13 *Proto Maningrida within Proto Arnhem: evidence from verbal inflectional suffixes*

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1 The Maningrida languages[1]

The four languages Ndjébbana, Na-kara, Burarra and Gurr-goni are non-Pama-Nyungan languages spoken in north-central Arnhem Land, to the east of the Liverpool River (see Maps 1 and 3). The settlement of Maningrida is located in the country of Ndjébbana speakers, and it is the community with which most Na-kara, Burarra and Gurr-goni speakers are also associated. These languages are surrounded to the west and south by other non-Pama-Nyungan languages of the 'Gunwinyguan' family (Kunbarlang, Kuninjku and Rembarrnga), and to the east by Pama-Nyungan Yolngu languages, the nearest being Djinang.

O'Grady, Voegelin and Voegelin (1966:30–31) placed these languages in three phylic families: Gurr-goni and Burarra in the 'Bureran' family, and Ndjébbana (Kunibidji) and Na-kara as sole members respectively of the 'Kunividjian' and 'Nagaran' families. Cognate percentages calculated on a 400-word list based on recent sources are shown in the following table (two percentages are given, based on non-verbal : verbal vocabulary):

Table 1: Language family Cognate percentages (non-verbal : verbal vocabulary)

Burarra			
48% : 82%	*Gurr-goni*		
16% : 32%	24% : 43.5%	*Na-kara*	
15.5% : 29%	22% : 33%	13% : 35%	*Ndjébbana*

[1] Work on this paper commenced when I was employed as a research assistant by Professor R.M.W. Dixon. Comments on versions of the paper were also received from Barry Alpher, Gavin Breen, Nicholas Evans, Ian Green, Harold Koch and participants in the ALS PreConference Workshop on Comparative Non-Pama-Nyungan Linguistics, Monash University, Melbourne 1989, and the ICHL 2001 Workshop on subgrouping in Australian languages, Melbourne.

Nicholas Evans, ed. *The non-Pama-Nyungan languages of northern Australia: comparative studies of the continent's most linguistically complex region*, 369–421.
Canberra: Pacific Linguistics, 2003.

The cognate percentages based on non-verbal vocabulary are fairly low (except for that between Burarra and Gurr-goni), and would not, of themselves, suggest close genetic (or other) relationship. However, it is noticeable that the percentage of cognate verbs is considerably higher, in some cases twice as high (the number of verb stems recorded for these languages varies from about 180 (for Ndjébbana) to over 400 (in Burarra)). While shared items could result in some instances from borrowing, it seems unlikely that more verbs would be borrowed than nouns. Moreover, not only do these languages share a significant number of verb roots, but an examination of the verbal inflectional paradigms reveals extensive shared conjugational irregularities.

In an earlier version of this paper, presented at the ALS Preconference workshop on Comparative non-Pama-Nyungan Linguistics in 1989 (Green 1989), I reconstructed a set of TAM suffixes for what I am now calling Proto Maningrida. Twenty-three monomorphemic verbs and an intransitivising suffix were reconstructed for the proto-language. In addition, all four languages display conjugations comprising di- or polysyllabic verbs characterised by a small set of final syllables, and it was possible to reconstruct a number of such verbs and their conjugations in the proto-language.

2 Wider relationships

An early version of the Alpher, Evans and Harvey paper (this volume; hereafter referred to as AEH) was presented at the same workshop. On first inspection, comparing the posited Proto Maningrida with AEH's Proto Gunwinyguan verb paradigms revealed only a small degree of overlap: Proto Maningrida Precontemporary and Future tenses corresponded to Proto Gunwinyguan Past Continuous and Nonpast respectively. However, Proto Maningrida Contemporary tense allomorphs found no correspondence in the AEH reconstruction of Proto Gunwinyguan, nor did anything resembling the Proto Gunwinyguan Past Punctual allomorphs appear in Proto Maningrida.

In a comment on my earlier paper, however, Evans pointed out that many of the irregularities which I was reconstructing for Proto Maningrida were also found in Mangarrayi. Mangarrayi, in fact, has cognates of both the Proto Gunwinyguan Past Punctual, and the Proto Maningrida Contemporary; it provides evidence for linking the Maningrida languages to the 'Gunwinyguan' languages. The same evidence can be found in Ngandi and Nunggubuyu, and in Marra, assigned by previous investigators (e.g. O'Grady, Voegelin & Voegelin 1966:32; O'Grady, Wurm and Hale 1966) to a separate 'Maran' family along with Warndarang and Alawa.

In this revised paper I will therefore present evidence which I believe demonstrates the genetic relatedness of a large number of languages of Arnhem Land: Burarra (Glasgow 1964, 1984, 1994), Gurr-goni (Green 1995), Ndjébbana (McKay 1980, 1981a, 1981b, 1981c, 1982, 2000), Na-kara (Eather 1990, forthcoming) (forming the Maningrida group); Mangarrayi (Merlan 1982), Ngandi (Heath 1978b), Nunggubuyu (Heath 1984) and Marra (Heath 1981). Some evidence from Kungarakayn (Parish 1983), Gaagudju (Harvey 1992), Rembarrnga (McKay 1975), Kunbarlang (Coleman 1982) and Warndarrang (Heath 1980) is also included. I have not included data from the other languages on which AEH based their reconstruction (Dalabon, Bininj Gun-wok, Jawoyn, Ngalakgan, Warray and Uwinymil) only because they do not appear to have any reflexes of the suffixes which are the major focus of this paper. While displaying data from these languages would perhaps have given a clearer

picture of the retention and loss of the posited proto-forms among the alleged daughter languages, it would have been largely repetitive of what is clearly shown in AEH, and would have made the current paper too bulky. I certainly am not excluding them from the languages which I believe, and hope to show in this paper, are all related as daughters of the language to which these paradigmatic irregularities are attributable. Given the geographic spread of these languages, I suggest the name Proto Arnhem for this proto-language.

3 Proto Maningrida and Proto Arnhem

The present study focuses on twenty-four verbs which clearly demonstrate the relationship of all the languages under consideration, while also showing proof of the closer genetic relationship of the Maningrida languages. The major focus of this paper will be the reconstruction of the forms set out in columns 3 and 4 of each table. Columns 1, 2 and 5 have largely been covered by AEH (this volume). I attribute the categories posited for Proto Gunwinyguan by AEH to Proto Arnhem (see §6 for further discussion of this position, particularly in relation to the Past Perfective). These categories, the Past Perfective, Past Imperfective and NonPast, are shown in columns 1, 2 and 5 respectively. I have added data from the Maningrida languages and, where cognate verb roots and affixes are found, from Mangarrayi, Marra, Kungarakayn and Gaagadju. The AEH reconstructions appear in the penultimate row. Unless the additional data suggest a different reconstruction for Proto Arnhem, I also attribute the AEH reconstructions for these categories to Proto Arnhem.

There is less evidence on which to base a reconstruction of columns 6 and 7. Column 7, the Imperative, has zero affixation in most languages under consideration. Reconstructing zero in a category in which it is cross-linguistically common is problematic. However, in some cases there are overt suffixes which do correspond, such as those in Mangarrayi and Kunbarlang for 'sit' (Table 28) and 'mimic' (Table 19). The evidence for column 6 also appears to be stronger for some verbs than for others; in this column I show Na-kara future forms which have no cognates in the Maningrida languages, but do have apparent cognates in the wider group of languages.

In the languages I began with, Proto Maningrida and Mangarrayi, the suffixes shown in columns 3 and 4 showed striking similarity of form and shared conjugational irregularities. It is this that has guided my search for cognates in other languages. Rather than showing all the exponents of any one TAM category, I have shown in columns 3 and 4 all the apparent cognates of the Proto Maningrida and Mangarrayi forms. I will firstly attempt a reconstruction of the forms for two verbs, 'see' and 'give', and then, by comparing the meaning and function which these forms express in the languages concerned, suggest possible TAM categories for the proto-language.

I will begin by examining the paradigms of the verbs 'to see' (Table 2) and 'to give' (Table 3 below). These verbs can be discussed simultaneously as, in all the languages surveyed here which have cognates of these verbs, 'see' and 'give' take the same set of TAM allomorphs.[2]

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2 Except in one TAM category in each of Ngandi, Nunggubuyu and Marra: in the first two languages, the column 5 form differs; in Marra, the column 3 form differs.

3.1 'see' and 'give'

3.1.1 'see' and 'give' in Proto Maningrida

Looking firstly at the column 3 forms, the Contemporary tense suffixes, we see that in the paradigm for these monosyllabic verbs, in Burarra and Gurr-goni a geminate stop *jj* corresponds to a single or short stop *j* in Ndjébbana and a glide *y* in Na-kara.

A similar paradigm to that posited for **na* and **wu* can be reconstructed for Proto Maningrida involving di- and polysyllabic verbs. Two of these verbs, **jarnta* 'hurt (tr)' and **pawu* 'leave (tr.)' are shown in Tables 4 and 5. The Burarra and Gurr-goni reflexes of the column 3 Contemporary tense suffixes for these disyllabic roots show a single stop *j*, again corresponding to a glide *y* in Na-kara.

Table 2: **na*[3] 'see'

	1	2	3	4	5	6	7
		Pre[4]	Con	IrrFutCont	IrrNPre[5]	Fut	Imp/Fut
B *na*		*na-na*[6]	*na-jja*	*na-jjin*	*na-n*		*na-ø*
G *na*		*na-ni*	*na-jji*		*na-n*		*na-ø*
Ndj *na*		*ná-na*	*ná-ja*				*na-ø*
Nkr *na*		*na-na*	*na-ya*			*na-ya*	
pMan		**na-ni*	**na-jja*	**na-jjin*	**na-n*	**na-ya*	**na-ø*
Ngan	PPunct	PCon	Pot	Pres	Fut/Imp	Evit	Imp
rna	*rna-y*	*rna-ni*	*rna-jjan*	*rna-jjini*	*rna-n*	*rna-yi*	*=Fut*
Nu	P1	P2	Evit	NP2	NP1	NP3	Imp
na	*na-ny*	*na-ni*	*na-yan*	*na-yii*	*na-ng*	*ni-ø*	*=NP1-3*
Kunp	RP	IrrP			RNP		IrrNP
	na-y	*na-ni*			*na-ny*		*na-ø/rnay*
Marr	PPunct	PCon	$Pres_3$	$Pres_{1-2}$	Fut	Pot	Imp
na	*(na-ji)*	*na-ni*	*na-ja*	*na-jini*	*na-y*	*na-yi*	*na-ø*
AEH	PP	PI			NP		
**na*	**na-y~na-ng*	**na-n-iny*			**na-n*		
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
**na*	**na-y~na-ng*	**na-ni*	**na-jan*	**na-jini*	**na-n*	**na-yi*	**na-ø*

3 The orthography used in this paper is identical to that used by AEH and Harvey (this volume), except that *j* is used instead of *c* for the palatal stop.

4 Abbreviations used for TAM categories are: Con - contemporary; Evit - evitative; Fut - future; Hab - habitual; Imp - imperative; Irr - irrealis; IrrFutCont - irrealis future continuous; IrrNFut - irrealis non-future; IrrNP - irrealis nonpast; IrrNPre - irrealis non-precontemporary; IrrP - irrealis past; IrrPre - irrealis precontemporary; NP(1,2,3) - nonpast (1,2,3); P(1,2) - past (1,2); PCon - past continuous; PI - past imperfective; PNeg - past negative; Pot - potential; PP - past perfective; PPunct - past punctual; Pre: precontemporary; Pres(1-2,3) - present (1-2,3); RNP - realis nonpast; RP - realis past; RPerf - realis perfective.

5 In Burarra, Future tense is expressed by the column 7 form plus a particle *parra*; the column 5 form expresses Irrealis NonPrecontemporary tense. In Gurr-goni, Future tense is expressed by the column 5 form, and Irrealis NonPrecontemporary by the column 7 form.

6 In all the languages included here, the inflected verb includes pronominal prefixes as well as TAM suffixes. None of the forms shown here (except the Imperative in some languages) occurs without such prefixes, but they are omitted here for ease of display.

Table 3: **wO* 'give'

	1	2	3	4	5	6	7
		Pre	Con	IrrFutCont	IrrNPre	Fut	Imp/Fut
B *wu*		*wu-na*	*wu-jja*	*wu-jjin*	*wu-n*		*wu-ø*
G *wu*		*wu-ni*	*wu-jji*		*wu-n*		*wu-ø*
Ndj *wu*		*wú-na*	*wú-ja*				*wa-ø*
Nkr *wu*		*wu-na*	*wu-ya*			*wu-ya*	
pMan		**wu-ni*	**wu-jja*	**wu-jjin*	**wu-n*	**wu-ya*	**wu-ø*
M	PPunct	PCon	Hab/PNeg		Pres		Imp
wu	*(wu-na)*[7]	*wu-ni*	*wu-ya-n/-p*		*wu-n*		*wu-ø*
Ngan	PPunct	PCon	Pot	Pres	Fut/Imp	Evit	
wo	*wo-y*	*wo-ni*	*wo-jjan*	*wo-jjini*	*wo-nung*	*wo-yi*	
Nu	P1	P2	Evit	NP2	NP1	NP3	
Ind	*ya-ny*	*i-ni*	*i-yan*	*i-yii*	*i-ny*	*yuu*	
Cpd	*-a-ny*	*-u-ni*	*-u-yan*	*-u-yii*	*-u-ny*	*-uu*	
Kung	RPerf	Irr	NP	IrrNFut			
wu~wi	*wi-ny, wi-jany*	*wi-ni* (PI *wujawu-janang)*	*wu-jen*	*wu-jene*			
Kunp	RP	IrrP			RNP		IrrNP
wu	*wu-y*	*wu-ni*			*wu-ny*		*wu-ø/ wu-y*
Marr	PPunct	PCon	$Pres_3$	$Pres_{1-2}$	Fut	Pot	Imp
wa	*(wa-ji)*	*wa-ni*	*wa-jungu ND*[8] *wa-jaju D*	*wa-jini*	*wa-y*	*wa-yi*	*wa-ø*
Gaag	PP	PI	Pres			Con	Imp
wu~wo	*wu*	*wu-ni*	*wo-y*			*(wo-ya)*	*wu-ø*
AEH	PP	PI			NP		
**wo*	**woy ~wong*	**woniny*			**won*		
pArn	PP	PI	Hab/IrrP	NP1	NP2	*Irr	Imp
**wO*	**wO-y?*	**wO-ni*	**wO-jan*	**wO-jini*	**wO-n*	**wO-yi*	**wO-ø*

Table 4: Proto Maningrida **jarnta* 'hurt'

	2	3	5	7
B *jernta*	*jernta-nga*		*jernta-n*	*jernta-ø*
G *jarnta*	*jarnta-ni*	*jarnta-ji*	*jarnta-n*	*jarnta-ø*
Nkr *jarnta*	*jarnta-na*	*jarnta-ya*		*jarnta-ø*
pMan **jarnta*	**jarnta-ni*	**jarnta-ja*	**jarnta-n*	**jarnta-ø*

7 Forms which do not appear to be cognate are shown in brackets.

8 Many Marra verbs have durative and non-durative forms: the non-durative is basic, with the durative formed by reduplication or prefixation. Both forms are shown only where the suffixes also differ, as here.

Table 5: Proto Maningrida **pawu* 'leave'

	2	3	4	5	7
B *pawa*	*pawa-na*	*pawa-ja*	*pawa-jin*	*pawa-n*	*pawa-ø*
G *pawu*	*pawu-ni*	*pawu-ji*		*pawu-n*	*pawu-ø*
Nkr *pawa*	*pawa-na*	*pawa-ya*			*pawa-ø*
pMan **pawu*	**pawu-ni*	**pawu-ja*	**pawu-jin*	**pawu-n*	**pawu-ø*

(A cognate verb is found in BGW (column 2 *pawo-ni* PI, column 5 *pawo-n* NP); D column 2 *pawo-niny* PI, etc. (Evans pers. comm.); **pawu/o* can probably be attributed to Proto Arnhem.)

Although Ndjébbana does not have cognates for either of these verbs, it does have polysyllabic verbs with a similar paradigm, eg *ngárawa* 'light fire': column 2 *ngárawa-na*, column 3 *ngárawa-ya*, column 7 *ngárawa-ø*.

It appears that Burarra and Gurr-goni (or more accurately perhaps the intermediary proto-language Proto Burarra/Gurr-goni) had a conditioned alternation between geminate and single stops. In verb suffixes (such as those shown here) and in pronouns, geminate stops appear following root-initial, stressed CV syllables; single stops occur in the same morphemes when the stress does not immediately precede the stop in question, or where the stressed syllable is closed (for example, G *ngújjuyu* '3MinFemPoss$_C$'; *ngijíyi* ~ *ngijiyéppu* '3MinCard' (Green 1995:12–13). In Ndjébbana, single stops, geminates and semivowels alternate in verbal and nominal root initial position, conditioned by shifting stress. Geminates are found medially before stressed vowels, semivowels occur medially before unstressed vowels, and single stops initially (for example, *ka-jjúwa* 'he is sick', *ka-yawé-la* 'he was sick/died', *jawé-la* 'be sick/die!'. This alternation, while not fully productive, appears to have been so at a recent stage of the language (McKay 2000:184–185). In the verbs under consideration here, we see a different phenomenon: an alternation in suffix-initial position between a single stop following a stressed vowel (as in *-ná-ja, -wú-ja*), and a semivowel following an unstressed vowel, as in *ngárawa-ya.* This environment is the same as that in which the alternation between geminate and single stops is found in Burarra and Gurr-goni, and suggests that an alternation, most probably between a geminate and a single stop, can be attributed to Proto Maningrida. In Ndjébbana, the single stop would then have lenited to a glide, and the geminate stop reduced to a single stop.

In Na-kara, reduction of the geminate stop would appear to have preceded lenition of **j* > *y*, as *y* follows both the monosyllabic and disyllabic roots. Other instances of a putative proto-phoneme **j* leniting to *y* intervocalically can be found in Na-kara: cf. Na-kara, Ndjébbana *méyameya* with Gurr-goni *mejimeji*, all 'hair', < **mejVmejV*; and Na-kara *ngiya-ka-ppa,* Gurr-goni *ngiji-yé-ppu* (Ndj *ngayáppa)*, all 'third person minimal feminine cardinal pronoun', < **ngijV-kV-ppV*.[9] (There are no other known instances of *jj* reducing to *j* in Na-kara. While there is some evidence of reduction of other geminates (e.g. **juppV*

[9] Compare B *-nikíppa*, G *niyéppu*, Ndj *naképpa*, Nkr *nakáppa* ('3MinNonFem' in all languages except Burarra, where it is simply '3 Min'). Either Gurr-goni has undergone a lenition *k*>*y*/__*e*, or it has replaced the morpheme *-kV-* with a morpheme *-ye-* ~ *-yi-*. Comparing the feminine noun class prefix *jin-* in B and G, with *kin-* in Nkr, and, on a deeper level, comparing G *jinyi* 'cook' with BGW *kinye*, D *kiny-* 'cook', suggests that palatalisation of *k* did occur in Proto Burarra/Gurr-goni, at least before *i*. The change *k* > *y* is not otherwise attested in Gurr-goni, but regardless of the cognacy of this segment, it is clear that the initial segments, illustrating *j* > *y*, are cognate.

'extinguish' (B *juppa*, G *juppi/u*, Ndj *júppa*, Nkr *jupakarama*), there are many apparent examples where geminates have been retained in Na-kara (**kakka* 'push, move' > Nkr *kakka*; **worlppu* 'hunt' > Nkr *worlppa*, etc.).

The only vowel which occurs finally in TAM suffixes in Burarra,[10] Ndjébbana and Na-kara is *a*; only in Gurr-goni do the other vowels occur in this position. As their occurrence in Gurr-goni is not completely predictable, I originally attributed them to the proto-language, positing a shift of final vowels to *a* in the other three languages.[11] However, while the wider cognates support the reconstruction of **-ni* for column 2, they suggest **-jja* for column 3 (see below for discussion). It seems necessary to posit a shift from **-jja* to **-jji* at some point to account for the Gurr-goni form, but it is simpler to say that this took place in Gurr-goni than at the Proto Maningrida stage, which would then have to be reversed in all three other languages by a shift of final *i* > *a*. The Gurr-goni form may have developed through analogy with the column 2 form. It may also be relevant to note that Gurr-goni speakers are aware that Burarra and Gurr-goni forms often differ only on this one point (a verb suffix ending in *a* is Burarra; a verb suffix ending in *i* or *e* is Gurr-goni), and it is possible that this conscious knowledge has influenced the development of some forms. As Evans (1998:143) notes, '[i]n speech communities ... where multilingualism is all-pervasive[12] ... it is common for speakers to be aware of correspondence patterns between their own language and its neighbours, and to use this awareness to extend such patterns analogically through the vocabulary'.

