alpher (2004b: 486-9) reconstructs *\*ngama* (*-\*ama*) ‘mother’, *\*ngamun* ‘breast’, and *\*ngami(r)ni* ‘mother’s brother’ in Proto-PNy, making no difference between the *ngami*-forms ended with *-rni* referring to mother’s brother, and those ended with *-ni* and referring to breast, milk or nipple.<sup>24</sup>

There is little doubt that the presence of the terms *ngamirni* or even *ngama* for MB, which are obviously cognate with *\*ngama* (*-\*ama*) M, results from an ancient identification made between a mother’s brother and a mother, or a mother’s sister. Such identifications, either overt or covert, made by native speakers, have been tracked down by Scheffler in a goodly number of Australian languages, along with that of FZ with FB or F, notably. This allowed him to establish the existence of kin classes and superclasses.<sup>25</sup>

One key bit of evidence for the identification of MB to *ngama* M has been reported by Shapiro (1995: 205) within Miwuyt, a Yolngu dialect:

.. she is (the mother or genitrix–AM) also the focal member of a superclass whose members include the denotata of both the ‘mother’ and ‘uncle’ classes. This is so because men of this latter class too are called sometimes ‘mother’—as if membership in the superclass, were extended, without regard to gender, by appeal to its quintessential member. And this is *precisely* how my informants put it. They often referred to men of the ‘uncle’ category as *ngama darramu* (literally ‘male mother’), expanding with *nakuna ngama*, *yurru darramu* (‘like mother, but male’).

The distribution of the reflexes of *\*kaka* for MB and of those of *\*ngamV-*, either for M, MZ or for MB in some PNy subgroups is very instructive, notably in the languages of the Ngumpin-Yapa and Karnic subgroups (Table 2).

In the Ngumpin-Yapa subgroup, the M kintype is, in the vast majority of the cases, referred to by reflexes of *ngama*, either by direct reflexes or by suffixed forms such as *ngama-ji* (or *-yi*), *ngama-rti* (*-rdi*), or even *ngama-rnti*, with *-ji*, *-rti*, *-rnti* being among

**Table 2: Mother's Brother and Mother's Terms, Karnic and Ngumpin-Yapa Subgroups (PNy)**

<b>Language</b>	<b>MB</b>	<b>M</b>
<b>Ngumpin-Yapa subgroup</b>		
<i>Ngumpin</i>		
Ngarti	<i>ngamirni</i>	<i>ngati</i>
Gurindji	<i>ngamirni, kaka</i>	<i>ngama</i>
Bilinara (Gurindji dial.)	<i>ngamirni, (Warner 1933: kaka)</i>	<i>ngama-yi</i>
Malngin (Gurindji dial.)	<i>kaka (Warner 1933)</i>	<i>nolyini (Warner 1933)</i>
Ngarinyman	<i>kaka</i>	<i>ngama-yi, ngamarnti</i>
Walmajarri	<i>kaka</i>	<i>ngama-ji</i>
Juwalini (Walmajarri dial.)	<i>kaka</i>	<i>ngama-ji</i>
Djaru (Jaru)	<i>ngamirni</i>	<i>ngama-yi</i>
Mudburra	<i>ngamirni</i>	<i>ngama</i>
<i>Yapa</i>		
Warlmanpa	<i>ngamirni</i>	<i>ngarti</i>
Warlpiri	<i>ngamirni</i>	<i>ngati, ngamardi</i>
<b>Karnic subgroup</b>		
<i>Arabana</i>		
Arabana	<i>kakaka</i>	<i>lhuka, but classificatory</i>
Northern Wangkangurru	<i>kaka</i>	<i>ama</i>
Southern Wangkangurru	<i>kaka, deceased MB: ngamakar-</i>	<i>ama</i>
<i>Central Karnic</i>		
Dieri	<i>kaka</i>	<i>ngandi</i>
Pirladapa	<i>kaka</i>	<i>ngandrri</i>
Yarluyandi	<i>kaka</i>	<i>ngandri</i>
Ngamini	<i>kaka</i>	<i>ngandri</i>
Karangura	<i>kukka</i>	<i>mundri</i>
Nhirrpi	?	<i>ngandri</i>
Mithaka	?	<i>ngandri</i>
Yandruwanta	<i>ngama ~ ama</i>	<i>ngandrri</i>
Southern Yauarawaka	<i>ngama</i>	<i>ngarndi</i>
Northern Yauarawaka	<i>ngadli</i>	<i>ngarndi</i>
<i>Eastern Karnic</i>		
Wangkumara	<i>kawalidya</i>	<i>ngamadya</i>
<i>Northern Karnic</i>		
Pitta-Pitta	<i>ngarlu ~ ngalu</i>	<i>ngamari</i>
Marula	<i>ngalu</i>	<i>ngandi</i>
Wangka-Yutjuru		<i>ngama</i>
<i>Unclassified Karnic</i>		
Kungkari	<i>kampa</i>	<i>ngama, ngamarni</i>
Pirladapa	<i>kaka</i>	<i>ngandri</i>
Pirriya	?	<i>ngamari</i>

the most frequent kin endings in PNY (McConvell: 2008: 316-20). The MB kintype is designated either as *ngami-rni* within both the Ngumpin and Yapa branches, or as *kaka*, but only in some Ngumpin languages. Further, according to McNair et al. 1988 (see AustKin for references), the two terms *kaka* and *ngamini* (McConvell [1997] reports *ngamirni*) both referring to MB, co-occur in Gurindji proper, whereas for Bilinara, a dialect of Gurindji, Warner (1933) reports *gaga* MB, and Meakins (2009, see AustKin for references) reports *ngamirni* MB.

The situation in the Karnic subgroup is somewhat different from that of the Ngumpin-Yapa subgroup. Although *ngama* (*ama*) and suffixed *ngama-* forms like *ngama-rdi*, *ngama-ri*, *ngama-dya* all refer to M in the Arabana, Eastern and Northern branches of Karnic, as well as in some unclassified Karnic languages, another root for M; i.e. *ngand(r)i*, frequently occurs. It is almost ubiquitous in Central Karnic, but it is also found in Marula belonging to (Northern Karnic), and finally in Pirladapa. For MB—and as long as the term for this kintype has been recorded—one finds *kaka*, mostly within the Arabana and the Central branches of Karnic, but one also finds *ngama* in a few languages within Central Karnic. The presence of *\*ngand(r)i* for M in Karnic is interpreted by Koch and Hercus (2013: 46) as “an innovation within the Karnic family at a level higher than Proto Central Karnic.” The presence of *\*ngama-* is interpreted by the same authors (2013: 46) as a retention in Karnic of the Proto-PNY root *\*ngama* M, reflected under various forms, sometimes with a shifted meaning, like in Yandruwandha (Central Karnic) *ngama*, or *ama* MB, or Southern Yawarrawarrka (Central Karnic) *ngama* MB (Koch and Hercus 2013: 46, following Breen 2004).

It may be that originally; i.e., at the level of Proto-Ngumpin-Yapa and Proto-Karnic, as well as at high-level nodes of other PNY subgroups, the reflexes of *kaka* and *ngama-* have coexisted, possibly designating MB in different speech contexts, with *kaka* referring to the male aspect of MB and *ngamirni* referring to the female side. The co-occurrence in Gurindji and Bilinara of both terms *kaka* and *ngamirni* for MB, although the precise contexts in which each of these terms is used are not known to me, brings support to this assumption<sup>26</sup>. This idea is also consistent with *\*ngamirni* MB being reconstructed back to Proto-Pama-Nyungan (Alpher 2004b: 488). It is also worth noting that Wangkangurru speakers refer to MB as *kaka*, but to deceased MB as *ngamakardi* (Hercus 1994: 13).

What happened thereafter was that, in all likelihood, in the vast majority of the cases, only one term for MB; i.e., *kaka* or *ngama ~ ngamirni*, subsisted in the lexicon of most of the languages constituting the branches of Ngumpin-Yapa and Karnic. A similar process probably occurred in a number of PNY subgroups displaying *ngama* or forms derived from *\*ngama* for MB. The case of Arrernte, a branch of the Arandic subgroup (PNy), is even more spectacular. Most of the languages composing this branch designate MB as *kamerne*, which is a form that Koch (2013: 178) believes is “potentially” reconstructible back to Proto-Arrernte, and which he suspects

was in origin a compound consisting of *\*ake* + *amerne*: both elements may have meant MB. The second element could be cognate with one of the forms beginning with *ngam-* and denoting MB that are found in other Pama-Nyungan languages (and hence possibly derived ultimately from *\*ngama* M).. The first element could be cognate with (the) *kaka* MB.

The second element, in all likelihood, originally reflected an earlier (Pre-Arandic) form *\*ngamVrnV*, like Koch (2013: 178, 181) suggests, pointing out its numerous cognates in PNY languages, most of them displaying a final vowel *-i*, a few a vowel *-a*, some none (Table 2).

These lexical and morphological features make the assumption that *kaka* MB had a much wider currency in the past than it does nowadays within all the branches of Karnic (and elsewhere) appear likely; they also make likely the existence of *\*kaka* MB in Proto-Karnic and Ngumpin-Yapa.

#### **\*Kaka vs \*ka:la in Proto-Pama-Nyungan**

Despite the fact that it was likely present in the proto-stages of a number of PNY groups already mentioned (Nyungic, Thawic) and that some evidence makes it possible that it was in Proto-Karnic, Proto-Arrernte, Proto-Arandic and in Kulin (even without considering the *kawa* terms), the form *kaka* MB has never been seriously considered, or more exactly it may have been *a priori* ruled out, as a potential candidate for reconstruction in Proto-PNY. The reasons for this are probably that its reduplicated form *ka-ka* puts it in the category of “nursery terms,” in which case many linguists are predisposed to attribute its widespread distribution to spontaneous creation or/and diffusion in non-genetically related languages rather than to inheritance from a proto-language. However, if one is willing to consider that the presence of regular phonetic correspondences *\*k > k* (both initial and intervocalic) and *\*a > a* (in first or second syllables) among CVCV forms of the PNY languages is a serious possibility, then a form like *\*kaka* MB should be reconstructible at the highest level. In view of this, the respective distributions of *kaka* and *ka:la ~ kal-nga* in PNY languages, both of which are rather similar with regard to the number of subgroups in which they occur, should make them potential candidates for ancestry in Proto-PNY. Again, the form *kawa* is not taken into consideration here for the reasons given above.

Unlike the various kinship forms tentatively reconstructed in Proto-PNY and mentioned in the presentation such as *\*kami* MM, FFZ,<sup>27</sup> *\*yatyi* MF, FMB *\*papi* FM, MFZ, *\*mayi-ri/li* FF, MMB, *kaka* is massively distributed in both PNY subgroups and non-PNY language families. This fact raises the question as to whether *\*kaka* is actually a retention from a proto-language ancestral to the non-PNY language groups and to the PNY language family as well, in which case *kaka* should be the original form for MB in Proto-PNY. One can still argue, though, that the geographical distributional continuity of *kaka* forms observed across non-PNY families and western PNY subgroups (Map 1) results from the general diffusion of *kaka* (see section: *The origin of kaka in Australia*).

The distribution of *ka:la* and its likely derivatives *kalnga* and *ka(n)ŋa* appears mainly to be restricted to the eastern PNY subgroups and might have resulted from the diffusion of an innovative form in the Paman subgroup that possibly referred to MyB. Moreover, the extensive geographical distribution of a number of MB forms in PNY could also result from areal diffusion.<sup>28</sup> This is notably the case with *mimi*, or *kongk(an) ~ kangku*, although the latter forms appear, as noted above, to be a likely rerouting of the term originally referring to (e)Sib, or FF.<sup>29</sup>

**\*Kaka and \*ka:la: An Alternative View**

Instead of *kaka* and *ka:la* being viewed in opposition to one another, these two terms could, instead, be considered as two faces of one and the same coin. The phonetic form *ka:la* is not restricted to PNY languages. First of all, the Daly River languages (non-PNY) present an overwhelming occurrence of terms phonetically consistent with *\*kala*, but referring to M: Brinken *ka'-lung* M, Nganygit *killa* M, Wageman *ŋalagulin* M, *ŋalŋabuŋu* GM, Marithiel *kidla* M, Mari'djabin *kil:a* M, Mari'jadi *kil:a* M, Maredan *kidla* M, Munrin'bata *ka:le* M, Tangural *kila* M, Mari'ŋar *kela* M, Magati'ge *kela* M, Tyemeri (Ngan'gityemerri) *kala* M, Ngengomeri *ala* M, Nganygit *killa* M, Kamor *kilaŋŋ* M, *kalaŋŋ* GM, Manda *agila* M, Ame *ala* M, Wadjigini *kalaŋ* M, Pungupungu *kalaŋ* M, Maranunggu *ala* M, Maramanandji *ala* M, Mullukmulluk *alawar* woman, Matngala *kidlaŋ* M, *kalaŋ* GM, Djeraity *kalaŋa* M, Kungarakany *karaŋ* M. (Tryon 1968: 32, Falkenberg 1962: 44). This list certainly makes *kala* M a good candidate for reconstruction in the Daly language groups. Further similar forms are reported for Maung (Iwaidjan, non PNY) *ŋala* MB, and for Burrara (Maningrida, non PNY) *gu'la* MB, MBS.

Is the fact that *kala* refers to M in the Daly River languages, while it overwhelmingly refers to M(y)B in the languages of the Paman subgroup (PNy), totally fortuitous? Maybe not if both *kala* forms are retentions from some higher node within the Australian phylum and if *ka:la* M(y)B in Paman results from an identification of MB to M, as is the case with *\*ngama* in a number of PNY subgroups. Let us examine the terms for MB in the Paman subgroup.

Most of the kinship terminologies from this subgroup do show an extensive use of the criterion of relative age in definitions of basic classes and subclasses (Scheffler 1978: 151). Thus the mother's brother's class is composed of two lexically different subclasses, MeB and MyB, which have been, respectively, reconstructed in Paman, as *\*muku(r)* and *\*ka:la*, as we already noted (see Alpher 2004b: 473 and 430). While the reflexes of *\*muku(r)* do present semantic extensions to MeZ in most languages of the Northern (Cape York Peninsula) and Middle-Paman groups like Kandyu, Ompela, Wik-Monkan, Wik-Alkan, Wik-Datara, Wik-Datanya, Tjunundji, Wutati, Yintjinja, etc. (McConnel 1934, 1939-40, 1950, Thomson 1972), those of *ka:la* MyB are not extended to MyZ in most instances, except for Kandyu (Northeastern-Paman) *ka:la* MyB, MyZ (McConnel 1950: 127) and Wik-Alkan (Middle-Paman) *kali* MyB, MyZ. But some evidence suggests that this could have been the case in the past and during the upper-stages of the Paman groups. Thomson (1972: 12) reported that in Ompela (Northeastern-Paman):

*kala* is spoken of as a “male mother” ... people often address their *kala* as *papa* (mother), and when asked about this they say “they are the same—*kala* is like *papa*.”

Although not overt in most of these Paman languages, the status of *ka:la* M(y)B as a M(y)Z is ascertained by the reciprocal relationships<sup>30</sup>. Thus, in the Wik-Monjkan language (Middle-Paman) (Thomson (1972: 17), though terminologically distinct, *kala* MyB, yFZH and *kata* M have the same reciprocals *tuwe* ♀C, ZC. Furthermore, although *pipa* or *pip* F is kept distinct from FZ, FeB is not. Both of these latter relationships are, in effect, referred to by a single term *pinya* (or *pin*), and have in turn a single lexically marked reciprocal stemming from the same root; i.e., *pinyai* (1972: 16). In the Ompela kinship terminology (Northeastern-Paman), *mampa* ♀C, eZC is the reciprocal of *papa* M, MyZ and *kala* MyB. The same is true for all the Northern Paman languages. McConnel (1950: 132-3) reported in her tables that the terms for MyB, with most of them having the form *alai* reflecting *\*ka:la* with initial consonant dropping, as well as the terms for M or MyZ, did have the same reciprocals referring to ♀C, eZC. Similarly, the F and FyB terms as well as the FyZ terms had the same reciprocals referring to ♂C, eBC.

In his blog of August 2013, German Dziebel speculates that self-reciprocal equations like this were probably in use in Proto-PNy, but that all of them were lost, except in Cape York Peninsula, in the course of the Paman-Nyungan expansion, with the first one to disappear being *ka:la* MyB, MyZ, ♀C, eZC. From our perspective, it appears that, in a Kariera-like fashion, *\*ka:la* originally meant MyB, MyZ, ♀C, ZeC, at least in the Paman subgroup, or alternatively, under the hypothesis that the criterion of relative age was initially absent, MB, MZ ♀C, ZC (on the question of juniority and seniority in PNy kinship systems see McConvell & Keen 2011: 110-14 & Note 8).

In conclusion, it seems that an explanation for the status of *\*kaka* in PNy needs to be sought in terms of the much larger context of Australian languages as a whole, and particularly in its status in non-PNy language families. Thus, it could have been that *\*kaka* originally meant MB and *\*ka:la* M(Z) in Proto-Paman, just as is the case in the Daly River (non-PNy) languages, with covert identification of *\*kaka* MB with *\*ka:la* M(Z). This view is consistent with the semantic records found in some Paman languages where *ka:la* refers overtly to both M(y)B and M(y)Z. By making this identification of MB with M overt, a number of languages of the Paman family in their ancestral stages may have triggered elimination of the term *kaka* MB.

### **The Origin of *kaka* MB in Australia**

How can we interpret the pan-Australian distribution of the term *kaka* regularly having the same meaning, MB? One could argue that the distribution of the CVCV form *kaka* results from convergent (independent) innovations of “nursery” reduplicated words in unrelated families, either coincidental (chance resemblance) or propelled by some inner parallel mechanism. One can argue that the continental distribution of *kaka* MB results from areal diffusion. Or lastly one may argue that this distribution requires a genetic ex-

planation (common origin), which means that the various forms encountered in the language groups reflect a form, *\*kaka*, present in one high-level proto-language, possibly Proto-Australian, or are present in several ancient languages from which modern Aboriginal languages descend.

### ***Convergence***

The hypothesis that the occurrence of *kaka* in many languages and language groups is coincidental appears utterly improbable, due to the number of groups involved. Also, the hypothesis that the distribution of *kaka* MB results from convergent innovations (independent but reflecting parallel internal mechanisms) appears weak. Unless an underlying principle attaching CVCV forms, with a velar consonant, as it occurs in *kaka*, to the MB relationship can be demonstrated, the convergence theory would predict similar forms with more erratic meanings than just MB.<sup>31</sup>

### ***Diffusion: Australia as a Linguistic Area?***

The hypothesis that the widespread distribution of *kaka* results from diffusion is consistent with the idea of the Australian continent being a vast and very ancient linguistic area.<sup>32</sup> This hypothesis has its roots in Capell's 1956 discussion about "Common Australian," a notion founded on the alleged pan-Australian distribution of common nouns, non-root morphemes, and verb roots, of which he published a list of 48 items with 35 different meanings. Capell warned that Common Australian was not necessarily the Original Australian, although he was inclined to equate the two (1956: 71). He also emphasized that a number of words referring to cultural artefacts, kinship vocabulary and trade articles, or even ceremonial songs, were spread over vast distances along well-known trade routes (1956: 68-69). He consequently excluded such words from his list of "Common Australian" items. Elkin (1970: 708-9) also implicitly attributed the continental distribution of kin terms such as *mama* F, *kami* and *djami* referring to second ascending generation parents, and finally *kaga* MB, to diffusion along "past lines of communication."

The idea of a continental diffusion found its ultimate development in Dixon's "punctuated equilibrium" model.<sup>33</sup> This model finds its application in Australia where, it is alleged, a very long period of equilibrium (tens of millennia), during which linguistic traits and vocabulary continuously diffused, was followed by "minor punctuations in quite recent times" (see Koch 2014: 39), with the result of these processes being to delineate the Australian continent as a linguistic area. As far as lexical diffusion in Australia is concerned, Dixon (notably 2002: 27) proposed a model called the 50 per cent equilibrium model.<sup>34</sup>

Linguistic critiques of the punctuated equilibrium model and its relevance to Australia, as well as of the 50% equilibrium level model, have been gathered, notably in Evans (2003a: 6-7, & 2005) and Koch (2014: 38-41). Among these critiques are concerns with the assertion that equilibrium implies convergence and punctuation divergence, due to historical examples in which the contrary appears well-grounded, as well as claims for more realistic (thus lower) estimates of rates of lexical sharing in contiguous languages of

Australia, showing that the 50% score predicted in Dixon's model is overestimated most of the time. This is the case notably for borrowing rates of kinship terms, although they appear to differ greatly according to each language's contact situation. Heath (1981: 355, quoted in Koch 2014: 46) ) found 22% of shared kin terms between Ritharrngu (Yolngu, PNY) and Ngandi (Gunwinyguan, non-PNY). McConvell (2009b: 796, also quoted in Koch 2014: 46) found a 46.2% rate of kin term borrowing from non-PNY languages, related Ngumpin languages and English/Kriol into Gurindji<sup>35</sup>, but the case of Gurindji appears to be an exception.

Haspelmath (2004: 211, quoted in Koch 2014: 40-41), although recognizing that Dixon provided a useful summary of Australian areal features, writes that he

falls short of demonstrating that Australia is a linguistic area, because linguistic areas need not only be internally coherent, but also distinctive with respect to languages outside the area. Thus, one would have to show that the Australianisms are uncommon in the rest of the world, or at least in adjacent areas such as New Guinea.

The argument is compelling and applies to the distribution of *kaka* MB in Australia. In effect, this item, despite being obviously pan-Australian by virtue of its geographical and linguistic distribution (Tables 1, 3 and Map 1), does not fall under the category of "Australianisms" under Haspelmath's definition because it is found in a great many regions and languages of the world, including Papuan languages.<sup>36</sup> This multiregional distribution certainly weakens the explanation of the huge Australian geolinguistic spread of *kaka* in terms of areal diffusion, but does not, however, establish that this wide distribution is the result of common inheritance from Proto-Australian, although it is consistent with this idea.

### ***Common Origin: Proto-Australian, Proto-Sahulian and Beyond***

The kinship term *kaka* MB, EF was first hypothesized by Ruhlen (1994; see also Bancel and Matthey & Matthey and Bancel 2002) to be a global etymon whose reflexes are found in a great many language-families world-wide. Thus, this stem may have possibly been brought to Australia, more probably into Sahul<sup>37</sup>, at different periods of the Sahulian or Australian prehistory, possibly by different human-groups speaking different languages, all of them having *kaka* forms for MB in their kinship-lexicon luggage.

Yet the most recent DNA analyses in Aboriginal populations (Hudjashov *et al.* 2007, McEvoy *et al.* 2010, Rasmussen *et al.* 2011, Pugach *et al.* 2013) have all indicated that Aboriginal Australians share a deep common origin with native populations of New Guinea (those from the Highlands notably) and Melanesia (the Aetas and Mamanwa from the Philippines notably), and that one colonization event was responsible for the occupation of Sahul and Sunda some 50,000 years ago. Although the first three studies emphasize population isolation in Sahul and then in Australia subsequent to this period, detecting only minor or no gene flow until the arrival of the Europeans, the fourth one (Pugach *et al.* 2013), based on large scale genotyping data from Australian (but only the popula-

tions from the Northern Territory were considered), New Guinean, Island South-East Asian, and Indian native populations, detected gene flow between India and Australia around 4,230 years ago. The authors of this paper (Pugach *et al.* 2013: 1807) suggest that changes in the Australian archeological records (new stone tool technology, new ways of plant processing and the arrival of the dingo) could be associated with this migration. The Dravidian languages of India do display the term *\*akka*, which is certainly the proto-form for eZ in this language family, whereas the Indic, Iranian, Munda and, to some extent, Dravidian languages display a gender-marked term whose precise origin remains unknown: *kaka* FyB, with extensions to eB, and *kaki* FyBW. It appears unlikely, though, that these two terms were the loan sources for the Australian kin term *kaka* MB.

If we stick to the postulate of ‘one people / one language,’ then it is from the proto-language spoken by the “small founding population” (Hudjashov *et al.* 2007: 8729) that first stepped foot on Sunda and then Sahul some 50,000 years ago, that the Australian and Papuan phyla may ultimately be derived.<sup>38</sup> In 1971, Greenberg proposed a macro-family that he named Indo-Pacific, grouping the Papuan languages with the languages of the Andaman Islands and Tasmania, but his hypothesis was rejected by a vast majority of linguists. We must also contemplate the possibility that the language of the first settlers had a kinship lexicon in which there were *\*kVkV-* shaped terms referring to MB, GP, GC, and likely (e)Sib (Matthey de l’Etang in prep. a.). The presence of such kinship terms nowadays in both Papuan and Australian phyla, referring to similar kin types, is consistent with this hypothesis.<sup>39</sup>

Furthermore, if we do not adhere to Dixon’s idea of a very ancient linguistic area, it appears likely that before the populations of Australia and New Guinea became separate and isolated entities; that is, after Australia became physically separated from New Guinea as a result of ice melt sometime after 9,000 BP (Lewis *et al.* 2013),<sup>40</sup> a linguistic differentiation had certainly already occurred on Sahul, giving rise to several linguistic branches and families. This is likely because, by then, 40 000 years had already elapsed between the arrival of modern man on Sahul and the Australian-New Guinean geographical split. Pugach *et al.* (2013) found a divergence time between New Guineans, Australians and the Mamanwa people (a negrito group from Mindanao) close to 36,000 BP. According to the authors (Pugach *et al.* 2013: 1804), this date might appear “too recent given the purported date of the dispersal into Sahul at 45 kya,” but their conclusions (Pugach *et al.*: 1804-5)

confirm a common origin but an ancient split (at least 36 kya) for the Mamanwa, Australians and NGH (highlanders of Papua New Guinea–AM), supporting the view that these populations represent the descendants of an early southern route migration out of Africa and that Australians and New Guineans diverged early in the history of Sahul, when they were still one land mass, and not when the lands were separated by rising sea waters, around 8,000 y ago.

This genetic split may have resulted, minimally, in a first linguistic divergence between an Australian linguistic branch, possibly Proto-Australian, and a Papuan branch. This

scenario would push the existence of Proto-Australian far earlier than the date of the geographic split of ca. 8-9,000 BP.

The hypothesized Proto-Australian, as it is understood today, rests chiefly on a new definition of the relationships between the PNY and the non-PNY language families, called in the linguistic literature the “Pama-Nyungan offshoot model,” wherein PNY is hypothetically considered to be “a relatively recent daughter node” within the Australian phylum (Evans 2003a: 9); i.e., “an offshoot sharing immediate ancestry with some non-Pama-Nyungan groups,” namely Garrwan, Tangkic, and Gunwinyguan, altogether delineating a Proto Macro-Pama-Nyungan node (Evans 2003a: 10, Fig.4). The PNY language family is dated by AustKin back to some 5,000 BP (McConvell & Dousset 2012: 106). According to this model (Evans 2003a: 10), the 21 or so language families making the non-PNY language cluster will assume a far

greater importance for the reconstruction of Proto-Australian than the Pama-Nyungan languages.