3.1.2 'see' and 'give' in Proto Arnhem

AEH reconstructed Past Punctual (column 1) **nay~nang, *woy~wong*, Past Imperfective (column 2) **na/wo-niny*, and Nonpast (column 5) **na/wo-n*, noting also cognacy between Ngandi Evitative (column 6) and Dalabon and Bininj Gun-wok Irrealis (see AEH Table 2). I have added paradigms from Marra and Kungarakayn. I suggest that these languages also show some evidence of systematic paradigmatic irregularity. Thus Kungarakayn Past perfective *wi-ny* is plausibly derived from the putative PP **wO-y* (probably through **wu-y*; the root variants in Kungarakayn are *wu-* and *wi-*); cf. the discussion of Nunggubuyu in AEH §3.1 and §3.2. The Marra PP form *-ji* is unlikely to have derived from **-y* if Marra *na-yi* is a reflex of a pArn **na-yi* (column 6); it may perhaps have been reformed by analogy with the column 3 and 4 forms.

With regard to their reconstruction of the PI (column 2) form, AEH note that the weight of evidence within the languages they consider favours epenthesis rather than loss of the final nasal *ny*. However, they decide to reconstruct pGN **naniny*, etc., with the final *ny*, as other column 2 (PI) forms with final nasals do exist; see their discussion in AEH §2.2. The

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10 The Burarra dialect Gun-nartpe also has suffix-final vowels other than *a*. Not enough information is available to include it in this comparison.

11 McKay (2000:180) notes for Ndjébbana that 'all five vowel phonemes are clearly differentiated when stressed and long, but there is a tendency for all vowels to be reduced to *a* when not bearing the phonemic stress and length'.

12 Multilingualism is pervasive in the Maningrida area generally, as in many areas of Australia, but is particularly pronounced in the case of the Gurr-goni, who constitute a very small group of speakers, and appear to have done so for some time. Marriage is always with speakers of other languages (Ndjébbana, Na-kara, Kuninjku, Rembarrnga, Burarra and others), hence all Gurr-goni family groups are multilingual.

additional languages I consider here (the Maningrida languages, Marra and Warndarrang, and Kungarakayn) lend more weight to the epenthesis hypothesis, and I have posited no final *ny*. The possibility that it may be an innovation could be worth exploring.

AEH also reconstruct the root vowel as **o*. Considering all the languages shown here, and those for which AEH show cognates of 'give', I suggest that the weight of evidence is fairly evenly balanced between **u* and **o*. Some languages show alternation of *o* (or reflexes of **o*) and *u* within the paradigm, and it is possible that this also occurred in the proto-language. However, it has not been possible to determine which vowel should be reconstructed for which TAM category, and I therefore show **O* (representing **o* or **u*, or the alternation of these vowels).

However, I do not intend to focus here on those categories which have been covered in detail by AEH, and will thus discuss only columns 1 and 2, and 5 where the additional putative cognates suggest alternative reconstructions. My major concern here is with the establishment of the categories and their allomorphic exponents shown in columns 3 and 4.

For the verbs shown in Tables 2 ('see') and 3 ('give'), comparing Proto Maningrida column 3 **-jja* with Ngandi *-jjan*, Nunggubuyu *-yan* and Kungarakayn *-jen* suggests that a final *n* was present in Proto Arnhem: **-jan*. Similarly, the evidence of Ngandi *-jjini*, Marra *-jini* and Kungarakayn *-jene*, compared with Proto Maningrida **-jjin*, leads me to posit Proto Arnhem **-jini* for column 4. Nunggubuyu *-yii* gives some slight support to this: Heath (1978a:45) observes that 'long vowels have been created by various processes, including contractions such as **eṛe* –> *a:*, **awa* –> *a:* and the like'. Possibly these processes also included loss of intervocalic *n*, giving **-jini* > **-jii* > *-yii*. Proto Maningrida would then have lost the final nasal from column 3 **-jjan*, and the final vowel from column 4 **-jjini*. In Marra and Mangarrayi, we also have to posit loss of *n* from **-jan* (although in Mangarrayi, the Habitual suffix, one of the two that follow the *-ya-* augment, is *-n*).

Reconstruction of the initial stop of these suffixes is problematical. The existence of a geminate in both Proto Maningrida and Ngandi suggests the possibility that it may have been present in Proto Arnhem. Marra and Mangarrayi do not have geminate stops, so development of a putative **jj* to *j* would have been automatic here. (Marra column 3 *wa-jungu* retains *j*, but an additional syllable *-ngu* appears to have been added; it is, however, not present in the durative *wa-jaju*, which suggests **wa-ju* as the original non-durative form in Marra. The shift of **-ja* > *-ju* on this verb is unexpected.)

In Mangarrayi, Merlan (1982:207–209) notes synchronic lenition of *j* to *y* intervocalically in the morphemes *-ji-* 'inchoative' and *-ju-k* 'swear at' (when this is used as a 'compounding auxiliary'). We can plausibly speculate that the attested suffix *-ya-* derives from **-jan* (whether this is the Proto Arnhem form, or its reflex in Mangarrayi following automatic reduction of a putative geminate) by the same process.

Kungarakayn does have geminate stops. Whether these are present in clearly ancient and inherited forms is not clear; it is possible that Kungarakayn, in its development from Proto Arnhem, could have reduced geminate stops to single stops and then have reintroduced geminates later through borrowed vocabulary.

The situation in regard to Ngandi and Nunggubuyu is less clear. Heath (1978a:5) hypothesises that 'Ngandi and Nunggubuyu ... form a subgroup within the prefixing group', and furthermore, that their parent language had a contrast between two series of stops (which he terms fortis and lenis respectively, for what I am terming geminate and single). Nunggubuyu then lost this contrast, through a process of shifting 'old fortis to modern simple

stops ... old lenis stops in most cases became continuants' (Heath 1978a:37). The correspondence of Ngandi *jj* and Nunggubuyu *y* is not accounted for by this hypothesis; nevertheless, for his proposed 'central' genetic subgroup (comprising Ngandi, Nunggubuyu and Anindilyakwa) Heath (1990:406) reconstructs a Present tense suffix **-jini* for 'see' and 'give'. He appears to be implying that Ngandi independently developed a geminate stop in this suffix. If this is so, there remains very little evidence for reconstructing a geminate in Proto Arnhem. Instead, we would appear to have original forms **na-jan, *wO-jan, *na-jini, *wO-jini*, with gemination occurring independently in Proto Maningrida and in Ngandi.

I propose that Gaagudju *wo-y* 'give-Pres' is a reflex of **wO-jan* (with loss of the final nasal as in pMan, and probably also in Marra); lenition *j* > *y* as in Mangarrayi, Nunggubuyu and Na-kara; and, finally, loss of the vowel, which, in this category, would have occurred in Gaagudju alone. It may be thought more likely that Gaag *wo-y* continues pArn PP **wO-y*. However, a parallel Present tense form is found for 'spear' (**ra-jan* > Gaag *(pa)ra-y*), where the PP is **ra-m*; and for other verbs too, the Gaag Present tense appears to derive from the pArn Habitual/PastIrrealis (column 3) (see especially §3.12, 'lie', 'be standing', 'sit', and §3.13 'take'). (This identification would imply that the Gaag form shown in column 6 of Table 3, *wo-ya*, although superficially a possible cognate of Nkr *wu-ya*, Ngan *wo-yi* and Marr *wa-yi*, is probably a later innovation. If the proposed development of **wO-jan* > *wo-y* occurred, a proto-form **wO-yi* would also be expected to become **wo-y* in Gaag; this is not what appears.)

It remains then to account for the occurrence of the vowel *e* in the Kungarakayn column 3 form *-jen*. Evans (pers. comm.) has noted instances of apparent vowel raising in Kungarakayn, including several of a putative **a* > *e* (for example pArn **-pam(i)* 'head', Kung *ki-pem;* pArn **wany* 'armpit', Kung *ki-weny).* The shift of **a* > *e* is triggered in this example by a high front vowel in the preceding syllable (the prefix *ki-*, which probably originally marked body parts and adjectives (Evans pers. comm.)). The proposed derivation of *wu-jen* involves a shift from *a* > *e* triggered by a high back vowel in the preceding syllable, thus **wO-jan* > **wu-jan* > *wu-jen*. In column 4, the vowels in the proto-language were clearly *i*; all languages but Kungarakayn agree on this, and the Kungarakayn column 4 form may well have been influenced by the column 3 form.

3.1.3 Suffixal category: column 3

We have now added the suffixes **-jan* and **-jini* to those reconstructed by AEH for 'see' and 'give'. Having determined their forms, we must also consider their functions in the proto-language.

MANINGRIDA In all the Maningrida languages, the column 3 form is used to signal Contemporary[13] tense, Realis mood, and the column 2 form Precontemporary tense, Realis mood; there is thus no difficulty in assigning these functions to Proto Maningrida. These two tenses between them cover all time prior to, and including, the moment of speaking. Both tenses are discontinuous. Thus the total range of Contemporary tense is from 'now (the moment of speaking)' to 'yesterday/recently'; but this is interrupted by Precontemporary tense for 'today before now', for which Contemporary tense cannot be used. The total range

[13] The terms Precontemporary and Contemporary are used by Eather (1990:165) and Green (1995:183–189); Precontemporary has been called 'remote' by Glasgow (1964:118) and McKay (2000:223).

of Precontemporary tense is from just before the moment of speaking, to the far distant past; but this is interrupted by Contemporary tense for 'yesterday', for which Precontemporary tense cannot be used. The tenses can be understood as dividing three time frames,[14] today, before today, and all time until now. Within the time frame of today, Contemporary tense refers only to the moment of speaking, with the remainder (the earlier part) of today covered by the Precontemporary tense. In the time frame of before today, Contemporary tense refers to the recent past, while Precontemporary refers to the more distant past; in the third time frame, Contemporary tense is used for actions taking place at the moment of speaking, for states or actions which are ongoing or habitual, and for generic statements. Precontemporary is used for states or events of long ago.

In all four of the languages, the column 3 suffix, or a form related to it, also appears in the Irrealis Precontemporary category; this is marked by the Contemporary tense suffix plus *-rna* in Burarra, *-rni* in Gurr-goni, *-na* in Ndjébbana and *-ma* in Na-kara. The Precontemporary Irrealis is used following a negative particle to refer to events that did not happen before now, earlier today and before yesterday. Used independently, it has two functions: one of referring to events which have not happened, but which the speaker can imagine having happened (a past potential use); and a second function of referring to events characteristic of a time long ago (a past habitual use). The Precontemporary Irrealis category, and the use of the Contemporary tense form plus a suffix, can also be attributed to Proto Maningrida. (The existence of a Past Negative suffix *-m~-p* in Mangarrayi makes it tempting to speculate that *-m* or *-ma* was the original form of the suffix in Proto Maningrida, and indeed in Proto Arnhem.)

MANGARRAYI In Mangarrayi, the column 3 suffix appears as an augment before the regular Past Negative and Habitual suffixes (*-m~-p* and *-n*, respectively). The Past Negative is used with the negative particle as a 'simple negation of a past positive'; used without this particle it expresses 'the obligative meanings 'should, should have' or an intentional meaning 'meant to', and with the addition of a desiderative-intentional suffix *-wᵢu-~-gu-* to the past negative, a form is created which expresses past intention, desire and sometimes also a nuance of past obligative meaning' (Merlan 1982:150). The habitual 'is sometimes merely used to express habitual activities ... However, habitual is more frequently used to express inherent activity, or activity characteristic of the agent' (Merlan 1982:148).

NGANDI AND NUNGGUBUYU In Ngandi, the column 3 form encodes the Potential mood; this 'is used in various past potential senses ('was going to', 'was just about to', 'would have', 'should have') and occasionally in present potential sense ('should'). As the translations suggest it often involves the notion of duty or obligation (rather than of mere capacity)' (Heath 1978b:106). In Nunggubuyu this form is the Evitative suffix; this category 'is used for an undesirable potential event which can be avoided by prudent action' (Heath 1984:346). It seems likely that in Proto Ngandi-Nunggubuyu, this was the potential form, and that the meaning has shifted in Nunggubuyu.

MARRA In Marra, this form marks the Present Positive and the Evitative (the Evitative is distinguished from the Present Positive by stem initial changes or stem suppletion). The Present tense in Marra is marked by two sets of suffixes: one (this suffix) 'is used only for third person forms ... (third intransitive, or third>third transitive)' (Heath 1981:186); the other is used where first and second persons are involved. Heath labels these Present$_3$ and

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14 The use of time frames to understand these tenses was first proposed by Glasgow (1964:118).

Present$_{1-2}$ respectively. However, 'the Pr$_3$ form, in addition to its use in third and third>third present positive forms, can be used ... for any pronominal category with the future indefinite positive ... a rare verbal category' (Heath 1981:228). Of this category, Heath says that 'it is difficult to pin down the exact nuances. It may be that the future/indefinite positive indicates a conjectural sense involving a possible event at an indefinite time in the near future (Heath 1981:186-187). It seems possible that this was its original function. The Evitative 'indicates a possible future event or situation, normally undesirable or catastrophic, which may result if a certain unfortunate course of action is taken by someone' (Heath 1981:187).

KUNGARAKAYN In Kungarakayn, the column 3 form expresses Nonpast tense, Realis mood (Parish 1983).

*HABITUAL/IRREALIS (PAST?) We see then that in Burarra, Gurr-goni, Ndjébbana and Nakara (and thus probably in Proto Maningrida), and in Mangarrayi, the column 3 suffix appears in categories expressing both present actions or habitual, characteristic actions and states, and also refers to actions which have not happened, but might have (in the past) or might (in the future). Ngandi and Nunggubuyu express only the second of these meanings through this suffix. Anticipating the presentation of paradigms for other verbs, we can note that for some verbs Gaagudju and Rembarrnga have cognate suffixes which express present tense, and cognate suffixes appear for a few verbs in Warndarrang in the Past Realis Continuous. There are thus also languages where this suffix encodes a single function closer to the first meaning.

It is not unusual to find one form encoding both past habitual and past potential or counterfactual functions (this is common, for example, in Indo-Aryan, Dravidian and Munda languages of South Asia (von Munkwitz-Smith 1995 and pers. comm.), and occurs in English (among the uses of the modal verb 'would' are past habitual and past potential), and in the Californian language Tolkapaya Yavapai (Harvey & Gordon 1980:191). I would suggest that reconstructing a dual function of habitual aspect and irrealis mood (probably past tense) would be compatible both with the other TAM categories proposed for this proto-language, and with the functions held by the reflexes of this proto-form in the daughter languages.

3.1.4 Suffixal category: column 4

Five of the languages, Burarra, Ngandi, Nunggubuyu, Marra and Kungarakany, also have another nonpast category, encoded by the suffixes shown in column 4.

BURARRA In Burarra, Glasgow (1984:35) terms the suffix category shown in column 4 'continuous probability', which 'defines a probable action as a repetition ("again")', e.g. 'he might pick it up again'.

NGANDI AND NUNGGUBUYU In Ngandi, the relevant form encodes the Present tense. This is used for events happening in the present, and '(as in English) can sometimes be extended to prospective events in the immediate future ... "I am going (now, or in a little while)"' (Heath 1978b:105).

In Nunggubuyu, Heath (1984:337–339) has labelled the suffix shown in column 4 as NonPast 2: it is used to mark the categories Present Positive and Future Continuous Positive (these categories take different sets of pronominal prefixes).

MARRA In modern Marra (Heath 1981:186), the column 4 suffix expresses the Present$_{1\text{-}2}$, which encodes the present tense for first and second persons in modern Marra, and may have done so for all persons in the proto-language (see §3.1.3 above).

KUNGARAKAYN In Kungarakayn, the column 4 form is recorded as an Irrealis Nonfuture (Evans pers. comm.).

COLUMN 4: NONPAST 1 Thus we see that Nunggubuyu expresses both Future Continuous (positive) and Present (positive) through this suffix. Ngandi expresses Present tense (which may be used for events in the immediate future). The Burarra category could be called Future Potential Continuous. The Marra form expresses Present tense only, and the Kungarakayn one Present and Past Irrealis. The most common element here is reference to nonpast tense, usually present, but in Burarra future, and in Kungarakayn in fact not non-past, but present and past (i.e. non-future). Other common threads are Continuous aspect (in Nunggubuyu and Burarra) and, perhaps, irrealis mood (in Burarra and Kungarakayn).

In considering the functions of the proposed column 3 form in the proto-language, we must obviously take into account the other nonpast category being reconstructed for Proto Arnhem, reflexes of which are shown here in column 5. Only two languages, Ngandi and Burarra, have clear reflexes of the column 5 proto-form *-*n*, as well as of the column 4 proto-form *-*jini*. In Ngandi, -*n* is used with 'see' to encode the future tense and the imperative mood (Heath 1978b:105–106). In Burarra, Glasgow (1984:32) describes this suffix as one of the 'probability series of four aspects [which] occur [...] optionally on verbs in the subjunctive mood of non-past tense'; this particular suffix 'define[s] an action as a definite prediction or as having consequence' (Glasgow 1984:35). (Many Burarra verbs have only one irrealis non-past (= non-precontemporary) suffix, however (and none have four). With 'see' and 'give', which have two, -*n* contrasts only with the irrealis 'repetition' suffix -*jjin*, and it is probably best regarded as the unmarked non-precontemporary irrealis (or potential) category.)

It is possible that Proto Arnhem made a distinction between present and future tense, or that some kind of aspectual distinction was made in the nonpast. As it is hard to determine which is more likely (or what the aspectual distinction could have been) from the available evidence, I will refer to these two categories simply as Nonpast 1 (column 4) and Nonpast 2 (column 5).

Having suggested possible TAM categories for the column 3 and 4 forms in the proto-language, I will now proceed to reconstruct these forms for other verbs. As we shall see below, the TAM allomorphs for the Habitual/Irrealis (past?) and Nonpast 1 categories are conjugationally determined. Before moving on to verbs which select different allomorphs, however, we will examine others for which *-*jan* and *-*jini* can probably also be reconstructed. These verbs are 'spear', 'see, visit', 'consume', and 'hear' (all of which have been considered by AEH).

3.2 'spear'

3.2.1 'spear' in Proto Maningrida and Proto Arnhem

AEH reconstruct the verb 'spear' on the basis of its occurrence at opposite sides of Arnhem Land, in Warray in the west, and in Nunggubuyu in the east. It is also found in Kungarakany, and in all the Maningrida languages, which, located in the north of the area

and not in contact with either Nunggubuyu or the western languages, add support to the argument that this root can be attributed to Proto Arnhem. The root can be reconstructed as **ra* in Proto Maningrida (the correspondence of Burarra/Gurr-goni *rr* to Ndjébbana *r* and Na-kara *rt* is also found in the paradigms of 'lie', 'be standing', 'sit', see §3.12). All the languages except Ndjébbana have the expected reflexes of column 3 **-jan*, and Burarra and Nunggubuyu have the expected reflexes of column 4 **-jini*. We therefore add these two suffixes to the set proposed by AEH for this root. (The Ndjébbana form *-ya* appears to be irregular; perhaps lenition has occurred following the root initial *r*.) See Table 6.

3.3 'consume', 'hear' and 'follow'

For **ngu* 'consume' (Table 7) and **nga* 'hear' (Table 8), only Ngandi and Nunggubuyu provide evidence of the column 3 and 4 forms, and reconstruction of **-jan* and **-jini* is therefore more tentative, as it is possible that these are intrusions or analogic replacements from another verb root. Kungarakayn may have a suffix cognate with the column 4 forms for 'hear', but this is not certain, as here we find *-yene* rather than *-jene* (which occurs with 'see'). As *-y-* appears in all tense forms of 'hear' in Kungarakayn (except the PP variant *ngo-weng*), it should perhaps be analysed as part of the root. It is also difficult to account for the variant vowels of this root (*a* in Ngandi and Nunggubuyu, *o~u* in Kungarakayn). For **wa* 'follow' (Table 9), it is Mangarrayi which provides the only column 3 form, and, again, reconstruction of **-jan* is therefore tentative.

Table 6: **ra* 'spear'

	1	2	3	4	5	6	7
		Pre	Con	IrrFutCont	IrrNPre	Fut	Imp/Fut
B	*rra*	*rra-na*	*rra-jja*	*rra-jjin*	*rra-n*		*rra-ø*
G	*rra*	*rra-ni*	*rra-jji*		*rra-n*		*rra-ø*
Ndj	*ra*	*rá-na*	*rá-ya*				*ra-ø*
Nkr	*rta*[15]	*rta-na*	*rta-ya*				*rta-ø*
pMan	**ra*	**ra-ni*	**ra-jja*	**ra-jjin*	**ra-n*		**ra-ø*
Nu	PI	P2	Evit	NP2	NPI	NP3	
ra	*ra-ng*	*ra-ni*	*ra-yan*	*ra-yii*	*ra-yang*	*ra-yi*	
Gaag	PP	PI	Pres			Con	Fut
para	*para*	*para-ni*	*para-y*			*pa'raaya~ pari*	*para*
Kung	PI			IrrNFut	NP		
la~lo	*la-m ~ lo-m*			*(lo-mere)*	*(lem)*		
AEH	PP	PI			NP		
**ra*	**ra-m*	**reniny*			**ren*		
pArn	PP	PI	Hab/IrrP	NPI	NP2	Irr	Imp
**ra*	**ra-m*	**ra-ni*	**ra-jan*	**ra-jini*	**ra-n*	**ra-yi*	**ra-ø*

15 The Na-kara detransitivised root for 'spear' is *lajjaya* (Eather 1990:228).

Table 7: **ngu~ngo* 'consume'

	1	2	3	4	5	6
Ngan	PPunct	PCon	Pot	Pres	Fut/Imp	Evit
ngu	*ngo-ng*	*ngu-ni*	*ngu-jjan*	*ngu-jjini*	*ngu-nung*	*ngu-yi*
Nu	P1	P2	Evit	NP2	NP1	NP3
	nga-ng	*ngu-ni*	*ngu-yan*	*ngu-yii*	*nga-ng*	*ngi-ø*
AEH	PP	PI			NP	
**ngu*	**ngong*	**nguniny*			**ngun*	
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr
**ngu~ngo*	**ngo-ng*	**ngu-ni*	**ngu-jan*	**ngu-jini*	**ngu-n*	**ngu-yi*

Table 8: **nga* 'hear'

	1	2	3	4	5	6
Ngan	PPunct	PCon	Pot	Pres	Fut	Evit
nga	*nga-ng*	*nga-ni*	*nga-jjan*	*nga-jjini*	*nga-n*	*nga-yi*
Nu	P1	P2	Evit	NP2	NP1	NP3
yanga	*yanga-ng*	*yanga-ni*	*yanga-yan*	*yanga-yii*	*yanga-ng*	*yangi-ø*
Kung	RPerf		NP	IrrNFut		
ngo	*ngo-weng* *ngo-ying*		*(ngo-yong)* *(ngu-yem)*	*ngo-yene*		
AEH	PP	PI			NP	
**nga*	**ngam ~* **ngang*	**nga-niny*			**ngan*	
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr
**nga*	**nga-ng?*	**nga-ni*	**nga-jan*	**nga-jini*	**nga-n*	**nga-yi*

Table 9: **wa* 'follow, see, visit'

	1	2	3	5	7
M	PPunct	PCon	Hab/PNeg	Pres	Imp
wa	*wa-p*	*wa-ni*	*wa-ya-n/-p*	*wa-n*	*wa-w*
AEH	PP	PI		NP	
**wa*	**wam*	**waniny*		**wan*	
pArn	PP	PI	Hab/IrrP	NP2	Imp
**wa*	**wa-m*	**wa-ni*	**wa-jan*	**wa-n*	**wa-w?*

3.4 'get'

The paradigm for the verb 'to get' is shown in Table 10.

3.4.1 'get' in Proto Maningrida

Here, I have reconstructed Precontemporary **ma-ngi*, Contemporary **ma-ngka*, **ma-n* (etc.). It is possible, given G *me-nyi*, *me-kka*, *me-n*, and M *mi-nyi, mi-ngka*, that, in the proto-language, a front vowel occurred in the root, or in one or more inflected forms. It is more likely, I believe, that, from the forms proposed here, palatalisation of *ng* before *i* in the column 2 suffix was followed in G and M by raising of *a* > *i/e* before the palatal consonant, and its subsequent spread through the paradigm.

For the Precontemporary, the weight of evidence points to *ng*, rather than *ny*, as the nasal. Conversely, while all languages except Gurr-goni have *a* as the final vowel (as we have seen before), positing *i* here would provide an environment in which the shift from *ng>ny* in Gurr-goni would be easily accounted for.

For the Contemporary suffix, Burarra and Ndjébbana both have *-ngka*. The correspondence of a homorganic nasal–stop sequence in Burarra with a geminate cluster in Gurr-goni appears in a considerable number of words (Green 1995:12); and other cognates exhibiting the same correspondences are also found between Gurr-goni and Ndjébbana. We would thus posit that an original cluster *ngk* has simplified to *ng* through deletion of the stop in Na-kara. Other probable instances of such a sound change can be found in Na-kara, though it is not unproblematic.

Table 10: **ma* 'get'

	1	2	3	4	5	6	7
		Pre	Con	IrrNPre			Fut/Imp
B *ma*		*ma-nga*	*ma-ngka*	*ma-n*			*ma-ø*
G *ma~me*		*me-nyi*	*me-kka*	*me-n*			*ma-ø*
Ndj *ma*		*má-nga*	*má-ngka*				*ma-ø*
Nkr *ma*		*ma-ngaya*	*ma-nga*			*ma-ya*	
pMan		**ma-ngi*	**ma-ngka*	**ma-n*		**ma-ya*	**ma-ø*
M	PPunct	PCon	Hab/PNeg			Pres	Imp
mi~ma	*ma-y*	*mi-nyi*	*mi-ngka-n/-p*			*mi-ø*	*mi-ø*
Ngan	PPunct	PCon	Pot	Pres	Fut	Evit	
ma~mi	*ma-y*	*ma-ngi*	*ma-ngan*	*ma-ni*	*mi-yang*	*ma-yi*	
Nu	P1	P2	Evit	NP_2	NP_1	NP_3	
ma~mi	*mi-ny*	*ma-ngi*	*ma-ngan*	*ma-ni*	*ma-ng*	*mi-ø*	
Gaag	PP	PI	Pres			Con	Fut
ma	*ma~ (ma-ki)*	*ma-ngi*	*ma-ngi*			*(ma-ki)*	*ma-ø*
AEH	PP	PI			NP		
**ma*	**may*	**manginy*			**mang*		
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
**ma*	**ma-ny/ *miya*	**ma-ngi*	**ma-ngkan*	**ma-ni*	**ma-ng*	**ma-yi*	*ma-ø*

It is again instructive to consider other sets of cognate verbs in these languages, shown in Tables 11–13 below.

Nkr is the problem in Table 11, as the other three languages suggest pMan **pengku*. Gurr-goni *pekku ~ pekki* corresponds regularly to B and Ndj *pengka*, with the original homorganic nasal stop cluster becoming a geminate stop in G.

In Table 13, Ndj differs in having *ng*, where in Tables 10 and 11 it has *ngk*. Ndj tends to retain nasal–stop clusters (see also Tables 22, 25, 31 and 42), although there are some examples of loss of the nasal (Tables 19, 37 and part of the paradigm in Table 31). Loss of the stop is not encountered elsewhere in Ndj, leading me to posit either pMan **pungu*, with analogical influence from **pengku* leading to *pungku* in B and G, or an alternation between **pungu* and **pungku* in pMan.

Table 11: Proto Maningrida **pe ~ pengki/u (~ peku)* 'arrive, come out'

	2	3	5	7
B 'arrive, come out'	*pe-na*	*pe-ya*	*pengki-n*	*pengka*
G 'arrive, come out'	*pekki-ni*	*pekki-ya*	*pekku-n*	*pejji*
Ndj 'float'	*ppéngka-na*	*ppéngka*		*ppéngka*
Nkr 'arrive, go out'[16]	*-paka-na*	*-paka-ø*		*-paka-ø*
pMan	**pengku-ni*	**pengku-ya*	**pengku-n*	**pengki*

Kunp *pingki* 'exit', and Iwaidja and Ilgar *-wingkan* 'arrive' (PP *wingkung*, 'frustrative' *wingkana* (Evans pers. comm.)), suggest that this verb can be attributed to a much deeper level.

Table 12: Proto Maningrida **we ~ we/angku (~we/aki/u)* 'speak'

	2	3	5	7
B	*we-na*	*we-ya*	*wengki-n*	*wengka*
G	*wekki-ni*	*wekki-ya*	*wekku-n*	*wejji*
Nkr	*waka-na*	*waka-ø*		*waka-ø*
pMan	**wengku-ni*	**wengku-ya*	**wengku-n*	**wengki-ø*

Wider cognates include nominals in BGW (*wok* 'talk, language') and Kayardild (*wak* 'cry, loud speech noise'), and verbs in Pama-Nyungan languages such as Martuthunira *wangka* 'speak to', Pitjantjatjara *wangka*, Djapu *wanga* 'say, speak, talk', etc.

Table 13: Proto Maningrida **pungku~ pungu* 'fall'

	2	3	5	7
B	*pungku-na*	*pungki-ya*	*pungku-n*	*pungka*
G	*pukki-ni*	*pukki-ya*	*pukku-n*	*pujji*
Ndj	*pangó-na*	*ppo* (*ppó-nga-na* IrrPre)		*ppo*
Nkr	*pungaya-na*	*pungaya-ø*		*pungaya-ø*
pMan	**pungu-ni~ pungku-ni*	**pungu-ya~ pungku-ya*	**pungu-n ~ pungku-n*	**pungi-ø ~ pungki-ø*

Wider cognates include Martuthunira *pungka* 'fall', and Pitjantjatjara *punka* (also 'fall').

In Tables 11 and 13 we have cognates from all four languages to consider. Table 11 gives us the correspondence set B *ngk* / G *kk* / Ndj *ngk* / Nkr *k*; Table 13 shows B *ngk* / G *kk* / Ndj *ng* / Nkr *ng*. Table 12 does not have an Ndj cognate, but gives B *ngk* / G *kk* / Nkr *k*, as in Table 11. Both of these correspondence sets differ from that seen in Table 10 above (B *ngk* / G *kk* / Ndj *ngk* / Nkr *ng*).

16 The Na-kara verb is *rtijjarapaka* 'go out, arrive'; *-paka* also occurs in *rterrapaka* 'move (intr.)'.

Na-kara appears to have three, perhaps four, possible developments of Proto Maningrida homorganic nasal–stop clusters, with evidence of loss of the stop in 'get' (Table 10), 'scold' (Table 22), and 'eat, bite 2' (Table 42) and possibly 'fall' (Table 13); retention of the cluster in 'hurt' (Table 4), 'go 2' (Table 15), and 'take' (Table 29); possible loss of the nasal in 'hit' (Table 37), 'come out' (Table 11), and 'speak' (Table 12); and gemination in 'mimic' (Table 19) and 'cut' (Table 25). I would therefore suggest that, while the Na-kara forms in Tables 11 and 12 may suggest pMan **peku* and **weku*, they may also be consistent with **pengku* and **wengku*.

The B alternation of monosyllabic *pe* and *we* in the Pre and Con tenses of Tables 11 and 12 respectively, with *pengki/u* and *wengki/u* in columns 5 and 7, may be a Burarra innovation, or may have been present in pMan and subsequently lost through regularisation in the other Maningrida languages (a similar alternation is found in Ndjébbana, but not Burarra, Gurr-goni or Na-kara, with the verb 'fall' (Table 13)). The Gurr-goni column 7 forms in these tables (*pejji, wejji, pujji)* may constitute further evidence that Gurr-goni (and/or Proto Burarra/Gurr-goni) underwent palatalisation of velar stops before *i* (and perhaps also *e*; see footnote 5 above). That palatalisation has occurred is uncontrovertible. That it was conditioned by a following high front vowel requires the stem final vowel in the other TAM categories to have been other than *i* at the time of the change. Perhaps the *u* of G *wekku-n* (column 5) reflects the original vowel in columns 2, 3 and 5, which underwent assimilation to the vowel of the suffix in column 2, and fronting before *y* in column 3, after palatalisation had ceased to be productive. The Ndj form *pangó-na* (column 2) does support the hypothesis of a back vowel in stem final position in columns 2, 3 and 5 in the proto-language.

Another issue is the reconstruction of the column 3 forms. As Ndj in Table 11, and Nkr in Table 12, have zero affixation for this category, perhaps this should be attributed to the proto-language. However, *-ya-* is not a common TAM suffix in B and G, occurring on only about 7–8 verbs in each language (of a total of 400+). Moreover, while the form *pungaya* (Table 13) constitutes the stem in Na-kara, and takes zero affixation in column 3, comparison with B and G suggests that an original suffix *-ya* has been incorporated into the Na-kara stem (as appears to have happened with other verbs in Na-kara; see for example 'hit' below, §3.18). Ndj, however, has no suffix on its column 3 form *ppo*, leaving the reconstruction uncertain.

3.4.2 'get' in Proto Arnhem

For Proto Maningrida, then, we posited Precontemporary **ma-ngi*, Contemporary **ma-ngka*, **ma-n* (etc.). For column 3, we find a direct cognate of the putative Proto Maningrida **-ngka* in Mangarrayi. Ngandi and Nunggubuyu both have *-ngan*: it is not certain that **ngk > ng* is the expected development in these languages, but it is certainly a plausible one.[17] With regard to the final nasal, the situation is comparable to that for 'give', where Kungarakayn *-jen* supported a reconstruction of the final nasal in **-jan*. We have no evidence from Kungarakayn in this case, but having posited loss of final *n* from **-jan* in all

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17 We will see below other instances where a putative shift **ngk > ng* appears to have occurred in Ngandi and Nunggubuyu (see Table 18, **tha* 'put standing' and Table 23, **tho* 'chop'). However, in Table 15 **ya* 'go 2', Nunggubuyu retains *ngk*.

languages but Ngandi, Nunggubuyu and Kungarakayn, we could plausibly suggest that the same process has taken place here.

We have less evidence on which to base a reconstruction of the column 4 form, Nonpast 1. Ngandi and Nunggubuyu both have *-ni*; it is possible that the Burarra and Gurr-goni suffix *-n* derives from this (with loss of the final vowel as posited for **-jini > -jin/-jjin* in Burarra 'see', 'give', etc.). AEH reconstruct the Nonpast (i.e. Nonpast 2, column 5) as *-ng* for this verb, but reconstruct *-n* for 12 of their 21 stems; in Burarra it appears in 20 of the 28 subconjugations. It is perhaps more likely that *-n*, as the most common Nonpast 2 allomorph, has simply replaced *-ng* in B and G (it is, in fact, the only final consonant in B and G verb suffixes, apart from a few instances of *-y*), and that the Nonpast 1 form has been lost. So as far as the original shape of the Nonpast 1 suffix is concerned, we can only tentatively suggest that the Ngandi/Nunggubuyu form may be a direct reflex of it.

3.5 'go 1'

3.5.1 'go 1' in Proto Maningrida

Two verbs meaning 'go' must be reconstructed for Proto Maningrida. Burarra and Gurr-goni have reflexes only of **po* (here 'go 1'). Na-kara has two verbs, *pa* and *ya*; *pa* is the general verb 'to go',[18] and *ya* occurs in the compounds *niya* 'move towards' and *rtiya* 'move away'. Ndjébbana has merged the two verbs into one paradigm: reflexes of **po* are found in the Precontemporary and Irrealis Precontemporary tenses (the latter is shown in column 3, as it is built on the Contemporary tense form, see §3.1.3), while reflexes of **ya* (here 'go 2', §3.6 below) appear in the Contemporary and Future tenses.

Table 14: **po* 'go 1'

	1	2	3	4	5	7
		Pre	Con	IrrNPre		Fut/Imp
B *po*		*po-na*	*po-ya*	*po-ka*		*po-y*
G *po~pokV*		*poki-ni*	*poki-ya*	*po-ko*		*po-y*
Ndj *pe~po*		*pé-na*	(suppl) *ppóppa-na* IrrPre			(suppl)
Nkr *pa*		*pa-na*	*pa-ø*			*pa-ø*
pMan		**po-ni*	**po-ya*	**po-ka?*		**po-y*
Warn						*pi-ø*
D	PP	PI			Pres	
po	*pong*	*po-niny*			*po-n*	
pArn	PP	PI	Hab/IrrP	NP1	NP2	Imp
**pV*		**po-ni*				

**po* is reconstructed on the basis of B, G and the Ndj IrrPre form. The source of the front mid vowel *e* in the other Ndj form is not clear. In Na-kara *o* has shifted to *a* in the unstressed position in which it occurs, as the second element in the stem consisting of pronominal plus 'go'. (The G stem is *pokV* in all but the Imperative; the column 4 form

[18] *Pa* is unusual in that the regular pronominal prefixes are not affixed directly to it, but to a stem which is already inflected for person and/or number.

appears to have been reinterpreted as the stem.) Column 2 **po-ni* is clear; all four languages retain the suffix, with shifts in B, Ndj and Nkr of *i* > *a* as discussed in §3.1.1. As with the verbs examined above in §3.4, column 3 presents a suffix *-ya* in B and G, versus zero suffixation in Nkr (the Ndj IrrPre form *ppóppa-na* unusually involves reduplication of the root, but no overt contemporary tense suffix preceding the IrrPre *-na*). As above, I tentatively ascribe the suffixed form **po-ya* to pMan.

3.5.2 'go 1' in Proto Arnhem

Evidence for this root outside the Maningrida language is sparse. Dalabon (close to the Maningrida area) does have a clear cognate, with a corresponding column 2 form. Warndarrang, distant from both Dalabon and the Maningrida languages, has a suppletive Imperative form *pi* in the paradigm of the (highly irregular) verb 'to go', which may be cognate. However, with no cognates for the column 3 form, and without cognates in the wider group of languages for the other verbs which in Proto Maningrida have been reconstructed with a column 3 suffix **-ya*, I am unable to speculate on the rest of the paradigm.

3.6 'go 2'

Reconstruction of this paradigm is difficult for both pMan and pArn due to the extent of suppletion in many of the languages. The pMan verb **ya* can only partially be reconstructed, and then only with evidence from languages outside the group, as Na-kara and Ndjébbana agree only in the root.