For a large subset of non-PNY language families, similarities in pronominal prefixes, verbal inflection, detailed aspects of the syntagmatic structure of the verbs and nouns, details of the noun class morphology, the details of which are summed up in Evans (2003a) and Koch (2014: 63-66), point to

deep-level shared inheritance rather than just typological convergence (Evans 2003a: 7),

possibly from Proto-Australian. Evans (2003a: 21) stresses the fact that the similarities in grammatical morphology found in non-PNY languages occur

in parts of the grammatical system which one expects to be immune of diffusion, so they cannot be attributed to language contact.<sup>41</sup>

At the same time, Evans (2003a: 11) claims that it is

premature to make any proposals about Proto-Australian until we have a better established subgrouping of the non-Pama-Nyungan languages.

Nonetheless, the presence of *kaka* MB in numerous non-PNY families and PNg subgroups appears to be consistent with the hypothesis of Proto-Australian.<sup>42</sup>

### **A Linguistic Reconstruction of *kaka*?**

Alpher (2004a:106) stresses the fact that

numerous Pama-Nyungan etyma are attested also in non-Pama-Nyungan languages. Some of these must be retentions from an earlier period of linguistic unity, and others are likely loans (presumably from a Pama-Nyungan language to a non-Pama-Nyungan neighbor.

Alpher (2004a: 106) believes that it is difficult to evaluate the “loan-vs-inheritance status of these words” because of

the scarceness of recurrent sound correspondences—i.e. of the scarcity of cognates.<sup>43</sup>

The case of *kaka* MB appears different. Even though this form has been reconstructed in some PNY subgroups: Proto-Thawic (Curran: 2002), Proto-Marrngu, or posited as “reconstructible” in Ngumpin-Yapa, Kartu, Ngayarta by Koch (2011: 4), Karnic, Daly River language groups, Worrorran (non-PNY, my contention), the pattern of phonological similarity, as well as the near semantic identity of the *kaka* sets globally occurring in the Australian geolinguistic context might appear suspicious to linguists for whom

these correspondences do not provide the evidence of systematic phonological change that would be the logic of the comparative method. (Miceli 2008: 213)

*In fine*, the problem comes down to explaining how *kaka* MB has managed to survive without having undergone significant phonological and semantic changes since, say Proto-Australian, which surely predated the PNY and the non-PNY families by thousands of years. According to the criteria of historical linguistics, it even should have disappeared from the scene. Our contention (Matthey and Bancel) is that, as we emphasized in Bancel & Matthey de l’Etang (2002) and subsequent publications, the daily use of this term (originally an address term), as well as the use of other reduplicated terms like *papa* and *mama*, generally coined “nursery terms,” the easiness of their transmission to young children, their high symbolic significance, and their emotional load have made them extremely resistant to phonological and semantic change, as is otherwise fully demonstrated by the written attestation of their continuous transmission in the course of the past 5,000 years in many language families (Matthey de l’Etang & Bancel 2008, Bancel & Matthey de l’Etang 2013). Likewise, *kaka*-like terms such as *papa*, *mama* and *tata*, have also left traces in the written records of Indo-Hittite languages, thereby enabling the reconstruction of Proto-Indo-Hittite *\*HawH-os* (*\*xawx-os*) MB, GF (Nikolayev: 2007), and in the written records of Chinese since Preclassic Old Chinese *guʔ* MB some 3,000 years ago (Starostin: 2005). But even without ancient written records, there is little doubt that *#ka(a)ka* GP in Niger-Congo is extremely ancient, if not the original form for this language phylum. This very same form *\*kààká* for GP has been reconstructed in Proto-Bantu both by Meeussen (1969) and Guthrie (1967-1971); the same must be said regarding the form *\*kaak’* GP in Proto-Sudanic that can be traced back to more than 10.5 kya according to Ehret (2011a), the form *\*ʔakk-* GF in Proto-Afroasiatic that traces back more than 15 kya ago (Ehret: 2011b), the form *\*qǔH* MB in Proto-Sino-Tibetan that traces back some 6 kya ago, or even the form *#koko* ~ *kaka* MB, EF / GF, GM in Amerind that traces back 15 kya ago (Matthey de l’Etang & Bancel 2014).

### **The Original Meaning of *\*kaka* and the Putative Proto-Australian Kinship Terminology**

Let me make it clear, as a beginning to this section, that I have neither claimed to have reconstructed a word *\*kaka* at whatever remote linguistic level (i.e., Proto-Australian, Proto-Sahulian) using the comparative method, nor reformulated its original meaning. In

**Table 3: Kintypes Referred to by kaka in Australian Languages**

Language	MB	WF	HF	Other kintypes
<i>Anson Bay Daly</i>				
Worgaits (Wadjiginj, also Patjitjamalh)	<i>kaka-balluk</i> (♀ sp.), <i>kukka</i> (♂ sp.)	<i>kukka</i>	<i>kaka-balluk</i>	
<i>Western Daly</i>				
Brinken (Marithiel)	<i>kaka</i>	?	?	
Mari'ŋar	<i>kaka</i>	<i>kaka boi</i>	<i>kaka</i>	<i>kaka</i> FZH, FFZS/ FMBS <i>kaka boi</i> ♂ZS
Magati'ge	<i>kaka</i>	<i>kaka boi</i>	<i>kaka</i>	<i>kaka</i> FZH, <i>kaka boi</i> ♂ZS
Mari'djäbin	<i>kaga</i> (unmarried), <i>kaʀal</i> (married)	<i>kaʀal kunbun 'ŋu-lan</i>	?	<i>kaka</i> FFZS/ FMBS
Mari'jädi	<i>kaga</i> (unmarried), <i>kaʀal</i> (married)	<i>kaʀal kunbun 'ŋu-lan</i>	?	<i>kaka</i> FFZS/ FMBS
<i>Eastern Daly</i>				
Matngele	<i>kaka</i>	<i>kaka</i> distant potential WF, <i>kaka paleEt</i> F of the betrothed girl	?	?
<i>Southern Daly</i>				
Murinbata (early 20 <sup>th</sup> c.)	<i>kaka</i> , <i>kaka mulluk</i> 'classificatory' MB	<i>kaka kapi</i>	<i>kaka</i>	<i>kaka mulluk</i> 'classificatory' ZS
Murinbata (ca. 1935)	<i>kaka ŋoitnan</i> (♂ sp.), <i>kaka</i> (♀ sp.)	<i>kaka kapi</i>	<i>kaka</i>	<i>kaka kapi</i> ♂FFZS/FMBS <i>kaka</i> ♀FFZS/ FMBS
Murinbata (present)	<i>kaka</i>	<i>kaka</i>	<i>kaka</i>	<i>kaka</i> FFZS/ FMBS, FZH
Ngangiyemerri	<i>ake</i>	?	?	?
Ngangiwumirri	<i>eke</i>	?	?	?
Ngangikurunggur	<i>eke</i>	?	?	?
<i>Nyulnyulan</i>				

Language	MB	WF	HF	Other kintypes
<i>Western Nyulnyulan</i>				
Nyulnyul	<i>kaga ~ kaka</i>	<i>(kaka) tyamin-yarri</i> (prospective)	<i>kaga rangen</i> (prospective)	<i>kaka</i> FZH, <i>kaka tyamin-yarri</i> FFZS/FMBS, ♂DH
Bardi	<i>kara (gaara)</i>	<i>jamoonyarri</i>	<i>rangan</i>	<i>kara</i> MMBS, MFZS, ♂DH, FZH
Jawi	<i>kaka</i>	<i>ramparr</i>	?	?
Dyaberdyaber	<i>kaka</i>	<i>(kaka) tyamin-yarri</i>	?	?
Nimanburru	<i>kaka</i>	<i>(kaka) tyamin-yarri</i>	?	?
<i>Eastern Nyulnyulan</i>				
Jukun	<i>kaka</i>	<i>(kaka) tyamin-yarri</i>	<i>lamparr</i>	<i>(kaka-)</i> tyamin-yarri ♀DH?
Yawuru	<i>kaka</i>	<i>kaka (potential)</i>	<i>kaka (potential)</i>	?
Dyugun	<i>kaka</i>	<i>(kaka) tyamin-yarri</i>	<i>lamparr</i>	<i>(kaka-tyamin-yarri</i> ♀DH?
Nyikina	<i>kaka</i>	<i>Ramparr</i>	<i>lamparr</i>	<i>(kaka-)</i> tyamin-yarri ♀DH?
Warrwa	<i>kaka</i>	<i>(kaka) tyamin-yarri</i>	<i>lamparr</i>	<i>(kaka-)</i> tyamin-yarri ♀DH?
<i>Worrorran</i>				
Worrorra	<i>kakaa-ya</i>	<i>kakaa-ya; waaya</i>	<i>ibaaya</i>	<i>kakaa-ya</i> MF, MBS, MBSS, FMBS
Umiida	<i>kaka-ya</i>	?	?	?
Unggarrangu	<i>kake</i>	?	?	?
Unggumi	<i>kaka-nyerri</i>	?	?	?
Yawijibaya	<i>kaka-ya</i>	?	?	?
Yeidji	<i>kaka</i>	?	?	?
Wunambal	<i>gaga</i>	<i>wejaŋa, buneŋu</i>	<i>wolenda, mala, buru</i>	<i>gaga</i> MF, MBS, MBSS, FMBS
Pelange				<i>kaga</i> M, MZ, SW

Language	MB	WF	HF	Other kintypes
<b>Rembarngic</b>				
Ngalagkan	<i>kaykka ~ gayka ~ -kaitka</i>	<i>tjo-kangini, joy</i>	<i>no-kangini</i>	<i>kaykka ~ gayka ~ -kaitka</i> MBSS
<b>East Arnhem</b>				
Ngandi	<i>gaykay</i>	<i>Ꞗoŋ-Ꞗoy</i>	?	<i>gaykay</i> MBSS
<b>Gunwinyguan</b>				
Proto-Gunwinyguan				* <i>kaka-li</i> E
Wulwulam				<i>kakkak</i> MBS, H
<b>Tangkic</b>				
Lardil	<i>kaku</i>	<i>karda wunyinjin; yembe</i> pair of people, one of whom is MB or DH to the other	<i>karda; yembe</i> pair of people, one of whom is MB or DH to the other	<i>kaku</i> MBSS, ♂DH
Kayardild	<i>kaku-ju</i>	<i>yambi</i> (syn. <i>kar-du</i> )	<i>yambi</i> (syn. <i>kardu</i> )	<i>kakuju</i> ♀MBSS, ♂DH
Yukulta	<i>kaku-Ꞗu</i> MeB	<i>yampiya</i>	<i>yampiya</i>	
<b>Pama-Nyungan</b>				
<b>Yolngu</b>				
Dhuwal	<i>gaykay</i>	<i>lambara</i>	?	<i>gaykay</i> WMMBS, MFS
Yan-nhangu	<i>gaykay</i>	?	?	<i>gaykay</i> FMBS, MBSS, ♂MMMBDSS
Djinang	<i>kaykiy ~ gaykiy</i>	<i>milmarra; gaykiy</i>	<i>milmarra</i>	<i>kaykiy</i> FMBS, MBSS, ♂MMMBDSS
Ritharrngu	<i>gaykay</i>	<i>ꞖuŋꞖaj; gaykay</i>	?	<i>gaykay</i> FMBS, MBSS, ♂MMMBDSS
<b>Paman</b>				
Gog-Nar	<i>kaꞖa-Ꞗ</i> (U)	?	?	?
<b>Arandic</b>				
Lower Arrernte		<i>ihe-nterre</i>	?	<i>ihe-nterre</i> ♂DH
Western Arrernte		?	<i>ihe-nterre</i>	?

Language	MB	WF	HF	Other kintypes
East. & Cent. Arrernte		?	<i>a-nterre</i>	?
Anmatyerr		<i>ahe-nterre</i>	?	<i>ahe-nterre</i> ♂DH
Antekerrepenh		<i>ahe-nterre</i>	?	<i>ahe-nterre</i> ♂DH
Alyawarr		<i>he-nterre</i>	?	<i>he-nterre</i> ♂DH
Kaytetye		<i>ahe-nterre</i>	?	<i>ahe-nterre</i> ♂DH
<b><i>P-Karnic</i></b>	<b><i>*kaka</i></b>			
Arabana	<i>kakaka</i>	<i>kakaka taru</i>	<i>kakaka taru?</i>	<i>kakaka</i> FFZS/ FMBS, FZH
Wangkangurru (southern)	<i>kaka</i>	?	?	<i>kaka</i> FFZS/ FMBS?, FZH
Wangkangurru (northern)	<i>kaka</i>	<i>taru</i>	?	?
Pirlatapa	<i>kaka</i>	<i>taru</i>	?	?
Innamincka (Yantruwantha dial.)	<i>kaka?</i>			
Dieri	<i>kaka</i>	<i>taru</i>	?	<i>kaka</i> MBSS, FZH
Yarluyandi	<i>kaka</i>	<i>taru</i>	?	?
Ngamini	<i>kaka</i>	?	?	?
Karangura	<i>kukka</i>	?	?	?
<b><i>P-Ngayarta</i></b>	<b><i>*kaka</i></b>			
Kariera	<i>kaga</i>	<i>kaga</i>	<i>kaga</i>	<i>kaga</i> FFZS/ FMBS, FZH
Ngarluma	<i>kaga</i>	<i>kaga</i>	<i>kaga</i>	<i>kaga</i> FFZS/ FMBS, FZH
<b><i>Wati</i></b>				
Warnman	<i>kaka ~ kakampa</i>	?	?	?
Manjiljarra	<i>kaka</i>	?	?	?
Martu Wangka	<i>kaka</i>	<i>kaka</i>	<i>kaka</i>	?
Tjupan	<i>kaka</i>	?	?	?
Kartujarra	<i>kaka</i>	?	<i>kaka</i>	?