Table 15: **ya* 'go 2'

	1	2	3	4	5	6	7
Ndj *yVrrV*		Pre (suppl)	Con *yirríya*	IrrNPre			Fut/Imp *yarra*
Nkr *ya*		*ye-ka*	*ye-ngka*				*ya-ø*
pMan			**ya-ngka?*				**yV-rra*
M *ya~yi*	PPunct *ya-j*	PCon *yi-nyi*	Hab/PNeg *ya-ngka-ma-n* *ya-ngka-p*		Pres *ya-k*		Imp *ya-k*
Nu	PI *(rumany)*	P2 *ya-ngki*	Evit *ya-ngkan*	NP_2 *ya-arrii*	NP_1 *(rumang)*	NP_3 *(rumi)*	
Marr	PPunct *anga*	PCon *yurra-nyi ~ (rlini)*	$Pres_3$ *(rlintu)* $Evit_3$ *yurra-nga*	$Pres_{1-2}$ *(rlintiyi* $Evit_{1-2}$*)* *yurra-ngani*	Fut *yurra-ø*	Pot *yurra-yi*	Imp *(rala)*
Warn	PPunct *inga*	PaIrr *yarni*	PaActCon *rarra*				
Kung	RPerf *yojong*	PI *yangka-rang*	NP *yangka-ø*	IrrNFut *yangke-re*			*kiya*
pArn **yV*	PP	PI **ya-ngi?*	Hab/IrrP **ya-ngkan*	NP1 **ya-ngkani?*	NP2 **yV-rra?*	Irr	Imp

Na-kara column 3 *ye-ngka* has close cognates in Mangarrayi *ya-ngka-*, Nunggubuyu *ya-ngkan* and Kungarakayn *yangka-ø*. On this evidence, we would reconstruct pArn **ya-ngkan* and pMan **ya-ngka*, with pArn final *n* and loss in pMan as in §3.1.2. (The mid-vowel *e* in the Na-kara form is probably an innovation, but it is not yet clear to what level it is to be attributed, not what conditioned it.) The Ndjébbana forms *yirríya* and *yarra* have possible cognates in Nu NP_2 *yaa-rrii* (shown here in column 3) and Marra Fut *yurra-ø* (column 5). In Marra this form appears to have been reinterpreted as the stem, appearing also in the PCon, Pres and Pot forms. The original column 3 suffix appears to have been retained (**ya-ngkan > *yu-rra-nga* with analogical spreading of *rra*, and loss of final *n* (see §3.1.2 above), and **ngk > ng* as in Table 22 below). Possibly the Marra column 2 and 4 forms also reflect pArn, with column 4 *?*yV-ngkani > yu-rra-ngani* (*ngk > ng* as in column 3), and column 2 **ya-ngi > yurra-ngi > yurra-nyi* (**ngi>nyi* as in Tables 18 and 22). However, although we can posit **yV-rra* for Proto Arnhem and Proto Maningrida, it is not clear what it encoded in either language. It does not appear at all in Mangarrayi or Kungarakayn. In Nunggubuyu, it expresses NP_2, but Nunggubuyu also has suppletion in this paradigm with a stem *rumV* in the column 1, 5 and 6 categories, so it is impossible to know what the full paradigm of **ya* in pre Nunggubuyu was (if, indeed, it was not already suppletive). Its reinterpretation as the stem in both Marra and Ndjébbana suggests the possibility that it may have expressed a category which typically has no overt suffix, such as the Imperative (where it does actually occur in Ndjébbana). Warndarrang *rarra* may possibly also be cognate, if the initial *ra* is a reflex of **ya* before the *rr* of the suffix (**ya* may have been retained in Warndarrang PaIrr *yarni*); it is probably more likely, however, that this form is cognate with the root *ru* evident in the Nunggubuyu paradigm, and the root *rli* evident in the Marra paradigm (**rV*, probably).

It is possible that a form **ya-ngi* may have existed, perhaps expressing the PI (column 2). This would be consistent with M *yi-nyi* (**-ngi > nyi* as in 'get' (Table 10), 'mimic' (Table 19), and 'scold' (Table 22)), and with Marra (**yV-ngi > yu-rra-nyi*, with the same analogical spreading of *rra* as discussed above, and **-ngi > -nyi* as in 'put standing' (Table 18) and 'scold' (Table 22). In Nunggubuyu, **ya-ngi* would normally be retained; perhaps here *ngk* has replaced *ng* by analogy with the Evit (column 3) form. The pMan column 2 form is unlikely to have been **ya-ngi*, however, at least on the evidence of Na-kara *ya-ka*; Na-kara elsewhere retains **ng*.

3.7 'reflexive'

3.7.1 'reflexive' in Proto Maningrida

An intransitivising suffix *-yi-* can be confidently posited for pMan. Its function in Gurr-goni and Ndjébbana is reflexive, reciprocal and mediopassive. In Na-kara and Burarra it is reflexive and mediopassive, while reciprocal is expressed by *-njiya* (Nkr) and *-jji-ya ~ -jjiji-ya* (B). Thus a cognate of the Proto Gunwinyguan reciprocal suffix **-nyji ~ *nhthi* also occurred in Proto Maningrida. It may have been independently inflected, or it may have been followed by **-yi* (> Nkr, B *-ya*) as it is now in Na-kara and Burarra. Certainly, no pMan paradigm can be reconstructed for **-nyji*.

All four Maningrida languages agree on the inflections for this suffix, so reconstruction is unproblematic. The paradigm resembles that for 'speak', 'fall', 'arrive' (§3.4.1) and 'go 1' (§3.5).

3.7.2 'reflexive' in Proto Arnhem

The column 2 form is again clear, **-yi-ni*. In column 3, it is possible that the M and Gaag may be cognate with pMan *-yi-ø*. Gaag *-y*, however, while clearly not taking an overt tense suffix, also occurs in the PP and the Fut tenses. M has *-yi-ma-n* in the Habitual, and *-yi-p* in the Past Negative. The same alternation, between *-ma-* in the Habitual, and *-ø-* in the Past Negative, is seen in 'go 2' (Table 15 above), 'bite 1' (Table 30), 'burn 1' (Table 33), and 'throw' (Table 34). In all of these paradigms, *-ma-* follows an overt Hab/PNeg suffix which also occurs in the PNeg (thus for example, 'throw' Hab *war-nga-ma-n*, PNeg *war-nga-m*, where the Hab/PNeg suffix is *-nga-*). Here, then, the absence of an overt suffix before the PNeg *-p/-m*, and before *-ma-n* in the Habitual, can be seen as significant, suggesting that pArn may have had **-yi-ø* in the Hab/IrrP. Ngandi and Nunggubuyu do not support this hypothesis, however, both having *-(y)i-ngun*.

Table 16: **-yi* 'reflexive'

	1	2	3	4	5	6	7
		Pre	Con		IrrNPre		Fut/Imp
B *-ya*		*-ya-na*	*-ya-ø*		*-ya-n*		*-ya-ø*
G *-yi*		*-yi-ni*	*-yi-ø*		*-yi-n*		*-yi-ø*
Ndj *yí~ya*		*-yí-na ~ -ya-na*	*-ya-ø*				*-ya-ø*
Nkr *-ya*		*-ya-na*	*-ya-ø*				*-ya-ø*
pMan **yi*		**-yi-ni*	**-yi-ø*		**-yi-n*		**-yi-ø*
M	PPunct	PCon	Hab/PNeg		Pres		Imp
-yi~-ya[19]	*-ya-k*	*-yi-ni*	*-yi-ma-n, -yi-p*		*-yi-n*		*-yi-ø*
Ngan	PPunct	PCon	Evit	Pres	Fut	Evit	
-yi~-i	*-yi-ny*	*-yi-ni*	*-yi-ngun*	*-yi-na*	*-yi-ng*	*-yi-ø*	
Nu	P1	P2	Evit	NP2	NP1	NP3	
-i	*-i-ny*	*-ii-ni*	*-i-ngun*	*-ii-na*	*-i-ny*	*-i-ø*	
Gaag	PP	PI	Pres			Con	Fut
	-y	*-yi-ni*	*-y*			*(-ya)*	*-y*
Kunp	RP	IrrP			RNP		IrrNP
-yi	*-yi-ny*	*-yi-ni*			*-yi*		*-yi*
AEH	PP	PI			NP		
	**-yiny*	**-yininy*			**-yi-n*		
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
**-yi*	**-yi-ny*	**-yi-ni*	**-yi-ø?*		**-yi-n*		**-yi-ø*

3.8 'die/be sick'

A root **juwe* can be attributed to Proto Maningrida, with direct reflexes in Burarra and Ndjébbana. The paradigms differ, however, and it is only possible to infer that Burarra reflects the original by reference to cognates in other languages. Lacking cognates in other

19 In Mangarrayi, *-yi* alternates with *-nyjiyi* and *-jiyi* as the reflexive/reciprocal/mediopassive suffix. All inflect identically.

languages which would show evidence of the column 3 form, we cannot say what this would have been in pArn, and can only suggest that B *juwa-ya* continues Man **juwe-yi*. The paradigm would thus be similar to that for 'arrive' (Table 11), 'speak' (Table 12), 'fall' (Table 13), 'go 1' (Table 14), and 'reflexive' (Table 16). It will be remembered that alternative reconstructions for column 3 were considered (§3.4.1); the same arguments would apply here, so it is possible that Ndj continues the pMan form in column 3.

Table 17: **thOwe* 'be sick, die'

	1	2	3	5	7
B *juwa*		*juwa-na*	*juwa-ya*	*juwa-n*	*juwa-ø*
Ndj *juwe*		*yawé-la*	*jjúwa-ø*		*jjúwa-ø*
pMan **juwe*		**juwe-ni*	**juwe-yi*	**juwe-n*	**juwa-ø*
BGW	*towe-ng*	*towe-ni*		*towe-n*	
D	*to-ny*	*to-niny*		*to-n*	
Kunp	RP	IrrP		RNP	IrrNP
ju	*ju-ng*	*ju-ngi*		*ju-wa*	*ju-ng*
AEH	PP	PI		NP	
	**thOwi-ng*	**thO(wi)-niny*		**thO(wi)-n*	
pArn	PP	PI	Hab/IrrP	NP2	Imp
	**thOwi-ng*	**thOwe-ni*		**thOwe-n*	

3.9 'put standing' and *-ja/-jja* verbs

3.9.1 'put standing' and -ja/-jja *verbs in Proto Maningrida*

All four Maningrida languages have a conjugation comprising verb stems whose characteristic final syllable is *-ja* or *-jja*. Gurr-goni also has a monosyllabic verb *ja* 'put standing, erect'. The Gurr-goni paradigm for *ja* 'erect' and the *-ja/-jja* verbs is identical (given a geminate stop following monosyllabic *ja*, and a single stop following polysyllabic stems, in column 3). The paradigms for the *-ja/-jja* verbs also appear to be cognate across the four languages, and historically probably derive from compounds built on *ja* 'erect'. Thus, although only Gurr-goni retains the independent monosyllabic verb, it can be reconstructed for Proto Maningrida with some confidence. Several *-ja/-jja* verbs can also be reconstructed: shown below are **ngunyja* 'mimic, call by name' (which can be attributed to Proto Arnhem, with cognates in Mangarrayi (*ngunyja* 'imitate') and Warray (*ngunji* 'talk to each other'); **kajja* '(water) dry up', and **parnja* 'put down'.

Table 18: **ja~je* 'erect, put standing'

	1	2	3	4	5	6	7
G *ja~je* pMan **ja?*		Pre *je-nyi* **ja-ngi*	Con *je-kka* **ja-ngka*		IrrNPre *je-n* **ja-n*		Fut/Imp *ja-ø* **ja-ø*
M 'stand'	PPunct *jaj*	(suppl)	(suppl)		(suppl)		Imp *jaji*
Ngan *-tha*[20]	PPunct *-thi*	PCon *-tha-ngi*	Pot *-tha-ngan*	Pres *-tha-ni*	Fut *-tha-ng*	Evit *-tha-ø*	
Nu *-ja~* *-tha*[21]	P1 *-ji-ny ~* *-thi-ny*	P2 *-ja-ngi ~* *-tha-ngi*	Evit *-ja-ngan ~* *-tha-ngan*	NP2 *-jii ~* *-thii*	NP1 *-ja-ng ~* *-tha-ng*	NP3 *-ji-ø ~* *-thi-ø*	
Marr *yi~ja* 'tell'	PPunct *yi-ø*	PCon *ja-nyi*	$Pres_3$ *ja-nga*	$Pres_{1-2}$ *ja-ngani*	Fut *(ninguy)*	Pot *ja-yi (~ ninguyi)*	Imp *ya-ø*
R *ta*	PP *ta-ya*	PI *ta-nginy, ta-ny*			NP *ta-ngan*		
BGW *ta*	PP *ta-nginy*	PI *ta-ny*			NP *ta-ngen*		
AEH	PP **thanginy*	PI **thany*			NP **thangen*		
pArn **tha*	PP **tha-ny*	PI **tha-ngi*	Hab/IrrP **tha-ngkan*	NP1	NP2 **tha-ng*	Irr	Imp

Table 19: **ngunyja* 'mimic, call by name'

	1	2	3	5	7
		Pre	Con	IrrNPre	Imp/Fut
B *ngunyja*		*ngunyji-nga*	*ngunyji-nga*	*ngunyji-n*	*ngunyja-ø*
G *ngujja*		*ngujji-nyi*	*ngujji-ka*	*ngujji-n*	*ngujja-ø*
Ndj *ngoja*		*ngója-nga*	*ngója-ø*		*ngója-ø*
Nkr *ngojja*		*ngojja-ngiya*	*ngojja-nga*		*ngojja-ø*
pMan		**ngunyja-ngi*	**ngunyja-nga*	**ngunyja-n*	**ngunyja-ø*
M *ngunyja*	PPunct *ngunyja-nyi*	PCon *ngunyja-nyi*	Hab/PNeg *ngunyja-ngka-n/-p*	Pres *ngunyja-k*	Imp *ngunyja-k*
Kunp *ngunyje* 'do'	RP *ngunta*	IrrP *(ngunta)*		RNP *ngunyje-ø*	IrrNP *ngunyja-ng ~ ngunyje-ø*
Warray *ngunji*	R *ngunji-yi*	Imperfective *ngunji-nyiny*		Irr *ngunji-ny*	Imp *ngunji- ø*
pArn **ngunyja*	PP	PI **ngunyja-ngi*	Hab/IrrP **ngunyja-ngkan*	NP2	Imp **ngunyja-ng*

[20] Ngandi has two thematising suffixes, *-tha* (shown here) and *-thu* (with an identical paradigm; only the vowel differs).

[21] Heath (1984:418) notes 'we can identify /*-ja-*/ or /*-tha-*/ ... as a minor derivational suffix', and (1984: 417) 'this [inflectional] class consists largely of stems which historically contain a kind of thematising augment'.

Table 20: **kajja* '(water) dry up/(tide) go out'

	2	3	5	7
	Pre	Con	IrrNPre	Imp/Fut
B *kajja*	*kajji-nga*	*kajji-nga*	*kajji-n*	*kajja-ø*
G *kajja*	*kajji-nyi*	*kajji-ka*	*kajji-n*	*kajja-ø*
Ndj *kaja*	*kkája-nga*	*kkája-ø*		*kkája-ø*
pMan	**kajja-ngi*	**kajja-nga*	**kajja-n*	**kajja-ø*

Table 21: **parnja* 'put down 1'

	2	3	5	7
	Pre	Con	IrrNPre	Imp/Fut
B *parnja*	*parnji-nga*	*parnji-nga*	*parnji-n*	*parnja-ø*
Ndj *panyja*	*ppányja-nga*	*ppányja-ø*		*ppányja-ø*
Nkr *parnya*	*parnya-ngiya*	*parnya-nga*		*parnya-ø*
pMan	**parnja-ngi*	**parnja-nga*	**parnja-n*	**parnja-ø*

The suffixes are similar to those for **ma* 'get' (Table 10 above). In column 2, B *-ja-nga*, G *je-nji/-ji-nyi*, Ndj *-ja-nga* and Nkr *-ya-ngiya* again suggest pMan **(-)ja-ngi*. **-ngi* > *nyi* in Gurr-goni was discussed above at §3.4.1. In Na-kara, **-ngi* has given rise here to *-ngiya*, while in Table 10 the reflex of the same putative proto-form is *-ngaya*. Neither is completely regular, apparently having undergone additional suffixation with *-ya*.

The form of the monosyllabic root in the column 3 form in Gurr-goni is *je-kka*, with a geminate stop. Without any other evidence for **ja* 'erect', we would be justified in positing **ja-ngka* for pMan, by analogy with **ma-ngka* (Table 10).

For the polysyllabic stems, however, the issue is not so clear. Na-kara *-nga* (as in *ngojja-nga*) would appear to be compatible with pMan **-ngka* or **-nga* (see §3.4.1 above for discussion of the apparent reduction of **ngk* > *ng* in Na-kara). There is no evidence for the same change in Burarra, however, and Burarra *-nga* plausibly derives only from *-ngV*. I therefore posit pMan **-nga* (**ngunyja-nga, *parnja-nga, *kajja-nga*, etc.), retained in both Burarra and Na-kara. Ndjébbana *-ø* is obviously not a regular development. In Gurr-goni, **-nga* would then have hardened to *-ka* (as in *ngujji-ka*). The full evidence of the Gurr-goni verbal system shows that this has occurred following a non-homorganic stop (geminate and single *rt, j, t, p*) in the last syllable of the stem, while *-nga* remains following a nasal, homorganic stop (*k* or *kk*), or the glide *w* in the same position in the preceding stem. However, I have suggested above that **-ngi* > *-nyi* in Gurr-goni, and below posit **-ngu* which remains in Gurr-goni; the latter particularly is a problem for this reconstruction.

Reconstruction of the stems **kajja* and **parnja* appears fairly clear. Reduction of *jj* > *j* in Ndj was noted above in §3.1.1. Lenition of *j* > *y* (**parnja* > *parnya*) in Nkr is consistent with observation of intervocalic lenition, also in §3.1.1. Retroflexes appear to have been unstable in Ndjébbana: pMan **kornta* 'cut' becomes *konyja* in Ndj (see §3.11 below) and pMan **pu-rnta* appears to have become *ppúra* in Ndj (see §3.18 below).

In Ndjébbana, the *o* in *ngója* appears to be an independent innovation, as the intransitivised form is *ngújeyi* (perhaps retaining the older form). However, while reconstruction of **ngunyja* is supported by cognates in Mangarrayi, Kunbarlang and Warray

(and Ngandi and Nunggubuyu both have particles *ngunyju* 'same', which could be either retentions or, possibly, loans), the expected development of *nyj* in Ndjébbana is either *nyj* or *y*, with no evidence of *nyj* > *j* (but see 'lift up' (Table 31), where a homorganic nasal–stop cluster appears in the Imp *nyémpa*, while the Pre *nyapé-la* and Con *nyapo* have a single stop); and in Na-kara *nyj* becomes *nyj* or *ny*, with no evidence of *nyj* > *jj* (although **kornta* becomes *kortta* in Na-kara). These forms appear to be cognate, but I am unable to fully reconcile them.[22]

3.9.2 'put standing' and -ja *verbs in Proto Arnhem*

Although wider cognates are found for only one of the *-ja* verbs, **ngunyja*, reconstruction of the column 2 and 3 forms is fairly clear. Column 2 **ngunyja-ngi* becomes *nyunyja-nyi* in Mangarrayi, with *ng* > *ny* as in **ma-ngi* > *mi-nyi*, Table 10 above, and **thO-ngi* > *ju-nyi*, Table 22 below. Warray *ngunyja-nyiny* would appear to involve the same change, plus epenthesis of the final *ny*, as discussed in §3.1.2. In column 3, both pMan and Mangarrayi have direct reflexes of the posited pArn **ngunyja-nga*. In the Imperative, M *ngunyja-k* and Kunp *ngunyja-ng* suggest pArn **ngunyja-ng* (with regular hardening of the final nasal in Mangarrayi). The Mangarrayi form is both an Imperative and a Present tense form; the Kunbarlang one an Irrealis 1. Present tense in Mangarrayi continues NP2, and it is possible that this was not originally an Imperative (**tha-ng* is reconstructed for NP2 in the paradigm of the monosyllabic root). The limited evidence does not allow reconstruction of other TAM categories, however.

Reconstruction of the monosyllabic root is less clear. As AEH note, few languages have retained reflexes of both **tha* 'put standing' and **thi* 'be standing' (§3.12 below) as distinct verbs. Gurr-goni is the only one of the Maningrida languages to have done so. Among the wider group of languages Rembarrnga and BGW retain both, and Marra may do so. The Marra verb shown above means 'tell'; semantically it is thus closer to pArn **thO* 'scold, tell off', while Marra *ju* 'causative auxiliary' is semantically closer to **tha* 'put standing', while the vocalism suggests the opposite.[23] The Marra paradigms are almost identical, except for the vocalism; *ju* 'causative aux' is shown in Table 22 below. Marra also has a cognate of **thi* 'be standing', *ya~yi~yu*, shown in Table 27 below. Ngandi and Nunggubuyu have

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22 It is possible that this verb could be a loan in one or more languages. There are clear cases where what could be called the lexical root of a verb, preceding a thematising suffix, is borrowed between languages: one example involves the Gurr-goni words *pengrtayja* 'be reminded of' and *pengrtaykinmi* 'let someone know'. *Peng* is a BGW nominal meaning 'faculty of understanding, cognition'; it has no independent meaning in Gurr-goni. BGW also has verbs *pengtayhme* 'be reminded of' and *pengtayhke* 'let someone know'; Gurr-goni has not borrowed the thematising suffixes *hme* and *hke*, but has used its own (*ja* and *kinmi*). It is thus necessary to consider sound correspondences and etymology when determining whether shared verbs are shared inheritance or borrowings. In my earlier paper, I posited several verbs for Proto Maningrida which I now believe more probably involve borrowing of the lexical roots (B/G *rorrjja*, Ndj *rórrajja* 'clear up, clean' and B *rarraya* 'empty, clean out', Ndj *rarrma* 'be clean, white' do not show the sound correspondences exhibited by reflexes of such verbs as **ra* 'spear' (B/G *rra*, Ndj *ra*, Table 6 above) and **yo-ri* 'lie-Con' (B *yu-rra*, G *yo-rri*, Ndj *yó-ra*, Table 26 below).