<b>Language</b>	<b>MB</b>	<b>WF</b>	<b>HF</b>	<b>Other kintypes</b>
Yulparija	<i>kaka</i>	<i>nyumpararra</i>	<i>nyumpararra</i>	?
Nyiya-parli	<i>kaaka</i>	<i>kanku</i> potential in-law	<i>kanku</i> potential in-law	?
<b><i>Kartu</i></b>				
Nandha				<i>kagga</i> MBC, FZC, FZ, ZS
<b><i>P-Marrngu</i></b>				
Karadjeri	<i>*kaka</i> <i>kaga</i>	<i>kaga</i>	<i>kaga</i>	<i>kaga</i> FFZS/FMBS, FZH
Inland Nyangu-marda	<i>kaka-ji</i>	<i>kaka-ji</i>	?	<i>kaka-ji</i> FZH
Coastal Nyangu-marda	<i>kaka-ji</i>	<i>kaka-ji</i>	?	<i>kaka-ji</i> FZH
Mangala	<i>kaka</i> (person to be avoided)	?	?	<i>kaka</i> FZH
<b><i>P-Ngumpin-Yapa</i></b>				
<b><i>P-Ngumpin</i></b>				
Gurindji	<i>*kaka</i> <i>kaka</i>	<i>lamparr</i>		?
Malngin (Gur. dial.)	<i>gaga</i>	<i>lambar</i>		
Ngarinyman (Gur. dial.)	<i>kaka</i>	<i>djabarda</i>		<i>kaka</i> MBSS
Bilinarra (Gur. dial.)	<i>kaka</i>	<i>djabarda</i>		<i>kaka</i> MBSS
Walmatjarri	<i>kaka</i>	<i>lamparr</i>	?	
Juwalini (Wal. dial.)	<i>kaka</i>	?	?	
<b><i>P-Yanyuwa-Ngar-na</i></b>				
Yanyuwa	<i>-kaka</i> MyB	<i>nya-adhungantha</i>	<i>nya-adhungantha</i>	
Warluwarra	<i>kaka</i>	<i>manngadha</i>	<i>manngadha</i>	
Bularnu	<i>kaka</i>	?	?	?
<b><i>Kulin</i></b>				
Wadi Wadi (Pi-angil)	<i>kaka?</i>	?	?	<i>kak-</i> FZH

Language	MB	WF	HF	Other kintypes
<i>Lower Murray</i>				
Daraltu (Ngaralta)	<i>kaɟaga</i>	<i>yuluwuntu</i> (& WM)		

this paper I have built an etymological series based on the form *kaka* and forms presumably phonetically derived from *kaka*, all referring to MB or to other kin that likely represent semantic extensions or meaning shifts. The Australian linguistic and geographical distribution of *\*kaka*, and its reconstruction in a number of language branches, as we just shown, are consistent with the hypothesis that a vast majority of the *kaka* terms, defined in this way, are inherited from the Proto-languages of the families to which they belong, and presumably derived from a Proto-Australian etymon *\*kaka* MB. This idea also finds support in the fact that *kaka*, or phonetically very close forms, occur with the same meaning, MB, in many language families worldwide (Bancel & Matthey de l'Etang 2002), and notably in the native language families from the Americas (Matthey de l'Etang & Bancel 2014).

The hypothesis that MB was the focal kintype referred to by *kaka* in Proto-Australian is supported by the fact that this kintype is focal with regard to virtually all the *kaka* terms reported on in this paper, as Table 3 clearly shows. But, as is also indicated in the same table, the terms *kaka* are semantically extended to other kin according to patterns of polysemy linked to the deep structure of the systems to which they belong, and it is likely that this was the case in the highest-levels of the Australian phylum. It would be extraordinary if the original *kaka* term for MB, from which the vast majority of Australian *kaka* terms likely derive, had departed from this semantic property. Further, one should stress that, from an evolutionary perspective, all the patterns of polysemy attached to the kin term *kaka* MB that are apparent in the ethnological records may constitute the contemporary outcome of a millennial social and linguistic evolutionary process, having entailed modifications of the initial kinship structure. This is to say that during the course of linguistic divergence, the languages, insofar as they have retained the term *kaka* with its focal meaning, may have modified (or not) the original semantic pattern in order to designate the kin that their system of kin classification classifies as MB.

These patterns of polysemy attached to the terms having MB as focal meaning are certainly among the semantic features most diagnostic of systemic structure, as Scheffler (1978) brilliantly demonstrated. But before beginning a discussion regarding these semantic patterns, let's describe the extensions most characteristic of terms with MB as the focal meaning.

- a. > **FZH**. Among the most current semantic extensions of *kaka* MB reported in the Australian records, we find FZH. The fact that FZH is referred to as MB (here *kaka*) is one of the most frequent features of Australian kin classification, although this frequency is difficult to calculate precisely because the designations for this category are not systematically provided in anthropological reports. So my

claim is also based on the type of system—when known—in which *kaka* occurs, and in which it should logically designate this affinal relation. This equivalence is formalized in the cross-stepkin rule (Scheffler 1978: 141; explanations p. 142),<sup>44</sup> and occurs in Kariera, Nyulnyul, Karadjeri, Arabana, Dieri and Aranda eponymous systems as well as in a number of terminologies that can be allotted to one of these paradigms. It is also likely that this equivalence occurs in the kinship systems from the dialects belonging to the Wati dialect cluster featuring *kaka* MB (Table 3), provided that they are structurally similar to that of the Ngaatjatjarra dialect interpreted by Dousset (2003) as Dravidian-like.<sup>45</sup>

In the systems deemed asymmetric (Keen: 2013b), like those of the Murngin (Yolngu) or Ngarinyin (Worrorra and Wunambal) languages where *kaka* MB occurs, this terminological equivalence is not featured (Scheffler 1978: 277-80, 306, 326), whereas the equivalence between MBW and FZ is. It is likely though, that both of these equivalences were present in the kinship terminologies of these languages during their proto-stages, under the hypothesis that they were Kariera-like, as McConvell and Keen have posited (McConvell & Keen 2011, Keen 2013a).

- b. > **EF (WF and HF) and DH.** These are in-law categories that are very frequently referred to using the MB (consanguineal) term *kaka*.<sup>46</sup> My account, based on data from Table 3, gives: WF 54.2 % out of the 58 languages having provided data for this relationship. The figure for HF cannot be provided, given the fact that there are only 33 languages out of 84 for which we have data. This reflects the fact that HF designata are far from regularly recorded in anthropological reports; in other words, female ego's designations are often not taken into account, or even more likely, are more difficult to obtain. The equation WF = MB is well known to anthropologists, and witnesses the fact that in a number of Aboriginal Australian systems of kin classification (but also worldwide) EF features no specific term, and thus, is terminologically identified with MB (similarly for EM, which is terminologically identified with FZ). This feature, formalized in Scheffler's spouse-equation rule as: a)  $E \rightarrow \text{cousin}$ , b)  $EF \rightarrow \text{MB}$ , and c)  $EM \rightarrow \text{FZ}$  (1978: 145; Table 4.4: 7.), notably characterizes Kariera-like systems, or systems structurally close to the Kariera paradigm; i.e., Aluridja-like systems, Nyulnyul, Karadjeri, Arabana, but also asymmetric systems like Murngin and Ngarinyin-type terminologies (e.g., Worrorra *kakaia* MB, WF).<sup>47</sup>

As Scheffler demonstrated, referring in particular to kin terms in G+1 and reciprocals in G-1 (1978: 127-8), these systems “feature no structurally independent in-law categories.”<sup>48</sup> Thus, in-law categories are generally subordinated to, or constitute subclasses of, the MOTHER'S BROTHER or FATHER'S SISTER classes, themselves constituting subclasses of the MOTHER/WOMAN'S CHILD or FATHER/MAN'S CHILD classes (which are features formally expressed in the parallel-cross neutralization rule [1978: 132]).<sup>49</sup> Most of the time, though, the

MB/WF/HF and FZ/WM/HM terms (*kaka* or any other term for MB, and any term for FZ), are compounded or suffixed with some *ad hoc* increment in order to distinguish ego's actual MB, who cannot be legally ego's father-in-law, from the classificatory, generally distant, MBs who happen to be ego's prospective or actual EFs (WFs or HFs). Once again, female ego's designations are far from being regularly reported. The extensions of *kaka* to DH (male speaking) occurs in Nyulnyulan (non-PNY) and in Arandic (PNY) languages (*\*ahenterre* EF, DH; see pp. 133 and 158), as a reciprocal of WF, but not of MB; those two kintypes are differentiated terminologically and have different reciprocals because of marriage rules.<sup>50</sup>

- c. > **FFZS/FMBS (father's [male] cross-cousins)**. Among the other semantic extensions widely covered by *kaka*, I note the terminological identification of father's cross-cousins with FZ and MB, which is formalized in Scheffler's parallel-cross status-extension rule (1978: 138-41)<sup>51</sup> that he believed (1978: 243) was "the most characteristic rule of Kariera-like systems." This rule is reciprocal and determines the status of cross-cousin's children and sibling's children. Scheffler also indicated (1978: 140) that this rule "*determines the parallel-cross statuses of more distant collateral kin.*" Such equivalences, involving *kaka* terms, occur in Kariera-like systems, Nyulnyul, Karadjeri, Arabana, Murngin, Ngarinyin (Worrorran),<sup>52</sup> and likely in a number of Wati systems, but are absent from Dieri systems. Unfortunately, these terminological extensions have not been systematically scrutinized in anthropological or linguistic fieldwork, so the data, in this respect, are obviously incomplete.
- d. > **MBSS**. The extension from MB to MBSS occurs in Yir Yoront, Murngin, Dieri/Warlpiri/Aranda-like systems, but is only actualized by *kaka* in the Dieri and Murngin (Yolngu) languages. The existence of this extension in Yir Yoront and Murngin is explained by Scheffler (1978: 264) as a superimposition of the AGA rule on a Kariera-like system. For Dieri/Warlpiri/Aranda, Scheffler explains it by saying that in these systems "cross cousins' of children are not classified as 'man's child' or 'woman's child' but, just the opposite, as 'father' and 'father's sister' (MBDC and FZDC) or as 'mother' and 'mother's brother' (MBSC and FZSC)." Their inclusion in the F and FZ classes and the M and MB classes are respectively determined by the AGU and AGA rules corrolaries (see Scheffler 1978: 339-40 for details).
- e. > **MF, MBS, MBSS**. What is also apparent in the Australian records is the existence of extensions of *kaka*, in a skewed Omaha manner, to MF, MBS, MBSS, and MBSSS, which occur in the systems of the Ngarinyin-type, notably those from the Worrorran dialects, and from the Wunambal language proper, all belonging to the Worrorran language family (non-PNy). In the particular context of these languages, this skewing in the mother's line appears to be an 'optional/contextual "overlay"' (McConvell 2012: 245, see also explanations and references for the

different types of Omaha skewing). This means that these kintypes may or may not be referred to by *kaka*, according to discourse context. Keen (2013a: 155) indicates that the MB (and the M) terms are “extended to agnatic descendants in contexts where interclan relations are discussed.”

- f. > **MBS (E)**. This particular Omaha-type extension has been exemplified by McConvell, taking the reconstructed Proto-PNY term *\*kaala* M(y)B as a test case, and showing the mechanism for the meaning shift M(y)B > MBC affecting the reflexes of *\*kaala* through an intermediate stage of MB = MBS (occurring notably in Ayabadhu (Yintjiṅa, PNY). The term *kaka* is not apparently affected by the equation MB = MBS if I make an exception of the use of the lexically-marked *kaka* MB term; i.e., the use of *kaka-nan* ‘little mother’s brother’ by Murin’bata speakers to designate their unmarriageable cross-cousins (FZS and MBS). This feature was judiciously pointed out to me by Patrick McConvell, when reading the first draft of this paper. To my knowledge, no other *kaka* term appears to be referring to both MB and MBS (FZS).

Another form, *kakkali*, present in Gunwinyguan, as mentioned earlier, refers to E or MBS. Harvey (2003a: 235, item 194; 2003b: 302) reconstructs *\*kakkali* E back to Proto-Gunwinyguan. One can suppose that such forms in these languages once referred to both MB and MBS, and that the primary meaning MB sank into oblivion, but there is no evidence supporting this supposition. As a matter of fact, numerous languages belonging to the taxonomically higher-level putative Arnhem language group, including Gunwinyguan and other language groupings, display forms like *kaka* (*gaga*) or *kak(k)ak* (*gagak*) referring to parallel GP and GC. A hypothetical skewing MB > //GP is not easy to explain (if it ever happened), unless we suppose a change MB > (e)B through Crow skewing and (e)B > FF through the AGA rule. As we showed in earlier publications (Bancel & Matthey de l’Etang 2002, Matthey de l’Etang & Bancel 2002), the reduplicated form *kaka* for GP also has a worldwide currency. This question will be fully dealt with in Matthey de l’Etang (in prep. a.).