23 Gavan Breen (pers. comm.) has pointed out that in other Australian languages, for example Arrernte, a verb 'tell' is used as a causative. While development of *tell (off) > causative in Marra thus has parallels, Marra appears to have also undergone an opposite shift from an inherently causative verb 'put standing' to 'tell'.

thematising suffix or derivational suffixes *tha (~-ja)*, as well as independent verbs *thi* (Ngan) and *lha* (Nu) 'be standing'. In other languages, the paradigms of **tha* and **thi* were merged, or one was lost. Forms with *a* vocalism that appear to be reflexes of **tha* are shown in Table 18 above.

Mangarrayi, which had identical PPunct and PCon (column 1 and 2) forms for *nguny-ja* above, here has a suppletive stem *jayki* for all categories except PPunct and Imp. The column 1 form *jaj* would suggest pArn **thany*: Nu has *-thiny ~ -jiny*, and *tany* is found in R and BGW, but in the PI category (usually cognate with column 2). Mangarrayi provides no evidence for column 2; pMan **ja-ngi* (G *je-nyi*) is a clear cognate of Ngan and Nu *-tha-ngi (~ -ja-ngi* Nu*)* and R *ta-nginy*, and of Marra *ja-nyi* (with **-ngi > -nyi* as in Table 15 above, and Table 22 below), suggesting **tha-ngi*. AEH, however, posit **thanginy* for the PP (= my column 1) and **thany* for the PI (my column 2). We at least agree on the forms; to which category they are to be assigned is debatable, as there have clearly been shifts in the daughter languages. For column 3, pMan **ja-ngka* (G *je-kka*), Ngan and Nu *-tha-ngan* and Marr *-ja-nga* point to **tha-ngkan*, with changes as in §3.4.2, §3.6 and §3.10. For column 4, however, the dissimilarity of forms makes reconstruction difficult. In column 5, as with 'get' §3.4.2, we find suggestions of **tha-ng* in pArn; pMan (or at least Proto Burarra/Gurr-goni) has replaced the final velar nasal with *-n*, the only nasal to occur finally in the verb suffixes.

3.10 'chop', 'scold' and 'burn 1'

Three other verbs for which a column 3 Habitual/Past Irrealis suffix **-ngka(n)* can be reconstructed are **thO* 'scold, growl at' (with reflexes in the Maningrida languages, Mangarrayi and Marra), **tho* 'chop' (with reflexes in Ngandi and Nunggubuyu), and **rO* 'burn 1' (with reflexes in Burarra, Gurr-goni, BGW and Ngalakgan). Reconstruction of these paradigms is unproblematic, with (fairly) regular sound changes in all languages (Nakara column 2 *jo-ngaya* is not completely regular, in that it involves the addition of a syllable; see §3.4.1 above for another instance of this). The root vowel of 'scold' and 'burn 1' is not clear, however. Proto Maningrida has **jo* 'scold' and **ro* 'burn 1', while reflexes of these verbs in the languages examined by AEH show *u* or *i* as the root vowels. Mangarrayi *ju-* could reflect either **thu* or **tho*: as AEH (this volume) note, mid-vowels do not occur in closed word classes in Mangarrayi, and '[c]onsequently, the *u* vowel in the Mangarrayi forms may be analysed as having replaced an original **o* vowel'. Marra and Warndarang both have only three vowels, and may have undergone a similar change to Mangarrayi. As in Table 3, I therefore represent this proto-phoneme as **O*, pending further research into the historical phonology of these languages.

Table 22: **thO* 'scold, tell off'

	1	2	3	4	5	6	7
		Pre	Con		IrrNPre		Imp/Fut
B *jo*		*jo-nga*	*jo-ngka*		*jo-n*		*jo-ø*
G *jo*		*jo-ngu*	*jo-kka*		*jo-n*		*jo-ø*
Ndj *-jjo~-ya*		*jjó-nga*	*jjó-ngka*				(suppl)
Nkr *jo*		*jo-ngaya*	*jo-nga*			*(kuya)*	
pMan **jo*		**jo-ngi*	**jo-ngka*		**jo-n*		**jo-ø*
M	PPunct	PCon	Hab/PNeg		Pres		Imp
ju	*ju-j*	*ju-nyi*	*ju-ngka-n/-p*		*ju-k*		*ju-k*
Marr[24]	PPunct	PCon	$Pres_3$	$Pres_{1-2}$	Fut	Pot	Imp
ju~ji	*(ji-ø)*	*ju-nyi*	*ju-ngu*	*ju-nguni*	*(ju-ø)*	*ji-yi*	*(ji-rli)*
Warn	PPunct	PIrr	P/FutCon				
ja~ji	*(ja-ø)*	*(ji-ø)*	*ja-nga*				
AEH	PP	PI			NP		
	**thuny ~ *thuy*	**thunginy*			**thung*		
pArn	PP	PI	Hab/IrrP		NP2	Irr	Imp
**thO*	**thO-ny*	**thO-ngi*	**thO-ngkan*		**thO-ng*		**thO-ng?*

Table 23: **tho* 'chop'

	1	2	3	4	5	6
Ngan	PPunct	PCon	Pot	Pres	Fut	Evit
	tho-ng	*tho-ngi*	*tho-ngan*	*tho-ni*	*tho-ng*	*tho-yi*
Nu	P1	P2	Evit	NP2	NP1	NP3
	lhi-ny	*lha-ngi*	*lha-ngan*	*lha-ni*	*lhi-ny*	*lhii*
AEH	PP	PI			NP	
**tho*	**thoy*	**thonginy*			**thong*	
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr
**tho*	**tho-ny*	**tho-ngi*	**tho-ngkan*	**tho-ni?*	**tho-ng*	**tho-yi*

Table 24: **rO* 'burn 1'

	1	2	3	5	7
		Pre	Con	IrrNPre	Imp/Fut
B *rro*		*rro-nga*	*rro-ngka*	*rro-n*	*rro-ø*
G *rro*		*rro-ngu*	*rro-kka*	*rro-n*	*rro-ø*
pMan **ro*		**ro-ngi*	**ro-ngka*	**ro-n*	**ro-ø*
	PP	PI		NP	
BGW	*ru-yi*	*ru-ngi*		*ru-ng*	
Ngal	*ru-ny*	*ru-nginy*		*ru-nga*	
pArn	PP	PI	Hab/IrrP	NP2	Imp
**rO*		**rO-ngi*	**rO-ngkan*	**rO-ng*	

24 As noted above (§3.9.2), this is a causative auxiliary.

3.11 'cut'

3.11.1 'cut' in Proto Maningrida

The paradigm of 'cut' is the same as that for 'mimic', 'dry up', and 'put down 1', Tables 19–21, in all languages except Gurr-goni. There **-ngi* became *-nyi* (**ngunyja-ngi* > *ngujji-nyi*, **kajja-ngi* > *kajji-nyi*); here, following a root in which the stressed vowel is *o*, **ngi* > *-ngu*, with the vowel of the suffix assimilating to the preceding stressed vowel, rather than the consonant assimilating to the following vowel (obviously, **-ngi* > *-ngu* must have preceded **-ngi* > *-nyi*, or the form G here would be *korntu-nyi)*.

Table 25: **kornta* 'cut'

	1	2	3	5	6	7
		Pre	Con	IrrNPre	Fut	Imp/Fut
B *kornta*		*kornta-nga*	*kornta-nga*	*kornta-n*		*kornta-ø*
G *kornta*		*korntu-ngu*	*kornta-ka*	*kornti-n*		*kornta-n*
Ndj *kónyja*		*kkónyja-nga*	*kkónyja-ø*			*kkónyja-ø*
Nkr *kortta*		*kortta-ngiya*	*kortta-nga*			*kortta-ø*
pMan		**kornta-ngi*	**kornta-nga*	**kornta-n*		**kornta-ø*
M	PP	PCon	Hab/PNeg	Pres		Imp
	kunta-ni	*kunta-ni*	*kunta-ya-n/-p*	*kunta-n*		*kunta-w*
pArn	PP	PI	Hab/IrrP	NP2	Irr	Imp
**kornta*				**kornta-n*		

The root is clearly **kornta*. The development in Ndjébbana to *konyja* may be partly due to analogical pressure from other verbs in the conjugation, many of which have *-ja* as the final syllable. In Gurr-goni, most homorganic nasal–stop clusters become geminate stops, but retroflex clusters appear to be an exception: *rnt* is also retained in *pu-rnti* 'hit-Con' (Table 37). On the other hand, gemination is not the norm in Na-kara (although it is not actually clear what regular development of such clusters is in Na-kara; see §3.4.1 above). **ngunyja* > *ngojja* 'mimic' is another instance where gemination appears to have occurred.

3.11.2 'cut' in Proto Arnhem

Mangarrayi is the only language examined here in which an apparent cognate of pMan **kornta* is found. As noted in §3.10 above, *u* in Mangarrayi inflecting verbs could derive from **o* or **u*, and I have posited **o* as the root vowel here in the absence of any evidence to the contrary. There are problems, however, as the root does not have a retroflex cluster as would be expected (compare pArn **pu-rnti* 'hit-Hab/IrrP' > pMan **pu-rnti*, M *pu-rnta* (Table 37 below), and the column 2 and column 3 inflections are not cognate. As cognate roots are also found in Pama-Nyungan languages (for example Martuthunira *wurnta* 'cut'), there is no doubt that it can be attributed to pArn, most likely with a retroflex cluster (**kornta*), but without further evidence we cannot reconstruct the paradigm.

3.12 'lie', 'be standing', 'sit'

3.12.1 'lie', 'be standing' and 'sit' in Proto Maningrida

Table 26: **yo* 'lie'

	1	2	3	4	5	6	7
		Pre	Con		IrrNPre	Fut	Imp/Fut
B *yu*		*yu-ø*	*yu-rra*		*yu-ngin*		*yu-ø*
G *yu~yo*		*yu-y*	*yo-rri*		*yu-ngu*		*yu-ø*
Ndj *yo*		*ya-ø*	*yó-ra*				*ya-ø*
Nkr *yu*		*yu-na*	*yu-rta*			*yu-nya*	
pMan *yu~yo*		**yu-y*	**yo-ri*		**yu-ngV*	**yu-nya*	**yu-ø*
M	PP	PCon	Hab/PNeg		Pres		Imp
yu	*yu-j*	*yu-nyi*	*yu-ra-n/-p*		*(yu-ø)*		*yu-ø*
Ngan	PP	PCon	Pres	Pot	Fut	Evit	
yo	*yo-nginy*	*yo-y*	*yu-rta*	*yo-ngini*	*yi-nyang*	*yo-ngi*	
Nu	P1	P2	NP2	Evit	NP1	NP3	
yi~ya	*yi-ngany*	*ya-y~yi*	*ya-ra*	*(ya-n)*	*yi-ngang*	*yi-ngi*	
Gaag	PP	PI	Pres			Con	Fut
yu~yo~jo	*(jo-kori)*	*(jo'ree-ni)*	*yu, yo-ri*			*(jo'reeya)*	*yu*
R	PPunct	PCon	Pres		Pres		
yu~yi~ ya	*yu-wa*	*(yi-nganiny) ~ yuweny*	*yu-ru*		*ya-ngan*		
Kung	RPerf	PI	NP	IrrNonFut			
yu~yo	*yu-nguny*	*(yungyung)*	*(yo-po)*	*yu-ngene*			
Kunp	RP	IrrP			RNP		IrrNP
	yu-ngany	*yu-ngi*			*yu-wa*		*yu-ng~yu*
AEH	PP	PI			NP		
	yonginy	*yoy*			*yu*		
pArn	**PP	**PI	**Hab/IrrP	**NP1	**NP2	Irr	Imp
	**yo-nginy*	**yo-y*	**yo-ra*	**yo-ngini*	**yu-ng?*		**yu*

Some variation occurs in the vowels of the roots, both within and between the languages, and it appears that variation must be reconstructed for the proto-languages.

For 'lie' (Table 26), *yu* predominates, but both Gurr-goni and Ndjébbana also show *yo* in some categories (perhaps significantly, in the Contemporary tense in both languages). *Ya* also occurs in Ndjébbana, but can be derived via the general rule of shifting unstressed vowels to *a*. We would probably be justified in reconstructing **yo* in Contemporary tense, **yu* elsewhere; note that AEH also reconstruct forms in both *yo* and *yu* for their 'Proto Gunwinyguan', though distributed differently over TAM categories.

For 'be standing' (Table 27), *ji* predominates in Burarra, Gurr-goni and Na-kara, but Gurr-goni also has *je* in two tenses (Contemporary, and Irrealis Non-Precontemporary, column 5). Na-kara has suppletive forms for both the Contemporary and the Imperative. Lacking evidence from Ndjébbana, which does not have a cognate, we would certainly posit *ji* as the major root form, with a possible variant *je* in Contemporary tense.

Table 27: **thi~*thu* 'be standing'

	1	2	3	4	5	6	7
		Pre	Con		IrrNPre		Imp/Fut
B *ji*		*ji-ø*	*ji-rra*		*ji-ngin*		*ji-ø*
G *ji~je*		*ji-ø*	*je-rre*		*je-ngu*		*ji-ø*
Nkr *ji~ja*		*ji-na*	*(kakaya)*			*ja-nya*	
pMan **ji~je*		**ji*	**je-ri~ji-ri*		**je-ngV~ ji-ngV*	**ji-nya*	**ji-ø*
Ngan *thi~thu~tho*[25]	PPunct *-thi-nginy*	PCon *-thi-ø*	Pres *-thu-rta*	Pot *-tho-row*	Fut *-thi-nyang*	Evit *-thi-ngi*	
Nu *lha*	PI *lha-ngany*	P2 *lha-y, lhi*	NP2 *lha-ra*	Evit *lha-n*	NP1 *lha-ngang*	NP3 *lha-ngi*	
Marr *yaV ND~jV D~jV*	PPunct *ya-nga*	PCon *yi-nji*	$Pres_3$ *yu-rlu*	$Pres_{1-2}$ *yu-rliyi*	Fut *ya-na*	Pot *yi-njiyi*	Imp *ya-ø*
Warn	PP ___	PIrr *(jayarni)*	PaActCon *jura*				
Gaag *ji*	PP *ji-ngi*	PI *(ji-ngi)*	Pres *ji, ji-ri*		Con *(ji-ngi)*		Fut *ji*
R *ti~ta~tu*	PPunct *ti-yi*	PCon *ta-ny, (ti-nganiny)*	Pres *tu-ru*		Pres *ta-ngan*		
Kung	RPerf *jo-ngony*	PI *(ji-ng-ji-ng)*	NP *(ja-po)*	IrrNonFut *jo-pere*			
Kunp	RP *ja-ngany*	IrrP *ji*			RNP *ja*		IrrNP *ji~ja- ng*
AEH	PP **thi*	PI **thiny*			NP **thi*		
pArn	PP **thi*	PI **thi-ny*	Ha/IrrP **thu-ra, *thi-ri?*	NP1 **thu-rlV*	NP 2 **thi ~?*	Irr	Imp **thi*

'Sit' (Table 28) shows even more variation. *Ni* predominates across all four languages. Ndjébbana, apart from unstressed *na*, has *no* in Contemporary tense, where Gurr-goni has *ne*. Given only internal evidence for Proto Maningrida, we would be justified only in positing a central vowel in Contemporary tense, and **ni* elsewhere. However, the widespread occurrence of cognate forms in column 3 with *rnu* and *nu* could be seen as evidence that a root variant **no* occurred in Proto Maningrida in Contemporary tense.

The Contemporary tense forms are plausibly reconstructed as **yo-ri*, **je-ri* (or **ji-ri*) and**no-ri* (or, possibly, **ne-ri*), although we must not forget the possibility that Gurr-goni has innovated its final vowels (see discussion in §3.1.1), and that pMan had **yo-ra*, **je-ra* and **no-ra*. The correspondence set B/G *rr*, Ndj *r* and Na-kara *rt* has already been seen in Table 6, **ra* 'spear'. Here, it is expanded, as cognates are found in more of the languages under consideration: M *r*, Ngandi *rt*, Marr *rl*, Warndarrang *r*, and Rembarrnga *r*. Considering only the Maningrida languages, other reconstructions of this proto-phoneme

25 This root in Ngandi is the final syllable of the verb 'stand', *jakathu*.

would certainly be possible. Consideration of the wider picture, where *r* is the most common reflex of this proto-phoneme, tips the balance in favour of *r*, however.

Table 28: **ni~nu* 'sit'

	1	2	3	4	5	6	7
		Pre	Con		IrrNPre	Fut	Imp/Fut
B *ni*		*ni-ø*	*ni-rra*		*ni-ngin*		*ni-ø*
G *ni~ne*		*ni-ø*	*ne-rre*		*ni-ngu*		*ni-ø*
Ndj *no*		*na-ø*	*nó-ra*				*na-ø*
Nkr *ni*		*ni-na*	*ni-nta*			*ni-nya*	
pMan **ni~no*		**ni-ø*	**no-ri ~ *ni-nta*		**ni-ngV*	**ni-nya*	**ni-ø*
M *rni~rnu*	PP *rni-ny*	PCon *rni-ø*	Hab/PNeg *rnu-ra-n/-p*		Pres *rni-ø*		Imp *rni/rni-k* 2s
Ngan *rni~rnu~rno*	PPunct *rni-nginy*	PCon *rnii*	Pres *rnu-rta*	Pot *rno-row*	Fut *rni-nyang*	Evit *rni-ngi*	
Marr *a~wu*	PPunct ____	PCon *a-nji*	$Pres_3$ *wu-rlu*	$Pres_{1-2}$ *wu-rliyi*	Fut *a-nu*	Pot *(a-njiyi)*	Imp *(a-ø)*
Warn	PP ___	PIrr ___	PaActCon *nura*				
Gaag *ni*	PP *ni-ngi*	PI *ni-ngi*	Pres *ni, ni-ri*			Con *ni-ngi*	Fut *ni~ngani*
R *ni~nu~na*	PPunct *ni-yi*	PCon *ni-nganiny*	Pres *nu-ra*		Pres *na-ngan*		
Kung	RPerf *ni-nginy*	PI *(ningning)*	NP *(no-po)*	IrrNonFut *no-pere ~ (no-pene)*			
Kunp	RP *rni-ngany*	IrrP *rni-ø*			RNP *rna*		IrrNO *rni~rni-ng*
AEH **ni*	PP **ninginy*	PI **niny*			NP **ni*		
pArn **ni~nu*	PP **ni-nginy*	PI **ni-ny*	Hab/IrrP **nu-ra*	NP1 *nu-rlV*	NP 2 **ni ~?*	Irr **ni-ngi?*	Imp **ni-ng?*

Na-kara *ni-nta* is unexpected, and not currently accounted for. It should perhaps be attributed to the proto-language as a variant form for Contemporary tense.

Precontemporary forms in Na-kara show a suffix *-na*, but the other three languages have zero affixation in this tense for 'stand' and 'be sitting'. As *-na* is the most common Precontemporary allomorph in Na-kara, it is plausible to suggest that analogical extension has occurred here in Na-kara. Only Gurr-goni has a suffix for Precontemporary 'lie': *yu-y*. Such a form is found nowhere else in the Gurr-goni verbal inflectional paradigm, and it would be difficult to suggest an internal source for it. I would thus propose **yu-y*, **ni* and **ji*.

Among the Irrealis forms, Burarra and Gurr-goni unusually do not agree on the column 5 (*Nonpast 2) form: Burarra *yu-ngan, ji-ngan, ni-ngan*; Gurr-goni *yu-ngu, je-ngu, ni-ngu*. A basic sequence *jVngV*, etc., is likely. Positing a final *n* for Proto Maningrida (*jVngVn*, etc.), would require its loss in Gurr-goni; as this has not happened in other cases such as the

Nonpast 2 suffix **-jin* for 'see' and 'give' (see §3.1.1), it may be more plausible to suggest that Burarra has added a final *n* here by analogy with the 'see', 'give' conjugation.