The way that these equivalences occur together in the same terminology are system-specific. The first remarkable pattern of polysemy comprising MB, FZH, EF, FFZS, FMBS appears to be shared among the Kariera-like systems, Aluridja-like systems where *kaka* MB is found (e.g., Martu Wangka), and the Nyulnyul-Karadjeri-Arabana-type systems. The prototypical designations employed here are from Scheffler’s (1978) typology, but we can also use Keen’s (2013b) typology, in which case we will refer to these systems as ‘dual systems.’<sup>53</sup> The second remarkable pattern concerns MB, FMBS, EF (generally WF), MBSS (by AGA rule) that occurs in the Yolngu (Murngin-type system), and the Yir Yoront language (Yir Yoront-type), whose terminology doesn’t display *kaka*. These two system types are subsumed by Keen (2013b) under the asymmetric A type. The same pattern also occurs to a certain extent in systems belonging to the Ngarinyin or asymmetric B type (Keen 2013b). According to Lucich (1968), Worrora and Wunambal, two lan-

guages from the same language family as Ngarinyin (Worrorran, non-PNy) display respectively *kaka-ia* MB, WF, FMBS (optionally) and *kaka* MB, FMBS (also optionally). As I said earlier, FZH is not featured in asymmetric systems, except in some instances in Yir Yoront (Scheffler 1978: 278). Finally, there is a third pattern occurring in Warlpiri-Aranda-Dieri-types (Keen's quadruple) which is MB, FZH, MBSS (for this latter extension see this section, subsection *d.*).

Obviously, the first pattern of extensions is numerically overwhelming in our data. This is consistent with the prevalence of dual systems (or Kariera-like systems) in Australia: 67.1 % according to Keen's (2013b: 18) account of the distribution of types in his 'sample' of 82 kinship terminologies (2013b: 8). But as important as this figure may appear to be, no general conclusion is to be drawn from it alone as to a hypothetical historical precedence of Kariera-type systems over all the other system types, or as to the semantic patterning of the MB term (likely *kaka*) in Proto-Australian. It is plausible though, that the patterns of polysemy occurring in G+1—but not only those—notably the absence of extensions to FMBS/FFZS and EF, typical of Aranda/Dieri systems, result from a change from a cross-cousin (or classificatory cross-cousin) bilateral marriage to a MMBDD/MFZDD marriage. The adoption of such marriage pattern, if the direction of change is correct, would have entailed the Aranda-isation of a number of Kariera-like terminologies. In any case, another, complementary, approach is needed to tackle these crucial problems.

### **A Primordial (Original) Kariera System in Australia?**

One of the question briefly addressed in this paper's preamble was to know if the diversity in Australian kin classification is representative or not of particular historical developments from just one system prototype; i.e., from the Kariera type, as has been theoretically assumed for many regions of the world by a number of authors, whose contributions we have already mentioned. Scheffler has insisted on how most of the structural features, even if differently present in the Australian system types, could be, for the most part, reduced to Kariera features.

It must be emphasised that the question of knowing what were the system types existing in the proto-stages of the language families (the fact that *kaka* MB occurs and is reconstructible, even if important, is not determinant here), is not exactly the same as asking whether or not all the Australian kinship terminologies ultimately originate from one ancestral Kariera-like system (my hypothesis) existing in Proto-Australian, and featuring the consanguineal term *kaka* MB. An answer to the first question, pointing to Kariera as the system existing during the languages proto-stages, though, would provide substantial support for the second hypothesis.

This first question comes down to evaluating the linguistic, semantic, and systematic changes that may have affected the kin classifications of the sister languages within particular Pama-Nyungan subgroups, or within non-Pama-Nyungan language families since their proto-stages, by reconstructing kin terms, using the comparative method, and

further, by characterizing the structural features of the proto-systems of kin classification of the said subgroups and families.

This is precisely the path followed by a number of anthropologists and linguists working on Australian Aboriginal languages and kinship systems, notably Koch, Keen, McConvell, and Dousset who have joined their forces, along with those from other scholars, in shaping the AustKin project, whose goal is to ultimately reconstruct the PNY kinship system. McConvell & Keen (2011: 100) emphasize that this approach is likely to

build up a picture of kinship system through time. This can tell us what kinds of transformations actually occurred and enables us to compare them with the abstract structural models.

We must keep in mind though, that the challenges faced by this task do not lie so much in the phonetic reconstruction of the terms, but rather in the evaluation of the “loan-vs-inheritance status” of a number of kin terms, as well as in the “reconstruction” of the kin terms’ original meanings. Differences—though not necessarily irreconcilable according to Read (2013)—that arise between phonetic reconstruction and the comparative method of historical linguistics, on the one hand, and structural reconstruction of possible sequences of terminological change, on the other hand, can be seen in Read’s (2013) reconstruction of the historical sequence of terminological changes in the Polynesian terminologies. The difficulties pertaining to kinship semantics have been notably addressed in McConvell (2013c and 2015). Likewise, the Auskin project has encouraged ‘reconciliation’ of anthropological ‘structural transformations’ approaches, notably that of Keen, with the methods of comparative linguistics, thus creating a synergism favourable to a better understanding, both at synchronic and diachronic levels, of the structures and the changes in the structures of Australian systems of kin classification, as well as advancement in the linguistic reconstruction of the terminologies at early stages of Australian language families, most notably those of PNY subgroups .

So far, McConvell and Keen (2011) and Keen (2013a) have produced, based on linguistic evidence, a solid case for Yulngu kinship terminology (Murngin, asymmetric A type) being developed from a Kariera-type system through an ordered series of differentiations, and extensions, summed up in Keen (2013a: 158). Keen (2013a: 154-7, summary p. 158) also argues that the Asymmetric B (Ngarinyin-type) system of the Ngarinyin language evolved from a Kariera-type system, through the differentiation of MM/MMB from FF/FFZ (as in Yolngu), the differentiation of FM/FMB from MF/MFZ, the skewing of the FM/FMB and the MF/MFZ terms and the AGA extension of the MM/MMB term (also in Yolngu). The author further indicates (2013a: 158-9) some ways in which the validity of these posited models of evolutionary change could be tested. One of the ways would be through

historical linguistic reconstructions of proto-terminologies (presumably those of Proto-Worrorran and Proto-Yolngu – AM) and through further research on links between Yolngu and eastern Cape York Peninsula terminologies and those of other languages as essayed in McConvell and Keen 2011. Another way.. would be

through the existence of intermediate types of terminologies. The form of the Yir-Yoront terminology can be seen as representing the penultimate stage of the evolution of the Yolngu form from a Kariera-type base, as can some variants in north-east Arnhem Land such as Ritharrngu.

Historical comparative linguistics has been applied by Koch (2013) with the aim of reconstructing kin terms at different nodes in the Arandic language tree. This study resulted in the conclusion that the Proto-Arandic terminology was already Aranda in type.

One term retains attention, though, that possibly points to an anterior, pre-Arandic, Kariera or Nyulnyul/Arabana-type stage. Koch (2013: 178) reconstructs *\*ahenterre* for EF and ♂DH back to Proto-Arandic, which he suspects was a compound: *ahenterre*, with the first segment possibly reflecting a Pre-Arandic form *\*CVV<sub>k</sub>V*, possibly *\*kaaka* MB and the second possibly reflecting a form *\*CVntVrrV* (perhaps *\*mantirrv*), probably cognate with the Wagaya form *mentirru* ‘father-in-law.’ Thus, the Pre-Arandic form for EF could well have been a lexically marked form such as *\*kaaka mentirrv*. The occurrence of a reflex of *kaka* augmented with a form, having ‘in-law’ for meaning is no surprise in the Australian kinship records. Let us remind ourselves that the Nyulnyulan languages refer to WF as *kaka tyaminyarri* (*kaka tyami-nyarri*), a compound literally meaning “MB associated with mother’s father” (McConvell 2015: 300). The same languages may refer to HF as *kaka rangin*, with *rangin* covering the affinal meaning. Also relevant are *kaka boi* WF in Mari’ṅar, *kaka kapi* WF in Murin’bata, and *kakaka taru* WF in Arabana etc.<sup>54</sup>

The latter feature, present in a Pre-Arandic stage, is consistent with the existence, at this level, of a kinship terminology whose type could range from a Kariera to a Nyulnyul or Arabana paradigm. This appears likely since it may be that another compound discussed earlier, namely *\*kamerne*, has been reconstructed back to Proto-Arrernte for MB by Koch,<sup>55</sup> with the first consonant likely reflecting an older *\*kaka* and the second segment reflecting an older *\*ngamVrnV* (possibly *\*ngamirni*) and was in fact in Proto-Arandic.<sup>56</sup> This could have been the case if the Kaytetye form *awe-le* MB, likely reflecting a pre-Arandic form *\*CawV-*, as do most of the FZ terms in the Arrernte branch (Koch 2013: 179), was actually representing a meaning shift: FZ > MB. Alternatively, it may have been a loan from a neighboring language referring, in those remote times, to MB as *kawa*, as is the case for a goodly number of languages distributed along the Australian coasts (Table 1 and Map 1) and for the Wangkumara language (Eastern Karnic, PNY) that is geographically closer to the Arandic language subgroup and for which MB is referred to as *kawa-lidya*.

Thus the two forms, *\*kaka* and *\*ngamirni*, may have co-occurred in a Pre-Arandic stage with both meaning MB, as is the case nowadays in Gurindji that we mentioned earlier. It is also likely that both forms happened to be subsequently bracketed together and resulted in the Proto-Arandic compound form *\*kamerne*.

**Table 4: Kaka in Systems of Kin Classification (Summary)\***

ORIGINAL TYPE in P-language	DERIVED TYPE and language name	Primary meaning in derived types	Collateral and affinal extensions in derived types
<b>Non-Pama-Nyungan</b>			
<i>P-Worrorran</i> (non-PNy): KARIERA (D). (Keen 2013a). Kariera posited early in Ngarinyin proper, Worrorra and Wunambal	NGARINYIN (AB): Wunambal, Worrorra proper and other Worrorran dial.	<i>kaka</i> - MB in Worrorra and Wunambal	Worrorra; variable/contetual <i>kaka</i> - MF, MFS, MFSS, also WF, FMBS. The same except WF in Wunambal
<i>P-Southern Daly</i> (non-PNy): KARIERA (D)	KARIERA (DA): Murin'pata	<i>kaka</i> MB	<i>kaka</i> FMBS, FZH, <i>kaka kapi</i> WF, <i>kaka</i> HF
<i>P-Western Daly</i> (non-PNy): KARIERA (D)	KARIERA (DA): Maringar, Magati'ge and affiliated dial.	<i>kaka</i> MB	<i>kaka</i> FMBS, FZH, <i>kaka boi</i> WF, <i>kaka</i> HF
<i>P-Western Daly</i> (non-PNy): KARIERA (D)	KARIERA (DA): Mari'djadi, Mari'djabin	<i>kaka</i> unmarried MB	<i>kaka</i> FMBS, <i>kaɾal</i> ( <i>kaka</i> ) <i>kunbun'julanj</i> WF
<i>P-Eastern Daly</i> (non-PNy): KARIERA (D)	KARIERA (D): Matngele	<i>kaka</i> MB	<i>kaka</i> WF, <i>kaka paleet</i> father of the betrothed girl
<i>P-Anson Bay Daly</i> (non-PNy): KARIERA (D)	KARIERA (DA): Worgaits (Wadyiginy)	<i>kukka</i> ♂MB, <i>kaka-balluk</i> ♀MB	<i>kukka</i> WF, WFB, <i>kaka-balluk</i> HF, HFB
<i>P-Nyulnyulan</i> (non-PNy): KARIERA (D)	NYULNYUL (DA): Nyulnulan languages (see McConvell 2015 for heavy borrowing of kinship terms, notably from Marrngu, PNy)	<i>kaka</i> MB	<i>kaka</i> FMBS, FZH, ( <i>kaka</i> ) <i>tyaminyarri</i> WF, ( <i>kaka</i> ) <i>rangin</i> HF
<i>P-Tangkic</i> (Non-PNy): KARIERA (D)	ARANDA (Q): Lardil (was Kariera in the past, Hale 1982), Kayardild, Yukulta	<i>kaku</i> - MB	<i>kaku</i> - MBSS, ♂DH
<i>P-Rembarngic</i> (non-PNy): KARIERA (D)	ARANDA (Q): Ngalagkan	<i>gayka</i> MB	<i>joy</i> WF, <i>gayka</i> MBSS
<b>Pama-Nyungan</b>			
P-Ngumpin-Yapa (PNy): KARIERA (D) (McConvell 1997)	WARLPIRI (Q): A number of <i>Ngumpin-Yapa</i> languages	<i>kaka</i> MB	FMBS?, <i>lamparr</i> WF, <i>kaka</i> MBSS

<i>P-Ngayarta</i> (PNy): KARIERA (D)	KARIERA (D): Karijarra, Ngarluma	<i>kaka</i> MB	<i>kaka</i> FMBS, FZH, WF, HF
<i>P-Marrngu</i> (non-PNy): KARIERA (D)	KARADJERI (AA): Karajarri, and likely Nyangumarda	<i>kaka</i> MB	<i>kaka</i> FMBS, WF, HF, FZH
<i>P-Wati</i> (PNy): KARIERA (Dravidian?) (D)	ALURIDJA (DHM, DRAVIDIAN?): Ngaatjajarra (Dousset 2003). Also numerous dialects, some referring to MB as <i>kaka</i>	<i>kaka</i> MB	<i>kaka</i> FMBS?, FZH?, <i>kaka</i> ‘potential’ EF, specific terms for ‘promised’ or ‘actual’ EF?
<i>P-Karnic</i> (non-PNy): KARIERA (D)	ARABANA (DA): Arabana	<i>kakaka</i> MB	<i>kakaka</i> FMBS, FZH, <i>kakaka taru</i> WF, <i>kakaka</i> HF
<i>P-Karnic</i> (non-PNy): KARIERA (D)	(DA): <i>Western Karnic</i> : Southern Wongkonguru	<i>kaga</i> MB	<i>tidnara</i> FMBS, FZH, <i>taru</i> WF, EF
<i>P-Karnic</i> (PNy): KARIERA (D)	DIERI (Q): Dieri, Pir-latapa, Northern Wongkonguru etc.	<i>kaka</i> MB	<i>tidnara</i> FMBS, <i>taru</i> WF, <i>kaka</i> MBSS, FZH
Pre-Arandic (PNy): KARIERA, NYUL-NYULAN or ARABANA-like system (D). P-forms from Koch 2013	ARANDA (Q) : <i>P-Arandic</i> (see next row)	P-Arandic possibly <i>*kamerne</i> MB (AM), or P-Arrernte* <i>kamerne</i> (*ake + <i>amerne</i> ) < Pre-Arandic <i>*ka(a)ka</i> MB + <i>*ngamVrnV</i> MB ( <i>*ngamirni?</i> –AM)	P-Arandic <i>*ahe-nterre</i> EF < Pre-Arandic <i>CVVkV</i> ( <i>*kaaka?</i> ) MB + <i>*CVntVrrV</i> ( <i>*mantirrV?</i> ) EF
P-Arandic (PNy): ARANDA (Q); (Koch 2013)	ARANDA (Q): Arandic languages	<i>ahenterre</i> EF; <i>kamerne</i> MB	<i>ahenterre</i> ♂DH, <i>kamerne</i> ♂DH, FZH
<i>P-Yolngu?</i> (PNy): KARIERA (D) (McConvell & Keen 2011, Keen 2013a)	YOLNGU (MURNGIN, AA): Ritharrngu, Djinnang, Yan Nhangu, Dhuwal	<i>gaykay</i> MB	<i>gaykay</i> FMBS, WF, MBSS
* Hypothesized directions of change, according to Scheffler’s typology. (Abbreviations for Keen’s [2013b] categories are D: Dual, DA: Dual augmented, DHM: Dual with horizontal merging, Q: Quadruple, AA: Asymmetric A, AB: Asymmetric B). In italics: name of language groups and kinship terms.			