3.12.2 'lie', 'be standing' and 'sit' in Proto Arnhem

These verbs are among the most exciting in relation to Proto Arnhem Habitual/Irrealis/Past (column 3) and Nonpast 1 (column 4), for it is here that we find reflexes — of column 3, at least — in a central Gunwinyguan language (Rembarrnga), and in languages in which the evidence of shared irregularities in the verbal paradigms examined so far is debatable: Gaagudju (which has cognates in column 3 for all three verbs), and Warndarrang (which has cognate forms for 'sit', *nura,* and 'stand', *jura*). In Rembarrnga and Gaagudju, the cognates are variant forms of the present tense; in Warndarrang *nu-ra* and *ju-ra* encode Past and Future Continuous (in paradigms lacking past punctual tense forms).

Although it is tempting, comparing Gurr-goni *yo-rri* and Gaagudju *yo-ri* in column 3, Table 26, to reconstruct **yo-ri* at the level of Proto Arnhem, the Mangarrayi, Ngandi and Nunggubuyu cognates have final *a*. These languages do show *i* as a reflex of putative **i* in the equivalent position in other paradigms (see for example column 2, Tables 2 and 3). We have already noted cases where Gurr-goni appears to have innovated final vowels other than *a* (see Tables 2 and 3, column 3). We have little evidence of the development of **a* in Gaagudju verbal suffixes: in column 3, Tables 3 and 6, the putative proto-forms **wO-jan* and **ra-jan* reduce to *wo-y* and *(pa)ra-y*, respectively, in Gaagudju. In Table 10, where the pArn column 2 and 3 forms are proposed as **ma-ngi* and **ma-ngkan* respectively, Gaag appears to have replaced the original column 3 form with the column 2 form (retained as *ma-ngi*). We therefore have no information about the phonological development of penultimate **a* here. The most likely final vowel, then, is *a*, with innovation in both Gurr-goni and Gaagudju. Rembarrnga final *u* in Tables 26 and 27 would also appear to be an innovation, but one which does not occur in Table 28. Marra has also developed final *u* for 'stand' and 'sit' (there is no cognate for 'lie').

**yo-ra*, then, is a possible reconstruction, although we must also consider **yu-ra*. Mangarrayi shows *yu-ra*, but Harvey (this volume, Chapter 8) describes the loss of central vowels in verb roots and other closed word classes in Mangarrayi, including instances of putative **o > u*. This could be an additional example of such a shift. Rembarrnga has *yu-ru*, and Ngandi has *yu-rta*.[26] The only instances of **o > u* noted by Harvey (this volume, Chapter 8) for Rembarrnga involve vowel breaking (so the actual shift is **o > uwa*). This has not occurred here, although it probably has in the column 1 (Past Perfective?) form *yuwa*. In Ngandi, the root vowel is predominantly *o*, with *u* occurring only in this category (the opposite pattern, in fact, from that proposed for pMan). It seems likely that pArn exhibited an alternation between **yu* and **yo* within the paradigm, and that different realisations of this (and other) vocalic alternations in the daughter languages result from paradigmatic reanalysis.

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[26] It appears that we do not find cognates of the column 3 suffix in Ngandi and Nunggubuyu Potential and Evitative, as was the case with verbs previously examined, but that the cognate forms appear in the Present and NP2 categories. (Ngandi Present and Potential and Nunggubuyu Evitative and NP2 exponents are similar in many verbs.)

For 'be standing' in column 3, we have a predominance of *u* in the root: Ngandi *thu-rta*, Marra *ju-rlu*, and Rembarrnga *tu-ru*, compared with Proto Maningrida **ji-ri~je-ri*, Gaagudju *ji-ri* and Nunggubuyu *lha-ra*. We can again posit an initial *r* in the suffix, thus **thu-ra* (or possibly **thu-ri*) (and perhaps a variant form **thi-ri*). *r* is retained in Proto Maningrida, Proto Ngandi/Nunggubuyu, Rembarrnga and Gaagudju. In Marra, the original central continuant **r* becomes a lateral continuant *rl*. The later shifts in the Maningrida languages are described above; Ngandi also shifts **r > rt* after its split from Nunggubuyu.

For 'sit' in column 3, the picture is less clear. Again, there is a predominance of *u* in the root: Ngandi *rnu-rta*, Warndarrang *nu-ra*, Rembarrnga *nu-ra*, Mangarrayi *rnu-ra* (although this may reflect an original **rno*; cf. the discussion of 'lie' above). Gaagudju alone has *ni-ri*, while Proto Maningrida may have **no-ri ~ *ni-nta*. As Ngandi apparently does not otherwise show a shift **o > u*, perhaps **nu-ra* (and/or **nu-ri*) is the most plausible reconstruction. (The Marra root *a~wu* may not be cognate at all; the column 3 suffix *-rlu* does appear to be, however.)

In column 4, the picture is even more confusing. For 'lie' we have Ngandi *yo-ngini*, Nunggubuyu *ya-n*, and Kungarakayn *yu-ngene*. **yo-ngini* may be posited here. For 'be standing', the forms to be compared are Ngandi *tho-row*, Nunggubuyu *lha-n* and Marra *ju-rliyi*. Again, the Nunggubuyu form is clearly not cognate. It is not clear that the Ngandi and Marra forms are either. We have a correspondence between Ngandi *rt* and Marra *rl* in Tables 27 and 28 (column 3); here, we have Ngandi *r* and Marra *rl*, and a problem with the final segment, *-ow* in Ngandi and *-iyi* in Marra. The same suffixes, and the same problems, are found with the Ngandi and Marra column 4 forms for 'sit'. The correspondence of Ngandi *r* and Marra *rl* is also found in another verb, 'eat, bite 1' (**pa-rli* > Ngan *pa-ri*, Marr *paynga-rli*), where it is reconstructed as **rl*, with cognate forms in other languages providing more evidence for the reconstruction (see Table 30 below). This suggests a tentative reconstruction here of Proto Arnhem **thu-rlV*, **nu-rlV*.

In column 5, many languages have forms of the shape *CV-ng(V)(N)* for all three verbs. AEH (this volume) suggest that this is an analogical extension from NP **tha-ngen* 'stand-change of state'. This may well be the case; in §3.9.1 above, I posit **tha-ng* for the NP2 of 'put standing'. It is intriguing, however, that while Gurr-goni has *je-n* for 'put standing' in column 5 (explicable as *-n* is the most common column 5 suffix), the Burarra and Gurr-goni forms for 'be standing', 'sit' and 'lie' are all *CV-ngV(N)*; we would thus have analogical pressure from the 'change of state' verb influencing the three postural state verbs, while the source of that pressure is then lost to analogical pressure itself.

3.13 'take'

Table 29: **ka* 'take'

	1	2	3	4	5	6	7
		Pre	Con	IrrNPre		Fut	Imp/Fut
B *ka*		*ka-nyja*	*ka-nyja*	*ka-nyjin*			*ka-ø*
G *ka*		*ka-jji*	*ka-jji*	*ka-jjin*			*ka-ø*
Nkr *ka*		*ka-ya*	*ka-nja*			*jika*	
pMan **ka*		**ka-ji?*	**ka-nyja~ *ka-nyji*	**ka-nyjin*			**ka-ø*

M	PP	PCon	Hab/PNeg		Pres		Imp
ka	*ka-nginy*	*ka-ni*	*ka-nyja-n/-p*		*ka-n*		*ka-w*
Ngan	PP	PCon	Pot	Pres	Fut	Evit	
ka	*ka-ng*	*ka-nti*	*ka-njan*	*ka-njini*	*ka-n*	*ka-yi*	
Nu[27]	P1	P2	Evit	NP2	NP1	NP3	
-ka~wa	*-ka-ng*	*-ka-nti*	*-ka-njan*	*-ka-njii*	*-ka-ng*	*-ki-ø*	
Marr	PPun	PCon	$Pres_3$	$Pres_{1-2}$	Fut	Pot	Imp
ka	*yaka-nyi*	*(yaka-rli* ND*)* ~ *ka-nji* D	*ka-nja*	*ka-njiyi*	*(ka-y)*	*ka-yi*	*(ya-ji)*
Gaag	PP	PI	Pres		Con		Fut
ka	*ka-ngka*	*ka-nyji*	*ka-nyji*		*(ka-ya)*		*ka-ø*
Kunp	RP	IrrP			RNP		IrrNP
ka	*ka-ngin*	*ka-nyji*			*ka-ny*		*ka-ng*
AEH	PP	PI			NP		
**ka*	**kang~ *kanginy*	**kaniny*			**ka-n*		
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
**ka*	**ka-ng ~ *ka-nginy*	**ka-ni ~ ?*ka-nti?*	**ka-nyjan*	**ka-nyjini*	**ka-n*	**ka-yi*	

3.13.1 'take' in Proto Maningrida

Burarra and Gurr-goni have coalesced the Precontemporary and Contemporary tense forms, and we have no cognate in Ndjébbana. However, Na-kara shows two distinct forms for Precontemporary and Contemporary tenses, and I posited Pre **-ji* and Con **-nyji* in my original reconstruction on the basis of these forms. We have already seen a shift of *j* > *y* in Na-kara (see §3.1.1 **na-ja* > *na-ya* see-Con, etc.), and shifting vowels to *a* in verb suffixes has been a general development in Na-kara. However, we have also posited a shift of *a* > *i* in verb suffixes in Gurr-goni (see §3.1.1), so **ka-nyji* and **ka-nyja* are both possible reconstructions here.

Both Pre **-ji* and Con **-nyji* (or **nyja* > **-nyji*) would develop into *-jji* in Gurr-goni, following gemination of single stops after primary stress (see §3.1.1, 'see' and 'give'), and following the shift of homorganic nasal + stop sequences to geminate clusters seen in §3.4.1 and §3.10 'get' and 'scold' and other verbs discussed there. However, the extension of the Contemporary suffix **-nyji* (or **-nyja*) to cover both Realis categories (Precontemporary and Contemporary) must have occurred in Proto Burarra/Gurr-goni, as Pre **ji* would develop into *-jja* in Burarra following the same process of gemination. This would lead to distinct Pre and Con forms *-jja* and *-nyja* in Burarra, which has not occurred.

3.13.2 'take' in Proto Arnhem

AEH have posited **kaniny* for column 2 (Past Imperfective). This reconstruction appears somewhat problematical given the array of cognates shown in Table 29; Proto Maningrida

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27 This occurs as the final syllable of about 30 verb stems, including *lhakaaka* 'guide along, lead (someone)', *ijka* 'take (dogs) hunting', and *rtulwa* 'stalk emus with camouflage' (Heath 1982:419).

ka-ji, Marra *ka-nji*, Gaagudju *ka-nyji*, and Ngandi/Nunggubuyu *ka-nti*.[28] In themselves they are not easy to resolve, but do suggest that some form other than the frequent PI suffix *-Niny* may have existed.

The column 3 cognates Proto Maningrida **-nyji* (but **-nyja* also possible), Mangarrayi *-nyja*, Ngandi and Nunggubuyu *-nyjan*, Marra *-nyja* and Gaagudju *-nyji* clearly indicate either *-nyjan* or *-nyjin*. Given that Mangarrayi and Ngandi/Nunggubuyu do not otherwise show shifts of *i* > *a* in the verbal paradigm,[29] I propose *-nyjan*. (The final nasal is reconstructed by comparison with 'see' and 'give' (§3.1.1), where **na-jan* > *na-ja* in Proto Maningrida and Mangarrayi.)

The column 4 cognates Proto Maningrida **-nyjin* and Ngandi **-njini* suggest **-nyjini* (similarly to 'see' and 'give'; see §3.1.2), which may also be supported by Nunggubuyu *ka-njii* (see discussion in §3.1.2). Marra *ka-njiyi* is unexpected, as Marra *na-jini* 'see-Pres 1–2' and *wa-jini* 'give-Pres 1–2' appear to directly continue the posited **na-jini* and **wO-jini*.

3.14 'bite 1'

3.14.1 'bite 1' in Proto Maningrida

A root *pa* is found in all the Maningrida languages. The Contemporary tense form is clear: all four languages have *pa-nga*. (Ndjébbana has zero affixation (*pa-ø*) in the Contemporary tense, but *pá-nga-na* in the Irrealis Precontemporary, which is based on the Contemporary tense form; see §3.1.3). We therefore reconstruct **pa-nga*. The Precontemporary is not so easily defined. Na-kara has a form which does not appear to be cognate. However, as with *pungáya* (Table 13 above) and *purta* (Table 37 below), the disyllabic stem in Na-kara suggests that an original suffix has been reinterpreted as part of the stem. We may therefore have to consider Nkr *para* in the reconstruction of this column, giving the correspondence set of Burarra *pa-rra*, Gurr-goni *pa-rri*, Ndjébbana *pa-la* and Nkr *para*. This contrasts with the correspondence of B *rr*, G *rr*, Ndj *r* and Nkr *rt* found in Tables 6 and 26 above, and 34 below, which is reconstructed as **r*. Here, we have no clear reason to prefer a reconstruction of **-rra* (or **-rri*) over **-la* (or **-li*). We must simply posit **-Li/-La*, where L represents some liquid.

The B/G IrrNPre form has been reconstructed for Proto Maningrida in some paradigms, with support from cognates in other languages. Here there are no cognates among the wider group of languages, and little basis for discovering whether **pa-rti* existed in pMan, or is an innovation at the level of Proto Burarra/Gurr-goni. (With no other cognates, the form cannot be certain either. However, 'cut' (Table 25 above), and 'hit' (Table 37 below) suggest that **rt* was retained in Burarra and Gurr-goni.)

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28 Kunbarlang *ka-nyji* carry-IrrP appears to be a cognate of either the column 2 or column 3 forms. With 'bite 1', a Kunbarlang cognate is also found in the Irrealis Past for the column 2 form. Indeed, cognacy between *Past Imperfective and Kunbarlang Irrealis Past appears to exist for other verbs too, although it is less strikingly obvious.

29 Except, possibly, **yo-ri* > Ngan *yo-rta*, Nu *ya-ra*, M *yu-ra-n/-p* (Table 26), but there too a reconstruction with **a (*yo-ra)* is preferred, for the same reasons.

3.14.2 'bite 1' in Proto Arnhem

The wider cognates do shed light on the reconstruction of the Proto Maningrida column 2 form. In Ngandi *pa-ri,* Marra *paynga-rli*, Gaagudju *pi-ri* and Kunbarlang *payi-rli* ('eat-Irr2'; cf. footnote 28) *i* clearly predominates as the vowel, but there is an even division betwen *r* and *rl*, between a rhotic and a lateral as in the Maningrida languages, although here between different ones. The Mangarrayi root *rta ~ rtaya* does not appear to be cognate, but interestingly the suffixes do appear to be (and the root variation is comparable to that between *pa~paya* in other languages). If we include Mangarrayi *-rli* in the comparison, the weight of numbers would suggest this as a possible proto-form for pArn, retained in pMan. It is plausible also: we would then have **rl > r* in Ngandi (possibly at the Proto Ngandi/Nunggubuyu stage) and Gaagudju, and from pMan **pa-rli*, **rl > r* in Na-kara, with **rl > l* in Ndjébbana, and **rl > rr* (possibly through either **rl > r* or **rl > *l*) in Proto Burarra/Gurr-goni. As noted above in §3.14.1, this does appear to be a different correspondence set to that examined in §3.2.1 and §3.12.1, which was reconstructed as **r*. The differences are found only in Ndj and Nkr (and hence in pMan), and in Ngan, but cannot be disguised. Therefore, although **r* is a possible alternative reconstruction for 'bite 1' here (?**pa-ri*), both correspondence sets cannot be reconstructed as **r*; if ?**pa-ri* was adopted, then we would have an alternative reconstruction for 'spear', etc.

I will not attempt here to reconstruct a column 1 (pArn PP) form. **pa-ng* would certainly be a contender (M *rta-rlak* indicates a final **ng*, but in addition to the problem of the root, the *rl* appears to be an intrusion, perhaps based on the column 2 form).

In column 3, Proto Maningrida **pa-nga* matches Mangarrayi *rta-nga-* (with the problem of the root noted above). Ngandi *pa-ngini* and Nunggubuyu w_2*a-ngangun* both contain *-ngV* sequences, with *-NV(N)* additions. As with 'see', 'give', etc. part or all of this may be attributable to Proto Arnhem, but as they differ in the additional segments, all that can be proposed is **pa-ngaN(VN?)*.

For column 4, we again have no clear evidence for the Proto Arnhem stage. Proto Maningrida **pa-rti*, Ngandi/Nunggubuyu *pa-ngana* and Marra *pa-nji ~ paynganji* do not appear to be cognate. (A correspondence between Proto Maningrida **-rnti~*-rti* and Marra *-rntu* occurs with 'hit', see §3.18.2.)

Two other verbs with an identical inflectional pattern can be posited for pMan: **ngempo* 'wake up, lift up' (Table 31) and **jene* 'look for' (Table 32).

Table 30: **pa~pay* 'bite 1'

	1	2	3	4	5	6	7
		Pre	Con	IrrNPre		Fut	Imp/Fut
B *pa~pay*		*pa-rra*	*pa-nga*	*pa-rta*			*pa-y*
G *pa~pay*		*pa-rri*	*pa-nga*	*pa-rti*			*pa-y*
Ndj *pa*		*pá-la*	*pa-ø* (*pá-nga-na* IrrP)				*(moya)*
Nkr *para*		*para-ngiya*	*para-nga*				*para-ø*
pMan **pa*		**pa-Li/-La*	**pa-nga*	**pa-rti?*			**pa-y*
M	PP	PCon	Hab/PNeg		Pres		Imp
rta~rtay	*rta-rlak*	*rta-rli*	*rtay-nga-ma-n* *rtay-nga-m*		*rtaya-ø*		*rtaya-ø*

Ngan	PP	PCon	Pot	Pres	Fut	Evit	
pa~pi	*pa-ng*	*pa-ri*	*pa-ngini*	*pa-ngana*	*pi-yang*	*pa-ngi*	
Nu	P1	P2	Evit	NP2	NP1	NP3	
w_2a[30]	*-w_2a-ng*	*-w_2a-ngaa*	*-$w_2$angangun*	*-w_2a-ngana*	*-w_2a-ng*	*-w_2i-ø*	
Marr	PPun	PCon	$Pres_3$	$Pres_{1,2}$	Fut	Pot	Imp
pa D ~wa ND ~ yinga ~ paynga	*(yinga)*	*wayngarli*	*(pa-ma ~ paynga-ma)*	*pa-nji ~ paynga-nji*	*paynga~pa yngay*	*yinga-y ~ paynga-yi*	*wa-ji*
Gaag	PP	PI	Pres			Con	Fut
pi	*pi*	*pi-ri*	*(pi)*			*piya*	*pi*
Kung	RPerf	PI	NP	IrrNFut			Imp
	___	*(peya-ng)*	*pey-ang*	*pey-ene*			*peya*
Kunp	RP	IrrP				RNP	IrrNP
	pey-ang	*peye-rli*				*peye*	*peye ~ peyang*
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
**pa*		**pa-rli~ payi-rli*	**pa-ngaN(VN?)*				**pa-y*

Table 31: **ngempo* 'wake up, lift up'

	2	3	5	7
	Pre	Con	NP	Fut/Imp
G *ngeppi*	*ngeppi-rri*	*ngeppi-ka*	*ngeppi-rti*	*ngeppi- ø*
Ndj *nyempo*	*nyapé-la*	*nyapo- ø*		*nyémpa- ø*
pMan **ngempe/o*	**ngempe-Li*	**ngempo-nga*	**ngempe-rti?*	**ngempi*

Table 32: **jene* 'look for'

	2	3	5	7
B *jene*	*jena-rra*	*jena-nga*	*jena-rta*	*jena-ø*
G *jeni*	*jeni-rri*	*jeni-nga*	*jeni-rti*	*jeni-ø*
Ndj *jena*	*yané-la*	*yana-ø*		*jjéna-ø*
pMan **jene*	**jene-Li*	**jene-nga*	**jenV-rti?*	**jeni-ø*

3.15 'burn, cook 1'

This root is not found in the Maningrida languages (see Table 33, below). There are numerous cognates in the wider group of languages. Reconstruction of **na-rli* in column 2 follows the same arguments as for column 2 of 'bite 1' (§3.14 above). In column 3, M *rnay-nga-m*, Ngan *rna-ngini*, Nu *na-ngangun*, the Warn stem *nangi*, and the Gaag transitive form *ni-ngi* all suggest **na-ngiN*. The Gaag intransitive form *na-y* and Marr *na-ja* suggest **na-ja(N)*. This may have been an alternation present in the proto-language, or it may be influence from the paradigm of **na* 'see' (transitive), in which there are widespread reflexes

30 w_2 symbolises the alternation of *w* and *p*.

of **na-jan*. (Marra *nu-rlu*, also in column 2, appears to be an intrusion from the paradigm of **ni* 'sit' (Table 28), while the rest of the paradigm is almost identical to that of 'see').