Let’s also mention other studies dealing with systemic change: that of McConvell (1997, 2015) presenting a tentative reconstruction of the Proto-Ngumpin-Yapa kinship terminology which he assumed was Karijera-like; that of Hale (1982), quoted in McKnight (1999: 50) assuming that Lardil (Tangkic, non-PNy) had a Karijera system in the past; and finally that of McConvell (2015) showing how language contact and borrowing severely affected the original kinship terminology of the Nyulnyulan languages, most notably by the borrowing during the early phase on the Nyulnyulan family—probably from the Marrngu subgroup (PNy)—of four PNy grandparental terms. Although these loans into Nyulnyulan languages made the system look like an Aranda-type system by restructuring the system

into four lines of descent, they did not affect the Kariera semantic pattern in G+1; i.e. *kaka* MB, FMBS, FFZS, FZH, *kaka tjamunyarri* ‘prospective WF’ and *kaka rangin* ‘prospective HF.’ Furthermore, Keen (2013a: 158) has judiciously pointed out that the transformations from Kariera into asymmetric systems within the Yolngu and Ngarinyin languages may have started

by a differentiation of parallel and cross-grandkin into an Aranda-type pattern, as in the Nyul-nyul system.

It seems to me that the Karnic language group (PNy) also deserves special attention, primarily because its sister languages display systems of kin classification that can be reduced to two eponymous, well-known, although structurally different, system-types: Arabana and Dieri, even without mentioning some structurally intermediary terminologies more or less close to one of these two paradigms. Linguistic and anthropological accumulated data regarding these languages are plentiful and should enable a linguistic reconstruction of a number of terms back to Proto-Karnic (among which presumably *\*kaka* MB), as well as the determination of the type of kinship terminology present in this proto-language. I must also insist on the primary importance of doing the same for the non-PNy language families, whose linguistic weight has been already stressed, and whose kinship lexicons often feature *kaka* terms for MB.

Table 4 presents putative directions of systematic changes in a number of non-PNy families and PNy subgroups displaying *kaka* terms for MB. Those already worked out are referenced in the first column. The direction of change appears clearly, from Kariera-like systems existing in the proto-languages into present-day Aranda or asymmetric systems. Some of the assumptions made here may be still provisional, but the general trend is unambiguous and supports the idea of “Kariera first.”

That the Kariera system was possibly the sole type of terminology occurring in the higher levels of the Australian phylum—both in PNy and non-PNy families—seems by now to be a better grounded hypothesis that was previously the case, although more work is still needed to test it further. As I have already said, this outcome is consistent with the idea that the kinship terminology in use during the Proto-Australian phase was Kariera-like.

A consequence of this putative global evolutionary trend is to make more plausible the extensions of the MB term, notably in contexts featuring *kaka*, to FZH, EF, FMBS/FFZS in the proto-stages of many PNy subgroups, in Proto-Nyungic, pre-Arandic, as well as in the proto-stages of a number of non-PNy families, as can be seen in Table 4.

Thus, in light of the overwhelming occurrence of this set of equivalences in system contexts featuring *kaka* MB and, even, more importantly, of their probable global occurrence during the proto-stages of most of the language families where *kaka* occurs, I suggest that FMBS, FFZS, FZH, EF were originally all classified and actually lexically identified with the category *kaka* MB in the Proto-Australian system of kin classification. This system cannot be directly characterized as Kariera because the latter needs a few more definitions than just those established in G+1.<sup>57</sup> But all the systems showing such

semantic features, even when they are not directly Kariera, have been posited to be just a few steps away from Kariera and likely derived from it. Luckily, we have records relating to a number of second ascending and descending generation's kin terms, notably those for parallel grandkin, as well as terms concerning ego's generation, notably those for sibling. Some of them may turn out to be very ancient and inherited, possibly going back to the same time period as that of \**kaka* MB. They are likely to help us continue unveiling the nature of the Proto-Australian kinship terminology.

### **Provisional General Conclusions**

The hypothesis supported in this paper is that the term *kaka*, having MB as its primary meaning, was presumably in the kinship terminology of a taxonomically high Australian language group, possibly Proto-Australian. It is also provisionally assumed that the system of kin classification of this proto-(Australian) language was Kariera in type. This double assumption builds on arguments pertaining to different fields: linguistics, genetics, archeology and kinship anthropology.

### ***Worldwide and Australian Distribution of kaka Terms***

The wide currency—even wider if we take into consideration its replacement by maternal terms, a process which surely occurred in a good number of linguistic groups—and particular geographic distribution of the kin term *kaka* MB in Australia is consistent with the distribution worldwide of phonetically and semantically similar terms, interpreted in Bancel and Matthey 2002, as reflecting the global etymon \**kaka*. This makes it very unlikely that *kaka* constituted an Australian innovation, possibly spread over vast regions and into a great number of languages. Instead, it appears likely that this term was inherited from the language(s) of the people who first colonized Sahul. Genetic studies agree that Papuan populations from New Guinea, Australian Aborigines and some other populations from the Philippines are all likely descended from one small group of people who reached Sunda, then Sahul, ca. 50,000 BP, and possibly earlier. This date agrees with archeological evidence (see notably Bowler *et al.* 2003, Summerhayes *et al.* 2010). Further, according to recent genetic studies, the group who first reached Sahul represents an early wave of anatomically modern humans that left Africa, possibly as early as 70 kya BP.

A first linguistic split between Papuan and Australian phyla may have resulted from a divergence between Melanesian, New Guinean and Australian populations, which, on genetic grounds, may be dated back to around ca. 36 kya BP. Proto-Australian may be equated with the Australian branch resulting from this split.

The overwhelming presence of *kaka* MB in 9 non PNY families and 12 PNY subgroups in which, for the most part, it is reconstructed or “reconstructible,” argues in favor of its inheritance from Proto-Australian even if it is not diagnostic of this phylum. The hypothesis of Proto-Australian, as it is posited today in the Pama-Nuyngan offshoot model, will eventually be tested when linguistic reconstructions, both of kin terms and classificatory systems, reach upper-level linguistic units, and also when Australian linguistics

convincingly draws up, as Evans (2003a) argues, a “better established subgrouping” of non-PNy language families.

### ***Phonetic Properties of kaka MB Terms***

Kinship etyma are certainly ‘long rangers,’ and some of them probably more than others. As McConvell (2013a: 289), quoting Clackson, remarked, 75% of the kin terms present in Proto-Indo-European 6,000 to 9,000 years ago have been retained in the daughter subgroups, a rate considerably higher than the one predicted by glottochronology. My claim (as well as that of Pierre Bancel) is that the phonetic properties of the term *kaka*, notably its reduplicated form, which is particularly well-adapted to the phonetic capacities of young children, and, as such, is suited to resisting phonetic change, as well as the importance of the maternal uncle or father-in-law being instrumental in marriage matching and initiation ceremonies of precontact Australian societies, made it possible to transmit this term from one generation to another without significant changes, even during tens of millennia in Australia (and Sahul), in the same manner as this occurred in other linguistic phyla from other parts of the world. Consequently, if the arrival of modern men in Sahul ca. 50,000 BP was part of a human dispersal, possibly independent and prior to the one that led modern humans to Europe and South-East Asia (Rasmussen *et al.* 2011), the word, *kaka*, could have then been passed from one generation to another since the departure from Africa, possibly 70,000 years ago.

### ***Kaka and the Kariera System***

Although *\*kaka* cannot be reconstructed via the comparative method back to Proto-Australian with a proto-meaning, thereby indicating in which kind of terminology it occurred, the Australian kinship studies, mentioned in this paper, have all converged on an evolutionary trajectory from Kariera into other system types in the course of the history of the language groups under scrutiny. This includes a posited Kariera system in the Pre-Arandic language stage. These first conclusions indeniably go for the proposal, rather conjectural until now, that the Kariera-type system was “primordial” in Australia, an expression appearing somewhat vague, but which means that at the start of the processes leading to kinship systemic changes that occurred both in PNy and non-PNy was the Kariera system. Yet, one cannot help hypothesizing that the Kariera system had been in existence, even earlier on, in higher nodes of the Australian language phylum. It might have been in the putative pTPNy (Proto-Tangkic-Pama-Nyungan) phylum (Evans 2003a: 10),<sup>58</sup> and it is possible that the Proto-PNy, the Proto-Tangkic, and also the Proto-Garrwan systems were Kariera-like. McConvell has reconstructed some kinship terms back to pTPNy; i.e., *\*tyampV* MF, MBS, and *\*ngatyV* MBS. To these, I add tentatively the form *\*kakV* (may be *\*kaka*) for MB, *\*ngama* for M, and *\*kangku* for FF. This latter term is interesting because it is found in both the Tangkic and Garrwan language families (non-PNy), focally referring to FF, but with different meaning extensions in the two language groups. While in all the Tangkic languages, *kangku* FF covers also FFZ in an Aranda manner, *kangku* FF is extended to MMB in Garrwa, which is an equivalence diagnostic of Kari-

era-type systems (FF = MMB). The feminine counterpart of *kangku* is the term *kukuli* referring to MM and FFZ. These latter semantic features in the Garrwa system are certainly very instructive, but need to be verified and completed, notably by the study of the Waanyi kinship terminology, which also features *kangku* FF and *kukuti* MM, before we can draw preliminary conclusions about the putative nature of the Proto-Garrwan system.

I insisted earlier on how a generalized evolutionary scheme from Kariera into other system-types, if not a proof in itself, would be consistent with the idea that the Proto-Australian kinship system was Kariera-like. The fact that the term *kaka* MB is found in systems that are either Kariera or likely evolved from Kariera (Table 4) is also consistent with this hypothesis. But can we go further in testing this hypothesis?

A lot of work is needed to reach firmer conclusions. From my point of view, further studies aiming at reconstructing kinship terminologies of PNY subgroups appear essential. In this respect, the research work that has already been accomplished within the framework of the AustKin project is of the utmost importance. It also appears crucial to undertake reconstructions of kinship terminologies back to the proto-stages of non-PNY language families. The future of kinship diachronic studies, also depends on progress being made in the determination of the sound changes occurring in particular languages and affecting kin terms, on the study of, and changes in, the morphology of kinship items, and on the structural analysis (and comparison) of the Australian terminologies as has been done with the Kariera terminology (see Leaf and Read 2012, Chapters 8-9). We will see in the forthcoming second part of our study that the ubiquitous presence of other *KV(D)KV*- kinship terms and their particular reference to ego's and second generation's kin types are consistent with the hypothesis that has been put forward in the present paper regarding the Kariera terminology.

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<sup>1</sup> AustKin is a database, a mapping software and a collaborative network (McConvell & Dousset 2012). Some of the kin terms reported in this study have been retrieved from the AustKin website.

<sup>2</sup> The form *kV(ŋ)kV(ŋ)*- accounts for the presence of a velar nasal *ŋ* in some MB terms.

<sup>3</sup> The languages of the Daly River region are nowadays generally classified into five different language families constituting a language area (*Sprachbund*) (see Evans 2003a: 13).

<sup>4</sup> I have data on about 241 languages reported in Bower's (2012) list of 392 languages, and data concerning 60 languages/dialects not included in her list.

<sup>5</sup> Let's mention the presence of the Paman forms *ka:la* MyB, the Waka-Kabic forms *mama* and *kami* MB, the Kulin forms *tjaRm* MB, the Nyungar forms *kongk* MB.

<sup>6</sup> The reference to (Koch 2011) actually refers to a draft of a paper presented at the Australian Languages Workshop, Stradbroke Island, March 12, 2011.

<sup>7</sup> Beside *kongk* MB, the form *kangku* has also been reported in Nyungar proper in 1900 (see AustKin, with reference to Dench 1994). In all the other dialects where the MB term is documented, we find *kongk* MB. The form *kangku* for MB also occurs in Ngatjumaya (Mirniny, PNY), a language spoken in the southern-most part of Western Australia.