Lacking a Proto Maningrida cognate, and with the Marra paradigm apparently influenced by that for 'see', the only reliable evidence for column 4 is from Ngandi and Nunggubuyu, so that reconstruction of **na-ngana* here must remain tentative.

3.16 'throw'

3.16.1 'throw' *in Proto Maningrida*

A similar, but not identical, paradigm, is found for the pMan root **wa~wo* 'throw'. Burarra has no reflex of this root, but cognates are found in Gurr-goni, Ndjébbana and Na-kara. Both Ndj and Nkr have disyllabic stems, of which the last syllable, *wo/wa*, appears to continue the original stem, while a syllable *ra/rta* (possibly the root **ra* 'spear', see §3.2.1) has been added. Reconstruction of **wa-nga* (?**wo-nga*) for column 2 is clear; G suggests also column 5 **wa-rti*. The Imperative (column 7) is irregular in G, as it is for **pa* 'eat' (Table 30 above), and is again posited for the proto-language. In column 2, we find the same correspondence set of G *rr*, Ndj *r* and Nkr *rt*, as we saw in Tables 6 and 26 above, where it was reconstructed as **r*. The form here, then, appears to be **wa-ri*.

Table 33: **na* 'burn, cook 1'

	1	2	3	4	5	6	7
M	PPunct *rna-rlak*	PCon *rna-rli*	Hab/PNeg *rnay-nga-ma-n/* *rnay-nga-m*		Pres *rnaya-ø*		Imp *rnaya-ø*
Ngan	PPunct *rna-ng*	PCon *rna-ri*	Pot *rna-ngini*	Pres *rna-ngana*	Fut/Imp *rni-yang*	Evit *rna-ngi*	
Nu	P1 *na-ng*	P2 *na-ngaa*	Evit *na-ngangun*	NP2 *na-ngana*	NP1 *na-ng*	NP3 *ni-ø*	
Marr	PPunct *ni-ji*	PCon *(na-ni)*	$Pres_3$ *na-ja ~* *(nu-rlu)*	$Pres_{1-2}$ *na-jini*	Fut *na-y*	Pot *ni-yi* ND, *nayinayi* D	Imp *ni-ø*
Warn	PPunct *nangi-ø*	PIrr *nangi-ri*	PaActCon *nangi-ma*				Imp *ni-ø*
Gaag intr. tr.	PP *nana~na* *ni-ki*	PI *na-ri* *ni-ngi*	Pres *na-y* *ni-ngi*			Con *na-ya* *ni-ya*	Imp *ngana-ø* *ni-ya*
Kung	RPerf *neyang*	Irr	NP	IrrNFut			
R Ngal	PPunct *rne-ny* *rne-ny*	PCon *rniya-nginy* *rne-nginy*			*rniya-ø*	*rniya-ngV*	
pArn **na*	PP **na(ya)-ng* *~ *na-ny?*	PI **na-rli*	Hab/IrrP **na-nga ~* *na-ja(N)?*	NP1 **na-ngana?*	NP2 **na-ya?*	Irr	Imp

Table 34: **wa* 'throw'

	1	2	3	4	5	6	7
		Pre	Con		IrrNPre	Fut	Imp/Fut
G *wa*		*wa-rri*	*wa-nga*		*wa-rti*		*wa-y*
Ndj *rawo*		*rawé-ra*	*rawo-ø* (*rawó-nga-na* IrrPre)				*ro-ø*
Nkr *rtawa*		*rtawa-rta*	*rtawa-nga*				*rtawa-ø*
pMan **wa*		**wa-ri*	**wa-nga ~ ?wo-nga*		**wa-rti?*		*wa-y*
M *war*	PPunct *war-ak*	PCon *war-i*	Hab *war-nga-ma-n* PNeg *war-nga-m*		Pres *war-ø*		Imp *war-ø*
Nu *-wa*[31]	P1 *-wa-ny*	P2 *-waa*	Evit *-wa-ngun*	NP2 *-wa-na*	NP1 *-wa-ng*	NP3 *-wi-ø*	
Gaag *-wa*[32]	PP *-wa-ø*	PI *-wa-ri*	Con *(-wi-ø)*			Fut *-wa-ø*	Pres *-wa-y*
BGW *we~wa*	PP *we-ng*	PCon *we-yi*			NP *wa-ø, we-n?*		Imp *we-men*
pArn **wa*	PP **wa-ng*	PI **wa-ri*	Hab/IrrP **wa-nga*	NP1	NP2	Irr	Imp **wa-y?*

Table 35: **kinyi* 'cook 2'

	1	2	3	5	6	7
		Pre	Con		Fut	Imp/Fut
G *jinyi*		*jinyi-rri*	*jinyi-nga*	*jinyi-rti*		*jinyi-ø*
Nkr *kenya* 'light small fire'		*kenya-rta*	*kenya-nga*			*kenya-ø*
pMan		**kinyi-ri*	**kinyi-nga*	**kinyi-rti?*		*kinyi-ø*
	RP	IrrP			RNP	IrrNP
Kunp	*kiny-ang*	*kinye-rli*			*kinye*	*kiny-ang*
BGW	*kiny-eng*				*kinye*	
D	*kiny-ing*				*kiny*	
pArn	PP **kinye-ng*	PI **kinyi-ri*	Hab/IrrP	Irr	Imp	PP

For Proto Maningrida, the paradigm of **kinyi* 'cook 2' (shown in Table 35) appears to be identical to that of **wa* 'throw', except that it does not have an irregular imperative. Cognates are also found in the wider group of languages (in Bininj Kun-wok, Dalabon, and in Kunbarlang, which has a cognate column 2 form).

31 This occurs as the final syllable of *yarrawa* 'throw'.

32 This occurs as the final syllable of *ngawa* 'hear' and other verbs.

3.16.2 'throw' *in Proto Arnhem*

The limited additional evidence for pArn suggests that the pMan forms have undergone little change. M column 2 *wa-ri* supports the posited pMan **wa-ri*; in M, *r* appears to have spread from this TAM category to all others, and has been incorporated as part of the stem.

3.17 *-mV-* verbs

3.17.1 -mV- *verbs in Proto Maningrida*

A number of di- or polysyllabic verb stems with *-mV* as the final syllable share a similar conjugation to *pa* 'eat, bite 1' and *wa* 'throw', at least in Burarra, Gurr-goni and Na-kara. Some are reconstructable for Proto Maningrida: **ngimi* 'paint, spread, rub', **rimi* 'have, hold', **numi* 'smell', **kOtmi*[33] 'put down'. The picture is complicated, however, by the existence of more than one paradigm for *-mV* verbs in Gurr-goni and Ndjébbana. Gurr-goni has three sets of *-mV-* verbs, and a monosyllabic root *meme ~ma* 'go along', all with slightly different patterns of inflection. Ndjébbana has two. These are all shown in Table 36a, for ease of comparison. (The table shows only the *mV* syllable plus suffix. If *mV* is the final syllable of a longer verb stem, it is shown as *-mV*; if it is an independent root, it is shown without a preceding hyphen.)

Table 36a: **mV* verbs in Maningrida languages and pMan

	2	3	4	5	7
B *ngima* 'paint', *numa* 'smell', *kengama* 'dislike', *kurrma* 'put down', *rrima* 'have, hold'	*-ma-rra*	*(-ma-nga)*	*-ma-n*	*-ma-rta*	*-ma-ø*
G *nyimi* 'paint', *numi* 'smell', *rrimi* 'have, hold'	*-mi-rri*	*(-ma-nga)*		*-mi-rti*	*-mi-ø*
G *kekimi* 'dislike'	*-mi-rri*	*-ma-ø*		*-mi-rti*	*-mi-ø*
G *korrmi/a* 'put'	*-ma-rnay*	*-ma-ø*		*-mi-rti*	*-mi-ø*
G *ma~me* 'go along'	*ma-rnay*	*ma-ma*		*ma-rti*	*me-me*
Ndj *nyami* 'paint'[34], *yema* 'dislike'	*(-mi-nga)*	*-ma-ø*			*-ma-ø*
Ndj *rímí* 'have, hold'	*-mé-ra*	*ma-ø*			*ma-ø*
Nkr *keyama* 'dislike'	*-ma-rta*	*-ma-ø*			*-ma-ø*
pMan **ma* 'go along', **ngimi* 'paint', **rimi* 'hold', **kOtmi* 'put down 2', **numi* 'smell'	**ma-ri ~ mi-ri*	**ma-ø ~ ma-ma*		**ma-rti?*	**mi-ø*

33 In Burarra and Gurr-goni, **t > rr*, as in **wet(a)* 'pass by', Ndj *wetta*, G *werr*, and **rita* 'tooth/teeth', Ndj *ritta*, B *rrirra*, G *rrirri*, and here **kOtmi* 'put down' > B *kurrma*, G *korrmi*.

34 The Ndjébbana verb 'to paint, rub, spread' is *porapa*. The IrrPre form is suppletive, *nyamíngana*, clearly a reflex of **ngimi*.

Table 36b: **mV* verbs in other languages and pArn

	1	2	3	4	5	6	7
M	PPunct	PCon	Hab/PNeg		Pres		Imp
ma 'do, say'	*ma-ny*	*ma-ri*	*ma-ma-n* *ma-ø-m*		*ma-ø*		*ma-ø*
-mi 'bound aux'	*-mi-ny*	*-mi-ri*	*-mi-mi-n* *-mi-ø-m*		*-mi-ø*		*-mi-ø*
rnu-ma 'smell', *rna-ma* 'hold'	*-m-tak*	*-m-ti*	*-ma-ma-n* *-ma-ø-m*		*-ma-ø*		*-ma-ø*
Ngan	PPunct	PCon	Pot	Pres	Fut	Evit	
rni-ma 'hold'	*-mu-ng*	*-mi-ri*	*-mi-ni*	*-ma-na*	*-ma-rang*	*-mi*	
yi-ma 'do, say'[35]	*-mi-ny*	*-mi-ri*	*-mi-ni*	*-ma-na*	*-ma-rang*	*-mi*	
Nu			Evit	NP2	NP1	NP3	
ni-ma 'have, hold'	*-ma-ny*	*-maa*	*-ma-ngun*	*-ma-na*	*-ma-ng*	*-mi*	
Marr	PPunct	PCon	$Pres_3$	$Pres_{1-2}$	Fut	Pot	Imp
mpurl-ma 'do'	*-ma-ø*	*-ma-rli*	*-ma-ma*	*-ma-nji*	*(-ma-y)*	*-mi-yi/* *-ma-yi*	*-mi-ø*
Warn	PPunct	PIrr	PaActCon				Imp
mi~ma 'do, say'	*mi-ø*	*mi-ri*	*ma-ma-ø*				*mi-nti*
Gaag	PP	PI			Pres	Con	Fut
ka-ma 'do'	*-ma-ø*	*-ma-ri*			*(-ma-y)*	*-ma-ya*	*-ma-ø*
R	PPunct	PCon	Pres		Pres		
	-mi-ny	*mv-rn*					
Kung	RPerf	PI	NP	IrrNFut	IrrFut		Imp
ngap-mV 'dive'	*-mi-ny*	*-ma-rrang*	*-me-m*	*-me-re*	*(-ma-ø)*		*-mi-ø*
	RP	IrrP			RNP		IrrNP
Kunp *-ma* 'aux', *nge-me* 'spread, rub'	*-me-ng*	*-me-rli*			*(-ma-ø)*		*-ma-ø* *~ -me-ø*
Warr	*-mi-ny*	*-ma-rlany*					
Ngal	*-mi-ny*	*-mi-yiny ~* *-me-riny*					
AEH	PP	PI			NP		
	**-many*	**-marany ~* *mariny*			**-mar*		
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
	**ma-ny*	**ma-RV*	**ma-ø ~* **ma-ma*		**ma-R2(V)*		**mi?*

35 The Ngandi verb *yima* is fully inflected for all TAM categories, as shown here, but does not occur independently. Following the inflections shown here, the thematising suffix *-h-thu-* is added, itself inflected for all TAM categories.

In column 2, B *-ma-rra*, G *-mi-rri*, Ndj *-mé-ra* and Nkr *-ma-rta* suggest a proto-form *-mi-rV* (with the correspondence set B/G *rr*, Ndj *r*, Nkr *rt* as in Tables 6, 26 and 34). Ndj *-mi-nga* (in *nyamí-nga-na*, the suppletive IrrPre form of the verb *porapa* 'paint, spread, rub') is clearly not cognate. AEH point out that the paradigms of *ma* 'get' and *-ma* 'thematising suffix' appear to have influenced each other in a number of languages, and it is the case that *ma-nga* is also the Precontemporary (column 2) form of 'get' in Ndj. This may then be its origin. The G column 2 form (-)*ma-rnay*, found with the independent root 'go along' and in verbs such as *korrma-rnay* 'put-Pre', is highly irregular, not only in the Maningrida languages, but it has no apparent cognates among the wider group of languages. I attribute this form to innovation in Gurr-goni.

G, Ndj and Nkr all show zero affixation, *-ma-ø*, in column 3. G and B also have a suffix *-nga* in this column (B *ngima-nga*, G *nyimi-nga*, for example). As noted above, AEH suggest that *ng* forms in the paradigm of *ma* 'thematising suffix' may be intrusions from the verb 'get'. In this case, the forms are not identical: compare B *ma-ngka* and G *me-kka* 'get-Con'. However, the existence of *-nga* as the column 3 suffix for 'eat, bite 1' (Table 30), 'look for' (Table 32), and 'throw' (Table 34), in all of which the Burarra and Gurr-goni column 2 suffixes *-rra/-rri* are identical to the column 2 suffixes here, suggest a source of analogical influence. Although the column 2 suffixes for these verbs in pMan have not been reconstructed identically, following the posited sound changes by which **L* and **r* both became *rr* in Burarra and Gurr-goni, there would be strong pressure to adapt this paradigm to conform, especially as the change replaces a zero suffix with an overt one.

Note that this does not account for G *kekimi-rri* (column 2), *kekima-ø* (column 3). This verb is something of a mystery: B *kenga-ma*, G *keki-mi*, Ndj *yé-ma* and Nkr *keya-ma* show similarities in the initial element, but the consonant correspondences appear anomalous in comparison to other known cognate sets.

3.17.2 -mV *verbs in Proto Arnhem*

An independent root *ma* 'do, say' is found in Mangarrayi and Warndarrang; Marra and Gaagudju have disyllabic verbs meaning 'do, say' in which the second syllable is *ma*. Mangarrayi, Ngandi and Nunggubuyu all have a verb *nima* meaning 'have, hold'; the initial syllable is not cognate with Proto Maningrida **rimi*, but the final syllable plus inflections certainly is. Mangarrayi does have a cognate of pMan **numi* 'smell', and Kunbarlang has a cognate of pMan **ngimi* 'spread'. (Another verb, not shown in the table, which appears to be cognate between Kunbarlang and Gurr-goni is Kunp *rleme*, G *rremi*, both 'pound, bash', which would suggest a proto-form **remi* or **rlemi*. However, while the sound correspondences suggest some time depth in Gurr-goni at least, these two languages are adjacent, and borrowing must be considered unless cognates appear in more distant languages.)

In column 2, there are numerous cognates suggesting pArn **ma-RV* or **mi-RV*. It is not certain here how the rhotic is to be reconstructed, as there are some differences from correspondence sets examined previously. In Burarra, Gurr-goni, Na-kara, Mangarrayi, Marra and Gaagudju, the same reflexes are found as in Tables 6, 26, 35 (reconstructed as **r*). Rembarrnga has *rn*, compared to *r* in Table 26 (although AEH offer a plausible derivation of *-marn* from **-marany*). Nunggubuyu also had *r* in Tables 6 and 26 (**ra > ra* root-initially in Table 6, **yu/o-ri > ya-ra* (Table 26), and **thu-ra > lha-ra* (Table 27), where

it was suffix-initial, and thus in intervocalic position as here). Here, **ma-RV* appears to have developed to *maa. Yarrawaa* 'throw, column 2' (Table 35) (**wa-ri > -waa*) is another probable instance of such a development. In other Nunggubuyu verbs *aa* appears to have developed from **arlii*: **pa-rli > *pa-nga-rli > wangaa* 'bite 1, column 2' (Table 30), and **na-rli > na-nga-rli > nangaa* 'burn 1, column 2' (Table 34). In Ngandi, **r* appeared to develop to *rt* in **yu/o-ra > yu-rta* 'lie', **thu-ra > thu-rta* 'stand' and **nu-ra > rnu-rta* 'sit (Tables 26, 27 and 28), although alternative cognates with *r* also exist for 'stand' (*thorow*) and 'sit' (*rnorow*), and the Ngandi stem *ramtha* 'spear' may be a reflex of **ra-m* (spear-column 1), Table 6. (Kungarakayn has *r* here, where *l* appeared in Table 6. It is possible that the development of **r* in Kungarakayn was conditioned by the environment in which it occurred: in **ra-m > la-m* 'spear-column 1' it is root-initial, while here it is suffix-initial and therefore intervocalic. Kungarakayn has few (no?) other cognates with reflexes of putative **r* with which to test this hypothesis.) In short, the majority of reflexes point to **r*, but Ngandi and Nunggubuyu present some difficulties.

In column 3, **ma-ø* was reconstructed for pMan on the basis of Ndjébbana and Na-kara as well as Gurr-goni. Among the other languages, it is found only in Mangarrayi. The wider pattern (appearing in Mangarrayi, Marra, Warndarrang, and perhaps Kungarakayn (*-mem*) is reduplication of the *mV* root. Significantly, both *ma-ø* and *ma-ma* occur in Gurr-goni and in Mangarrayi, and this alternation in two distant languages gives us reason to attribute it to Proto Arnhem (and to Proto Maningrida).

In column 5, the tentative reconstruction of pMan **ma-rti*, when compared with Ngandi *-ma-rang* (and Warray *-ma-rl*, Jawoyn *-ma-r*), suggest that this form also contained a liquid in Proto Arnhem. Again, the reconstruction is somewhat difficult. While it is not absolutely certain what pMan phoneme Burarra and Gurr-goni *rt* reflect, it is certain that *rt* is not a regular reflex of **r* (at pMan or pArn level), therefore it is unlikely that this form contained **r*. **rl* is possible, but if that were so, then the correspondence set which has been reconstructed as **rl* in 'bite 1' (Table 30), 'burn, cook 1' (Table 34), and, probably, in 'stand' and 'sit' (Tables 27 and 28) must have a different reconstruction. The two forms in which **rt* has been reconstructed, **pu-rnti* 'hit-column 3, and (more tentatively) **ko/urnta* 'cut', are both lacking cognates in Ngandi, so we have no evidence of the reflex of **rt* in Ngandi. I will therefore leave this form as **ma-R2(V)*.