<sup>8</sup> A third solution would be to interpret *kanga* MB as a form resulting from syllable deletion *kaka* > *ka*, suffixed with *-nga*, thus *ka-nga*. McConvell (2008: 321) indicates that endings like *-ngai*, *-ngeg*, *-ngi* occurring on kin terms of some languages from southeastern Australia, "may descend from the initial part of the first singular pronoun." This feature might perhaps explain the forms *ka-ngu* MB in Woivurrung; *ka-ngit* MB in Colac; *ka-ngaba* MB in Yorta-Yorta (Table 1, Map 1 and 2).

<sup>9</sup> Alpher (2004b: 413-414) reconstructed the form *\*cuway* ~ *\*cuwa* in Proto-PNY, mentioning the existence of cognate forms *dhuwai* ZS in Gugu Yimidhirr (Yalanjic, PNY), *juway* GGF, ZC in Kuku Yalandji (Yalanjic), and *thyuwayrr* female cross-cousin in Koko-Bera (Southwestern Paman, PNY). The suffix *-y* is also found, transcribed as *i*, in the Paman languages of Cape York Peninsula; i.e., *alai* MyB.

<sup>10</sup> Possibly: Iwaidja *gadja* MB, Ubugarla *djadja* MB; Gagudjuan: Gaagudju *jadja* MB; Maningrida: Nakkara *nadjait* MB, Gunbudj *nadjait* MB; Gunwinyguan: Proto-Gunwinyguan *\*cacac* U, Mayali *nadjait* MB, Kunwinjku Oenpelli *ngadjaj* MB, Gundjeihmi *ngadjaj* MB, Kunwinjku (Maningrida) *ngadjaj* MB, Kuninjku *ngadjaj* MB, Warrai *cacac* U, Uwinymil *cacac* U; Maran: Alawa *kudja* MB, Yikul *kaidjiri* MB; Yangmanic: Wardaman *djuga* MB, Wambaya *djoko* MB, Binbinga *tjunga-rai* MB.

<sup>11</sup> Note also the form *kokkok* eB present in the Gunwinyguan languages, whose relationship with *kakkak* parallel GP and GC will be examined in Matthey de l'Étang In prep. a.

<sup>12</sup> The relevant PNY subgroups are: Ngumpin-Yapa, Marrngu, Western Desert (Wati), Ngayarta, Kanyara, Mantharta, Kartu, Nyungar, Mirniny-Ngatjumaya, and Thura-Yura.

<sup>13</sup> To my knowledge, only in the Ngumpin branch.

<sup>14</sup> As I have already mentioned, *kaka* is also present in the Nhanda language (Kartu?, PNY) referring to FZ, MBC, FZC, ZC.

<sup>15</sup> In Koch's Table 2 (2011: 4), where kin terms for the first ascending generation are presented, the cell for MB, as regards the Thura-Yura subgroup, is left blank. Yet the terms for MB, (EF) in Kaurna, and other languages belonging to this language subgroup are *kauwa-* ~ *kawa-*. In Wirangu, also from the same language subgroup, the term for MB is *kaing*.

<sup>16</sup> Alpher (2004b: 429-30) mentions that some *ka:la* forms include the *ng* (ŋ) ending, like Wik-Muminh (Middle Paman) *kalang* MyB, Yir Yoront (Southwestern Paman) *kalang* MB, Yugambeh *kalang* 'uncle', etc. We find similar forms with first syllable reduction: Oykangand = Kunjen = Olkola (Central Paman) *alangarr* MB, FZH.

<sup>17</sup> McConvell (2012: 251) points out that the term *kaali* in Ayabadhu (Middle-Paman) still keeps the initial skewed equation MB = MBS.

<sup>18</sup> The cognate sets *\*ka:la* ‘uncle’ in PNy are published in Alpher (2004b), but they do not include the whole range of meaning extensions, notably FZH. An additional reflex of *\*ka:la* not given by Alpher for the Paman branch is Ayaphatu (Ayabadhu, Middle Pama) *kaali* MyB, FZH, MBS.

<sup>19</sup> McConvell & Keen (2011: 114) also hold that *galnga* and *gawa* are related to *\*ka:la* MB.

<sup>20</sup> Restricted to a single PNy subgroup, we find *tjaRm(pa)* MB in Kulin languages (PNy). This appears like an innovation in this language group. Another MB form found in many languages from the Western Desert (Wati) subgroup is *kameru* ~ *kamuru*, which occurs alongside the form *kaka* for the same relationship(s). Apparently, only *kameru* ~ *kamuru* is ubiquitous in this subgroup, so Koch (2011: 4) holds that it is an innovation diagnostic of the Western Desert (Wati) subgroup. *Kameru* MB is also found in Wirangu beside *kaing*, and the form *kamaru* occurs in Karadjeri with a meaning shifted to FZ. Koch does not mention the presence of *kaka* in Wati, but see Table 3.

<sup>21</sup> In the Mirndi language family (non-PNy) *\*-ni* or *\*-rni* has been reconstructed as a masculine inflected ergative suffix, or possibly as an enclitic (Green & Nordlinger 2004: 304). The Mirndi language family is geographically close to the Ngumpin-Yapa languages (Northern Territory) where *ngami-rni* MB kin terms frequently occur (Table 2), which leads me to tentatively suggest a loan into Ngumpin Yapa. On the other hand, one could speculate about the meaning of *\*-(r)ni* if it were in Proto-Pama-Nyungan. If it is a masculine marker, then *ngami-rni* meant ‘masculine mother’, a meaning that matches exactly Koch’s claim. Further, in the Eastern Ngumpin languages (PNy) the suffix *-rni*, generally employed after place names, appears to mean ‘exactly.’ In the same languages, *-rni* can also be translated by ‘still’, ‘only,’ ‘exactly,’ ‘even,’ ‘all the time’ (McConvell 2009a: 380-1), according to the speech context. Pensalfini (1999) related this Ngumpin suffix with the existence in the neighbouring language Jingulu (Mirndi, non-PNy) of the suffix *-rni* marking focus. All these latter senses are also consistent with the ‘mother’s brother’ being regarded as a kind of ‘mother.’ Finally IO mention the existence of the nasal (retroflex) *-rn* consonant-final in some Kulin nouns and kinship terms; i.e., *ku-rn* ‘neck,’ *kuku-rn* ~ *kuku-rni* FF. As is the case for most consonant-final nouns in Kulin, this final consonant *-rn* results from the loss of the stem final vowel (Blake 2011: 11-12); i.e., likely *-i*. These brief considerations do not pretend to bring the discussion to a close; rather, they stress the importance of investigating this suffix in Australian languages.

<sup>22</sup> All the forms reported here were recorded quite recently and can be retrieved from the AustKin website.

<sup>23</sup> Yugambeh *ngamin* ‘breasts, any breast’, *ngamung* ‘breasts’, Wirangu *ngami* ‘breast’, Djapu (Dhuwal) *ngamini* ‘breast’, Djambarrpuynu *ngamini* ‘breast, nipple; milk’, Daartiwuy *ngamini* ‘breast’, Gupa *ngamini* ‘breast; milk’, Dhangu *ngamini* ‘breast, milk’, Ritharrngu *ngamini* ‘milk; female breast; teat; milk snake.’ See the extensive list in Alpher (2004b: 486-8) including *ngamu* or *ngama* terms for M and breast.

<sup>24</sup> McConvell (1997: 178) reconstructs *\*ngama*(-SUFFIX) M, and *\*ngamirni* MB back to Proto-Ngumpin-Yapa.

<sup>25</sup> Scheffler (1978: 127, 215), quoting Hernandez and Piddington, assumes that the “status of MB as a kind of M” and of “FZ as a kind of F” can also be made overt in a number of Australian languages. Thus Hernandez (1941: 226) reported that in the Wunambalic dialect Pelange (Pela, non-PNy), *jaela* FZ was often called *djadja* F. In a similar manner, *adji* or *penengo*—both referring to MB, WF, FZH—, were similarly considered as the masculine equivalents of *kaga* M, MZ, though Hernandez indicated that MB was never directly addressed (my emphasis) as ‘mother.’ Furthermore, in a manuscript dated from 1937 that Scheffler had access to, Piddington (see also Piddington 1950: 123) reported that in the Karadjeri language, FZ *kamaru* could be designated as F *djabalu*, and that MB *kaka* could be designated as M *kurdaing*. Let’s also remind ourselves that in the Ompela language (Northeastern Paman, PNy), *kala* ‘mother’s younger brother’ was “spoken of as a ‘male mother’” and often addressed as *papa* ‘mother’ (Thomson (1972: 11-12). Thomson also reported that *mukka* mother’s elder brother was considered “just like a mother but bigger than a mother.”

<sup>26</sup> Nukunu from the Thura-Yura subgroup (PNy) shows the co-occurrence of *ngama-rna* and *kawa-rna* for MB (see AustKin and references).

<sup>27</sup> As mentioned earlier, beside *kaka*, Fry (1959: 14) and Elkin (1970: 709) named *kami* among the most common kin terms distributed over the Australian continent. As has been shown in more recent studies, the distribution of *kami* appears mainly restricted to PNy languages.

<sup>28</sup> With the possible extension of *ka:la* > *kawa* in the coastal regions.

<sup>29</sup> McConvell (1997: 228) admitted that justifications for such semantic shifts were hard to find.

<sup>30</sup> In his afterword of Thomson's presentation (1972: 39), Scheffler makes it clear how the bereavement terminology of the Wik-Mongkan confirms such extensions. Thus bereaved M, MZ and MB are encompassed under the same higher category named *aimi*, while their bereaved reciprocals ♀C, ZC are called *oma*. Similarly, bereaved F, FB and FZ are grouped under the term *maki*, while their bereaved reciprocals ♂C, BC are called *antj*.

<sup>31</sup> I refer the reader to Bancel & Matthey de l'Etang (2002), where these questions have been thoroughly treated.

<sup>32</sup> Dixon (2002: 30) says that "the Australian linguistic area may have been in existence for around forty thousand years."

<sup>33</sup> He developed this model over the years, since the 1970's. A summary can be found in Dixon (2002: 27-35). As summed up by Koch (2014: 38), this theory claims that "divergent and convergent changes (a) occur at different times, (b) take place at different rates, and (c) result from different kinds of linguistic factors ... Throughout most of human history the kind of linguistic split that can be captured by tree diagrams typically occurred in bursts of relatively short duration and a much greater proportion of history was characterized by periods of relative equilibrium in which linguistic traits diffused between adjacent languages, which tended to converge on a common structural prototype, with the overlaid layers of diffused material obscuring the original genetic structure."

<sup>34</sup> This models comprizes two phases that Koch summarizes in his 2014's paper: "In the first, two languages with a low level of shared vocabulary will come into contact. Each will replace vocabulary at a steady rate, partly by borrowing from the other. Their level of shared vocabulary will gradually rise until it levels out at around 50 per cent. In the second scenario, two dialects of one language will diverge until they ... become distinct languages. At first they will show a high level of shared vocabulary. As each replaces some of its lexemes it is more likely to borrow from other neighbours than from the close relative (with whom many lexemes are shared). As a consequence, the percentage of shared vocabulary will gradually drop until it stabilizes at the equilibrium level of around 50 per cent."

<sup>35</sup> In the context of the Amazonian languages, Dixon & Aikhenvald (1999: 8 notably) have otherwise suggested that language groups practising intermarriage were likely to borrow kin terms and particularly *koko*-like terms referring to MB and EF, whose widespread distribution was demonstrated a long time ago in the Amazonian basin. This idea of a general diffusion was rejected by Matthey de l'Etang & Bancel (2014) as a general explanation for the global occurrence of *koko*-like terms in Amazonia as well as in the Americas, in general.

<sup>36</sup> The number of Papuan language group and languages referring to MB using *kVkV* forms or forms possibly derived from *kVkV* is not negligible, thus Kutubuan #*aua* MB, #*kauwa* EF; Engan \**auwa-nge* MB; Kainantu-Goroka #*kaako-qe* MB, Teberan #*awa* MB; Kapaur *kaga* 'uncle'; Moi (West Papuan) *kak* MB, Wiru (Wiru) *awa* ~ *kawa* MB; Ama (Arai) *auwa* MB; Sulka (Isolate) *kaka* MB etc. Yet I must point out that kinship terminologies are only known for a limited number of the some 800 Papuan languages. See Matthey & Bancel 2015: *The Kinship terms (k)aka* ~ *(k)oko* ~ *(k)uku in the World's Languages* at language-kinship.org For details see Matthey de l'Etang & Bancel 2015.

<sup>37</sup> The Sunda designates the land mass linking South East Asia to Sumatra, Java, Borneo and parts of the Philippines during the last glacial period (115 kya–10 kya). Sahul designates the land mass separated from Eurasia and encompassing Australia, Tasmania, New Guinea, and some islands to the east of New Guinea during the same time span.

<sup>38</sup> Proto-Papuan is conceived here as the macro-phylum from which the various Papuan language families, distributed in New-Guinea, and in a good number of islands around it, could possibly have derived.

<sup>39</sup> The presence of *kVkV* terms referring to MB in Papuan languages has been pointed out in note 47. The series *kV(η)kV(η)* FF, MM, eSib, DC, SC in Australia is the subject matter of the second part of my study regarding *kV(η)kV(η)* kinship terms on this continent. Papuan languages also display comparable terms referring to both GP, GC, like Yagwoia (Angan, Trans-New-Guinea phylum) *kakwa* GF, GS; Mbowamb (Chimbu-Waghi, Trans-New-Guinea Phylum) *kawua* GF, GS; Proto-Engan (Trans-New-Guinea phylum) \**kagua-ŋgi* GF, GS; Yelmek and Maklew (South-Central Papuan phylum) *kaga* GP, GC; Savosavo (Central Salomon phylum) *kukua* GF, GC, etc. For details, see Matthey de l'Etang & Bancel 2015.

<sup>40</sup> Tasmania was also separated from Australia during this period; i.e., from ca. 8,000 BP onwards (see Wikipedia: Bass Strait, with references included).

<sup>41</sup> Among the linguistic features and lexemes having a large distribution in non-PNy languages, some also occur in PNy as cognate forms, or as items resulting from a substrate influence on PNy languages or languages possibly spoken in the PNy geographic zone before the PNy expansion. These include:

- The existence of the derivational suffix *-ma* among the verb morphology in the majority of Australian languages, sometimes causative, sometimes associated with transitive verbs without any specific causative meaning (Blake & al. 1998: 89).
- The widespread reciprocal suffix *-NHThu ~ -NHThi* in non-PNy pronominal prefixes to the verbs (Evans 2003a: 10). The existence of cognate reflexive and reciprocal morphemes in non-PNy, also found in PNy languages: Kulin, Djabugay (Dyjrbalic), Warrgamay (Dyjrbalic) (Alpher *et al.* 2003: 341-43, Evans 2003a: 20).
- The existence of the past form *-rni ~ -ni* in Walmatjari (also found in Warlpiri), compared with non-PNy past suffixes *-ni*, and interpreted as an ancient retention (Evans 2003a: 10).
- The lexical roots shared by non-PNy families and PNy subgroups are considerably fewer than those proposed in Capell (1956), because most of them have been shown to be restricted to PNy. Among the remaining roots are *jarra* ‘tigh’, *lirra ~ dirra ~ rirra* ‘tooth’, *gugu* ‘water’ (Evans 2003a: 11), and some monosyllabic verb roots such as *\*wu-* ‘give’, *\*ya-* ‘go’, *\*pu-* ‘hit’, *\*na-* ‘see’, *\*ma-* ‘do’, *\*ka-* ‘carry’, *\*ru-* ‘cry’ (Evans 2003a: 11, Koch 2014: 65).

<sup>42</sup> Three kinship terms, *\*tyam(p)V(ny)* MF, *\*kaka* MB, and *\*ka(ŋ)kV-* parallel grandkin, (e)Sib, may possibly have deep-level inheritance, possibly from Proto-Australian—all the more so since their presence, as has long been pointed out, is pervasive in non-PNy language families, and PNy subgroups of South Australia. Yet, the wide distribution of *tyam(p)V(ny)* across the Australian continent is interpreted by McConvell (2015) as resulting from its diffusion from PNy, in which it has been reconstructed, into non-PNy language families (McConvell 2013b: 205-9). McConvell (2015: 306) argues in the first place, that all of the terms that spread up into the non-PNy families are phonetically too similar to have credible inheritance from a deep proto-language, say from proto-Australian, and secondly that “the restriction (of the distribution) to a particular geographical zone and concentration in it, along what is plausibly a line of spread, point strongly to a diffusion in a relatively recent period.”

<sup>43</sup> Taking the Gunwinyguan language group as a test case, Alpher (2004a: 119-20) poses the question: “whether the status of such words (both the obvious and the non obvious) as loans or retention is amenable to evaluation by the classical comparative method. Because as it turns out, the number of recurrent correspondences in these cases is small (relative to the generally large number of recurrences among Pama-Nyungan languages), I argue that the relationship of Gunwinyguan to Pama-Nyungan is distant enough to be right on the edge of the applicability of the comparative method, and by extension that Gunwinyguan is not a Pama-Nyungan group.” Among the putative cognates he cites Dalabon *mañ7* ‘meat,’ ‘game,’ ‘animal’ vs Proto-PNy *\*miña* ‘meat,’ ‘animal;’ Proto-Gunwinyguan *\*celng* ‘tongue’ vs Proto-PNy *\*calan* ‘tongue;’ Proto-PNy *\*caku* ‘left’ vs Proto-Gunwinyguan *\*caku* ‘left’ etc. The test proved inconclusive because some segments could not be evaluated by the comparative method (Alpher 2004a: 121-22).

<sup>44</sup> Scheffler (1978: 141) writes this rule as:

“(…wBW → …wHZ) = (wHZ… → wBW…),  
 (…mZH → …mWB) = (mWB… → mZH…),

that is, let a linking kinswoman’s BW be regarded as structurally equivalent to that kinswoman’s HZ and, conversely, let any woman’s HZ when considered as a linking relative, be regarded as structurally equivalent to that woman’s BW as a linking relative; and similarly for a linking kinsman and his ZH, etc.”

<sup>45</sup> Dousset (2003:55) points out that the Ngaatjatjarra have two different ways to address their relatives, depending on whether it is in an interrelational or a sociological context: “Any MB is called *kamuru*. This same MB may be called *mama* (father) in a sociological context, as all males in G+1 are part of the identical social category (alternate generational moiety). However, calling him *mama* doesn’t make of him a (classificatory) father, and certainly does not transform his children into siblings. Any classificatory WF is a (classificatory) *kamuru* (MB), but when he becomes potential or actual WF, he will be called *wapuju* (WF and initiator).” Thus one cannot say that *kamuru* MB is a subclass of the FATHER’s class. By contrast, the existence of the term *waputju* WF supports Dousset’s claim that the Ngaatjatjarra terminology, which he describes as Dravidian-like, has a specific affinal terminology, thus indicating that some Dravidian systems could feature a specific affinal terminology.

The second example concerns ego’s generation (Dousset 2003: 55): “Any male cross cousin of a male ego may be called *kurta* (brother) in a sociological context (he is a ‘generational brother’). This doesn’t make of him a (classificatory) brother. This same person is called *watjira* (cross cousin) in an inter-relational context. The *watjira* will become *marutju* (brother-in-law) if ego marries his actual sister.”

We will infer, using the available data, that this feature also occurs in the systems belonging to the Wati subgroup (or dialect cluster) displaying *kaka* MB. Bliege Bird & Bird (2008: 11) mention that on the distribution of meat on the return of the game in Martu groups, a father-in-law to the hunter (often a classificatory MB *kaka*) or a mother-in-law (often a classificatory FZ *yumari*) “can claim the rump (the cut with the most meat).”

<sup>46</sup> More generally, a map showing the languages where MB and WF terms are equated can be generated through the AustKin website.

<sup>47</sup> Scheffler (1978 notably) pointed out that some kin terms particular semantic extensions and equivalences, notably those of the MB term to FZH, EF, FMBS etc., as well as other characteristics of Kariera-like systems, were not to be understood as reflecting bilateral cross-cousin marriage, a form of marriage that he denied was the source of Kariera-like systems of kin classification, but conversely could be formalized by using a set of rules able to account for their existence. But in doing this, his strict synchronic analysis might have taken him too far. One reason is that cognitive constructs such as systems of kin classification as a whole may appear as historically conservative when compared to the rapidly-changing marriage “rules” or “patterns”, but this is a discussion that would lead us far from our subject matter. However, Leaf and Read (2012) have circumvented the problems arising with Scheffler’s synchronic analysis by working out the structural logic of the Kariera terminology from first principles and have shown that marriage rules, in whatever form, are not causal with regard to the structure of the Kariera terminology but a consequence of its structural logic. Thus they argue that marriage “rules” may change, within the bounds determined by the structural logic of the terminology without simultaneously requiring change in the structural form of the Kariera terminology (on such crucial questions see also McConvell and Hendery to appear and Matthey de l’Etang in prep. b.).

<sup>48</sup> A few systems of kin classification like the ones of the Walpiri (Warlpiri), Aranda or Dieri, feature in-law (sub)classes, (*wandiri* EF and *maliri* [mali-rdi] EM for Warlpiri; *anherr* ♀EM, *mwer* ♂EM for Aranda; *paiara* WM, *kalari* HM, *taru* WF, HF for Dieri) etc., but these subclasses are still dependent on the M’s and F’s classes.

<sup>49</sup> The parallel-cross neutralization rule (Scheffler 1978: 132) is written as:

“(FZ. → FB.) = (.wBC → .mBC)

(MB. → MZ.) = (.mZC → .wZC); that is, let any person’s FZ as a terminus (this restriction is indicated by the single postfixed dot) be regarded as structurally equivalent to that person’s FB as a terminus; conversely, let female ego’s brother’s child (the restriction to the locus of ego is indicated by the single prefixed dot) be regarded as structurally equivalent to male ego’s BC; and similarly in the case of anyone’s MB as a terminal kintype, etc.”

<sup>50</sup> Nyulnyulan languages have *kaka* MB but *kaka tyaminyarri* WF, ♂DH; most Arandic languages have *ahenterre* EF, ♂DH, but refer to MB as *kamerne*, both latter terms are related to *kaka* (see present paper pp. 11 & 16).

<sup>51</sup> Scheffler (1978: 138) writes the parallel-cross status-extension rule as:

“(FPSb<sub>x</sub>C → MSb) = (PSb<sub>x</sub>SC → ZC)

(MPSb<sub>x</sub>C → FSb) = (PSb<sub>x</sub>DC → BC); that is, let anyone’s father’s cross-cousin be regarded as structurally equivalent to that person’s mother’s sibling, and conversely, let one’s male cross-cousin’s child be regarded as structurally equivalent to one’s sister’s child; also, let anyone’s mother’s cross-cousin be regarded as structurally equivalent to that person’s father’s sibling, and, conversely, let one’s female cross-cousin’s child be regarded as structurally equivalent to one’s brother’s child.”

<sup>52</sup> Scheffler (1978: 394-5) argues that the Ngarinyin system, like the Aranda/Dieri systems, does not feature the parallel-cross status-extension rule, whereby the father’s male cross-cousin (FMBS) is identified with mother’s brother (*kandingi* in Ngarinyin), nor the type of spouse-equation rule whereby EF is identified with MB. In Ngarinyin, the designation for WF is ‘father’s mother’s brother’ *waiingi*, which is also equated with WB. Further, Scheffler (1978: 407) reports on Elkin’s genealogical data, showing that: “the kin class status of WF is not invariably ‘father’s mother’s brother’ *waiingi* (the current status of WF in Ngarinyin-AM); some WFs are the husbands of classificatory ‘sisters’ or ‘father’s sisters’, that is, *wuningi* (wSC); others are the husbands of classificatory ‘mother’s mothers’, that is, classificatory ‘mother’s fathers’ (or ‘cousins’) *mamingi*, or classificatory ‘mother’s brothers’ *kandingi*. Even so, it seems that regardless of the premarital kin-class status of a man’s wife, once she is betrothed or married to him he may designate her as *maringi* (FM), her father as *waiingi* (FMB), and her mother as *wolmingi* (WM).”

These considerations need to be related to Lucich’s reports on kin terms (1968: 54-106), notably those showing extensions of MB terms to other kintypes and not just to those determined through Omaha skewing. Thus, in Ngarinyin WF, FMBS can be designated as *kandingi* MB or alternatively as *waiingi* FMB; in Worrorra, WF and FMBS can be terminologically identified with MB *gagaia*, or alternatly to FMB *waia*; and in Wunambal, FMBS can be designated as *gaga* MB or alternatly as *wejana* FMB. These alternative extensions of MB to FMBS and WF are consistent with Keen’s (2013a) claim about the Ngarinyin system of kin classification evolved from a Kariera-type system.

<sup>53</sup> I give Keen’s (2013b) definitions of system-types without commenting on them. Dual systems (p. 14): “With some exceptions categories in the Dual systems sort into two sequences through patrification...or matrification;” Dual augmented systems (p. 18): “move closer to Quadruple terminologies by having a separate parents cross-cousin term;” Dual with horizontal merging (p. 16): “Even though there are just two grandparental terms distinguished only by gender, I classify these as ‘Dual’ because cross-cousin is distinguished from the sibling category – although socially close cross-cousins are reclassified as siblings (Dousset 2003);” “Quadruple systems can be represented as having four terminological lines;” Asymmetric A systems (p. 14): “Asymmetric A systems have between five and seven terminological patri-sequences;” and Asymmetric B systems (p. 14) have “seven patri-sequences.”

<sup>54</sup> *Taru* or *tharu* in Karnic languages, and very likely in Proto-Karnic, means ‘in-law’ in general. This term somehow resembles the second segment of the putative pre-Arandic form \*CVn-tVrrV or \*man-tirrV EF. *Tharu* is also found as an alternative for *ngamarna* MB in Parnkalla (Thura-Yura) (see AustKin for references).

<sup>55</sup> In his diagram of Lower-Arrernte’s kinship terminology, Alpher (2013 : 188, fig. 9.2.) reports *kamerne* as referring to MB, but also—with a question mark --, to HF; this latter extension being obviously diagnostic of Kariera.

<sup>56</sup> Koch (2013 : 181, Table 8. 12.) reconstructs the form \*ngamVrnV MB back to the Pre-Arandic stage.

<sup>57</sup> In effect, the semantic extensions of *kaka* MB to FZH, EF, FMBS and FFZS occur in Kariera-like systems, and in Nyul-nyulan, Karadjeri, and Arabana-type systems.

<sup>58</sup> Evans (2003a : 10) delineates a putative phylogeny of Australian languages going back to Proto-Australian in which Proto-PNy and Proto-Garrwan constitute two branches in a higher node, called Proto-Garrwan-Pama-Nyungan (pGPNy) in McConvell (2013b: 207); this proto-language constituting in turn, a branch, along with Tangkic, in an even higher node called Proto-Tangkic-Pama-Nyungan (pTPNy).