3.18 'hit'

3.18.1 'hit' in Proto Maningrida

Table 37: **pu* 'hit'

	1	2	3	4	5	6	7
		Pre	Con		IrrNPre	Fut	Imp/Fut
B *pu*		*pu-na*	*pu-rnta*		*pu-n*		*pu-ø*
G *pu*		*pu-ni*	*pu-rnti*		*pu-n*		*pu-ø*
Ndj *ppo~ppu*		*ppó-na*	*-ppú-ra*				(suppl)
Nkr *purta*		*purta-ø*	*purta-nga*				*purta-ø*
pMan **pu*		**pu-ni*	**pu-rnta ~ pu-rta, or *pu-rnti ~ pu-rti*		**pu-n*		**pu-ø*

M	PP	PCon	Hab/PNeg		Pres		Imp
pu	*pu-p*	*pu-ni*	*pu-rnta-n/-p*		*pu-n*		*pu-ø*
Ngan	PPunct	PCon	Pot	Pres	Fut	Evit	
po~pu	*poo-m*	*pu-ni*	*(po-mini)*	*(pu-mana)*	*pu-nung*	*pu-yi*	
Nu	P1	P2	Evit	NP2	NP1	NP3	
w_2a~w_2i~w_2u	*w_2a-ng*	*w_2i-ni*	*(w_2u-mangun)*	*(w_2u-mana)*	*w_2i-ny*	*$w_2$uu*	
Marr[36]	PPunct	PCon	$Pres_3$	$Pres_{1-2}$	Fut	Pot	Imp
-wu	___	*-wu-ni*	*-wu-rntu*	*-wu-rntiyi*	*-wu-y*	*-wu-yi*	*-wu-ø*
Warn	PPun	PaPot	PaActCon				Imp
pa~pi~pu	*pa-ø*	*pi-ni*	*pu-ra*				*pi-ngu*
Gaag	PP	PI	Pres			Con	Fut
pu	*pu-mu*	*pu-ni*	*pu-nyji*			*pu-ya*	*pu*
Kung	RPerf	PI	NP	IrrNFut		IrrFut	Imp
pu	*pu-m*	*pu-ne?*	*(pu-mu)*	*pu-yune, pu-ne, pi-ni?*		*yi*	*pu-mu?*
Kunp	RP	IrrP			RNP		IrrNP
	pu-m	*pu-ni*			*pu-ny*		*pu-ø*
AEH	PP	PI			NP		
**po~pu*	**pom~ pong*	**puniny*			**pun*		
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
	**po-m ~ po-ng*	**pu-ni*	**pu-rnta*		**pu-n*		**pu-ø*

Precontemporary **pu-ni* is unproblematical. In Contemporary tense, Burarra *-rnta*, Gurr-goni *-rnti*, Ndjébbana *-ra* and Na-kara *-rta* suggest reconstruction of **-rnti* (possibly ~**-rnta*), with loss of the nasal in Na-kara and Ndjébbana. (In Na-kara, the original Contemporary tense suffix appears to have been reanalysed as part of the stem, with other TAM suffixes (*-ø, -nga*) added.) An alternative reconstruction would be **-rta* (or **-rti*), with an epenthetic nasal in Burarra/Gurr-goni. This seems less well motivated; but it does seem possible that variation between, for example, **pu-rnti ~ *pu-rti* might have existed in the proto-language. As was the case with 'see' and 'give', Burarra and Gurr-goni have an inflectional paradigm, similar to that for *pu* 'hit', for di- and polysyllabic verbs (in this case, the characteristic final syllables are *ppu, pu, ppi, pi, ppa, pa*, etc.[37]). Here, the Contemporary tense suffix is *-rta* in Burarra, *-rti* in Gurr-goni. Cognate verb stems can be found in Na-kara and Ndjébbana, suggesting that they may be reconstructable for Proto Maningrida. (A

36 In Marra, *wu* does not occur as an independent verb, but only as the final syllable of several polysyllabic, transitive verb stems (*kulukuluwu* 'wait for (dugong/turtle) to surface', *jarrawu* 'take (dog) hunting'). The suffixes are clearly cognate with those for the verb 'hit' in Proto Maningrida and Mangarrayi. It appears that **pu* 'hit' has not survived as an independent verb in Marra, but only in stems where it was probably originally an auxiliary following a coverb (as is suggested above for verbs like Proto Maningrida **worlppu* 'hunt').

37 These verb stems probably derive historically from coverb + inflected monosyllabic auxiliary verb constructions. Such constructions are common in other non-Pama-Nyungan languages such as Mangarrayi and Marra, but rare synchronically in Burarra and Gurr-goni.

similar reduction of a suffix-initial consonant cluster following a cluster in the stem was noted for **ngunyja* 'mimic'; see §3.9 above.) Examples are shown in Tables 38–41.

Table 38: **worlppu* 'hunt'

	2	3	4	5	7
B	*worlppa-na*	*worlppa-rta*	*worlppa-nga*	*worlppa-n*	*worlppa-ø*
G	*worlppi-ni*	*worlppi-rti*	*worlppi-ka*	*worlppu-n*	*worlppu-ø*
Nkr	*worlppa-na*				
pMan	**worlppu-ni*	**worlppu-rti*	**worlppu-nga*	**worlppu-n*	**worlppu-ø*

Table 39: **ngarnpu* 'be warm'

	2	3	4	5	7
B	*ngarnpa-na*	*ngarnpa-rta*	*ngarnpa-nga*	*ngarnpa-n*	*ngarnpa-ø*
G	*ngartpi-ni*	*ngartpi-rti*	*ngartpi-ka*	*ngartpu-n*	*ngartpu-ø*
Nkr	*marangarnpa-na*				*marangarnpa-ø*
pMan	**ngarnpu-ni*	**ngarnpu-rti*	**ngarnpu-nga*	**ngarnpu-n*	**ngarnpu-ø*

Table 40: **juppu* 'extinguish'[38]

	2	3	4	5	7
B	*juppa-na*	*juppa-rta*	*juppa-nga*	*juppa-n*	*juppa-ø*
G	*juppi-ni*	*juppi-rti*	*juppi-ka*	*juppu-n*	*juppi-ø*
Ndj	*jjúppa-nga*	*jjúppa-ø*			*jjúppa-ø*
pMan	**juppu-ni*	**juppu-rti*	**juppu-nga*	**juppu-n*	**juppi*

Table 41: **wirrppu* 'spray'

	2	3	4	5	7
B	*wirrppa-na*	*wirrppa-rta*	*wirrppa-nga*	*wirrppa-n*	*wirrppa-ø*
G	*wirrppi-ni*	*wirrppi-rti*		*wirrppu-n*	*wirrppu-ø*
Nkr	*wirrppa-na*				*wirrppa-ø*
Ndj	*wírrpa-na*	*wírrapa-ra*			*wírrapa- ø*
pMan	**wirrppV-ni*	**wirrppu-rti*	**wirrppu-nga*	**wirrppu-n*	**wirrppu-ø*

If Proto Maningrida had only **pu-rnti*, then Ndjébbana has regularised its paradigm through dropping the nasal, **rnt* > **rt*, and then shifting **rt* > *r* for both monosyllabic *pu* and di- and polysyllabic stems. Alternatively, Proto Maningrida may already have had alternants **pu-rnti* ~ **pu-rti*, and Ndjébbana has simply eliminated one.

Na-kara has obscured the probable original relationship between the monosyllabic verb *pu* 'hit' and the di- and polysyllabic stems ending in *-pa/-ppa*. **pu-rta* 'hit-Contemporary tense'

[38] Na-kara *jupakarama* 'extinguish' probably retains a reflex of this verb in a compound with another verb. BGW *dompun* 'extinguish' is a possible further cognate here. BGW *mp* : G *pp* would be a regular correspondence, but BGW *mp* : B and Ndj *pp* would not appear to be, on our present understanding. If the correspondence could be sustained, the initial *t:j* would suggest pArn **thOmpu*.

has been reanalysed as the stem, and its inflectional paradigm changed, while for the *-pa/-ppa* verbs, the original Precontemporary suffix *-na* (< **-ni*) now covers both Precontemporary and Contemporary tenses.

3.18.2 'bit' in Proto Arnhem

The suggested Proto Maningrida column 3 **-rnti/-rnta* has clear cognates in Mangarrayi *pu-rnta-* and Marra *pu-rntu*. **-rnti* was posited for Proto Maningrida on the evidence of Gurr-goni alone. However, Mangarrayi does not appear to have changed *i* > *a* elsewhere in the verb paradigm, whereas we have already seen an instance where the weight of evidence suggests that in Gurr-goni the opposite shift *a* > *i* has occurred (Proto Arnhem **-jan* > Proto Maningrida **-ja* > Gurr-goni *-ji*, Contemporary tense suffix for 'see' and 'give', see §3.1.1) This suggests a stronger case for positing **-rnta* for Proto Maningrida, and possibly for Proto Arnhem. How Marra *pu-rntu* fits in is not clear, but again, other shifts of *a* > *u* appear to have taken place in Marra (**nu-ra* > *wu-rlu* 'sit' and **thu-ra* > *ju-rlu* 'stand', both column 3, see §3.1 2.2; **wO-jan* > *wa-jungu* 'give' column 3, see §3.1.2). I thus posit **pu-rnta*. Warndarrang *pu-ra* may plausibly derive from this.

Ngandi and Nunggubuyu are aberrant here, having *po-mini* and *wu-mangun* respectively. The forms are identical to those for *-mV* verbs, and it appears that *-mV* has been added as a thematising suffix, and the resulting stem then takes the inflections appropriate to that suffix. Possibly the appearance of *-m* in the Past Punctual acted as a stimulus. Interestingly, Kungarakayn has *pu-mu* in the Nonpast (the category where cognates of column 3 forms are found for other verbs). Perhaps Kungarakayn has independently extended the *-m* found in the Past Perfective to this category; or, perhaps, these two widely separated forms are reflexes from Proto Arnhem — of an alternative to **-rnta*, or another category — the evidence is insufficient to be certain.

Gaagudju is tantalising here. The PP *pu-mu* appears to be a very plausible reflex of **po-m*, and the PI *pu-ni* could easily derive from **pu-niny* (but is hardly an unusual form). The Present form *pa-nyji* contains a homorganic nasal stop cluster, as does **pu-rnta* (and, interestingly, a number of other column 3 allomorphs). Could *pa-nyji* derive from a proto-form **pu-rnti* by assimilation of the place of articulation? (A similar development of **rnt* > *nyj*, with a possible factor of analogical pressure, has already been noted in Ndjébbana for 'cut', Table 25 above.)

It does not appear possible to reconstruct a proto-form for column 4. Ngandi/Nunggubuyu *po-mana/pu-mana*, Marra *wu-rntiyi* and Kungarakayn *pu-yune* are too divergent.

3.19 'eat', 'bite 2'

3.19.1 'eat', 'bite 2' in Proto Maningrida

This root is found only in Ndjébbana and Na-kara, and only Na-kara has distinct Precontemporary and Contemporary tense forms. In Ndjébbana the Precontemporary form has been replaced by the Contemporary form. We then posit Pre **ji-rra* and, probably, Con **ji-nyja*. Na-kara retains the posited **ka-nyja* 'take-Con'; this reconstruction was based on evidence from Burarra and Gurr-goni also. Unfortunately, Ndjébbana does not have a cognate form of the verb 'take', so we cannot compare the Contemporary tense allomorphs

for that verb with this one. Na-kara does have evidence, however, of some instances of apparent loss of the stop from a putative homorganic nasal + stop sequence in the proto-form (see 'get', 'speak', 'fall', §3.4.1), suggesting that **nyj* > *ny* is a possible development here.

Table 42: **ja ~ ji* 'eat, bite 2'

	1	2	3	4	5	6	7
		Pre	Con				Fut
Ndj		*-jji-nyja*	*-jji-nyja*				*ya-ø*
		Pre	Con			Fut	Imp
Nkr		*ja-rra*	*ji-nya*			*ji-ya*	
pMan		**ja-rra*	**ji-nyja*			**ji-ya*	**ya-ø*
M	PP	PCon	Hab/PNeg		Pres		Imp
	ji-rrak	*ji-rray*	*ji-nyja-n/-p*		*ja-ø*		*ja-ø*
Marr	PPun	PCon	$Pres_3$	$Pres_{1-2}$	Fut	Pot	Imp
yi~ ya ND, *ji ~ja* D	____	*ya-rli*	*yi-nja*	*yi-njini*	*yi-ø*	*yi-yi*	*yi-ø*
Gaag	PP	PI	Pres		Con		Fut
	(pa)	*ja-ri*	*y*		*ja-ki*		*ja*
Kung		PI	NP				Imp
		ja-rang, jo-rong	*ju-r*				*ja-m*
Kunp	RP	IrrP				RNP	IrrNP
	ja-rrang	*ja-rri*				*(ji-n)*	*(ja-ng ~ji-n)*
pArn	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
		**ja-rring*	**ji-nyja*	*?*ji-nyjini*		**ji-yi*	

3.19.2 'eat', 'bite 2' in Proto Arnhem

Few cognates are found in the wider group of languages which show evidence of the column 3 and 4 forms. The column 3 forms *ji-nyja-* (M) and *yi-nja ~ ji-nja* (Marra) lend support to the proposed reconstruction of Proto Maningrida **ji-nyja*, and indicates that it can be posited for Proto Arnhem also. The Marra column 4 form can only tentatively be suggested for Proto Arnhem NonPast 1, as there is no other evidence at all. (As can be seen, a cognate root exists in Kungarakayn, but few forms were recorded.)

In column 2, the correspondence of Na-kara (and Proto Maningrida?) *rr*, Mangarrayi *rr*, Marra *rl*, Gaag *r* and Kung *r* may possibly derive from **rr*, contrasting with the correspondence sets found in 'lie', 'stand' and 'sit' (proposed here as **r*), and in 'bite 1' (proposed here as **rl*). The vowels of both root and suffix vary across the languages between *a, i* and *o*, making firm reconstruction difficult. However, the existence of Marra *ja-rli* and Gaag *jari* suggests that *i* is a strong contender for the suffix. I would tentatively propose **ja-rring* on the basis of these languages.

4 Summary of Proto Maningrida reconstructions

See Table 43, below.

5 Summary of Proto Arnhem reconstructions

See Table 44, below.

6 Conclusion

The extensive shared irregularities that emerge from a close examination of the verbal paradigms of the languages considered here provide unmistakeable evidence that the Maningrida languages, Burarra, Gurr-goni, Na-kara and Ndjébbana, are closely related genetically, and that these four languages share a genetic relationship with the other languages considered here: Ngandi and Nunggubuyu, Rembarrnga (and the other Gunwinyguan languages examined by AEH, Dalabon, Bininj Gun-wok, Jawoyn, Ngalakgan, Warray and Uwinymil), Mangarrayi, Marra, Kungarakayn, Gaagadju, and, probably, Warndarrang and Kunbarlang.

This wider picture gives a valuable perspective on the Maningrida languages, pointing to an innovation that distinguishes them as having a shared parent language below the level of Proto Arnhem. For all the other languages considered in this reconstruction, and in the AEH paper, there are reflexes of the column 1, *Past Punctual, allomorphs, for some or all cognate verb roots. In the Maningrida languages, there is no evidence at all of any reflexes of this category: the forms have been totally lost, with no trace in any of the languages.

Not only do the Maningrida languages share a TAM system (in its main features, at least), but the exponents of the Precontemporary and Contemporary tenses have been demonstrated to be cognate across all four languages. Furthermore, the Precontemporary allomorphs are clearly cognate with the set expressing Past Imperfective in many languages (and which has been labelled PI for Proto Gunwinyguan and for Proto Arnhem). The Contemporary TAM allomorphs are also fairly consistently related to another set of TAM categories across the other languages; this set is proposed as reflexes of the Habitual/Irrealis Past in Proto Arnhem.

I suggest that the evidence presented here leads to the conclusion that there was a systematic shift from the TAM system of Proto Arnhem to that of Proto Maningrida. Had the development of the Precontemporary/Contemporary tense distinction taken place independently in the four languages (or three, before Burarra and Gurr-goni separated), one would expect to find varying choice of the exponents of the new tenses, and varying retention or loss of the PP forms.

Even though loss has less evidentiary value in subgrouping than positive shared innovation, in this case it is not simply a matter of an isolated loss, but a coordinated series of losses and semantic shifts shared by all the M languages.

The proposed development is shown diagrammatically in Figure 1:

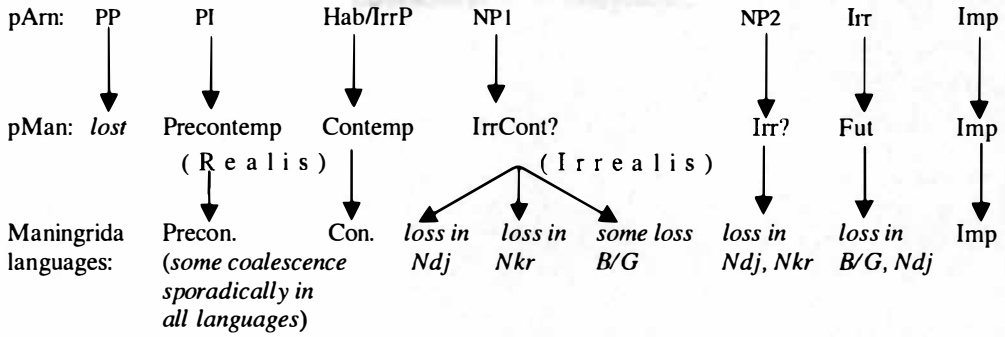

Figure 1: Proposed development of TAM categories from pArn > Man > B/G, Nkr, Ndj

Table 43: Summary of Proto Maningrida reconstructions

	Pre	Con (IrrPre)	IrrFutCon?	IrrNPre?	Fut?	Imp
**na* 'see'	**na-ni*	**na-jja*	**na-jjin*	**na-n*	**na-ya*	**na-ø*
**wu* 'give'	**wu-ni*	**wu-jja*	**wu-jjin*	**wu-n*	**wu-ya*	**wu-ø*
**jarnta* 'hurt'	**jarnta-ni*	**jarnta-ja*		**jarnta-n*		**jarnta-ø*
**pawu* 'leave'	**pawu-ni*	**pawu-ja*	**pawu-jin*	**pawu-n*		**pawu-ø*
**ra* 'spear'	**ra-ni*	**ra-jja*	**ra-jjin*	**ra-n*		**ra-ø*
**ma* 'get'	**ma-ngi*	**ma-ngka*	**ma-n*		**ma-ya*	**ma-ø*
**pengku/i ~ peku ~ pe* 'arrive, come out'	**pengku-ni*	**pengku-ya*		**pengku-n*		**pengki-ø*
**we/angku ~ we/aku/i ~ we* 'speak'	**wengku-ni*	**wengku-ya*		**wengku-n*		**wengki-ø*
**pungu ~ pungku* 'fall'	**pungu-ni ~ pungku-ni*	**pungu-ya ~ pungku-ya*		**pungu-n ~ pungku-n*		**pungi-ø ~ pungki-ø*
**po* 'go 1'	**po-ni*	**po-ya*		**po-ka?*		**po-y*
**ya* 'go 2'		**ya-ngka?*				**yV-rra*
**-yi-* Refl	**-yi-ni*	**-yi-ø*		**-yi-n*		**-yi-ø*
**juwe* 'die'	**juwe-ni*	**juwe-yi*		**juwe-n*		**juwa-ø*
**ja* 'put standing'	**ja-ngi*	**ja-ngka*		**ja-n*		**ja-ø*
**ngunyja* 'mimic'	**ngunyja-ngi*	**ngunyja-nga*		**ngunyja-n*		**ngunyja-ø*
**kajja* '(water) dry up'	**kajja-ngi*	**kajja-nga*		**kajja-n*		**kajja-ø*
**parnja* 'put down 1'	**parnja-ngi*	**parnja-nga*		**parnja-n*		**parnja-ø*
**jo* 'scold'	**jo-ngi*	**jo-ngka*		**jo-n*		**jo-ø*
**ro* 'burn 1'	**ro-ngi*	**ro-ngka*		**ro-n*		**ro-ø*
**kornta* 'cut'	**kornta-ngi*	**kornta-nga*		**kornta-n*		**kornta-ø*

yu~yo 'lie'	**yu-y*	**yo-ri*		**yu-ngV*	**yu-nya*	**yu-ø*
**ji~je* 'be standing'	**ji*	**ji-ri~je-ri*		**je-ngV*	**ji-nya*	**ji-ø*
**ni~no* 'sit'	**ni-ø*	**no-ri ~ *ninta*		**ni-ngV*	**ni-nya*	**ni-ø*
**ka* 'take'	**ka-ji?*	**ka-nyja/i*	**ka-nyjin*			**ka-ø*
**pa* 'eat, bite1'	**pa-Li/-La*	**pa-nga*		**pa-rti?*		**pa-y*
**ngempe/o* 'wake up, lift up'	**ngempe-Li*	**ngempo-nga*		**ngempe-rti?*		**ngempi-ø*
**jene* 'look for'	**jene-ri*	**jene-nga*		**jenV-rti?*		**jeni-ø*
**kinyi* 'cook 1'	**kinyi-Li*	**kinyi-nga*		**kinyi-rti?*		**kinyi-ø*
**wa* 'throw'	**wa-ri*	*wa-nga (~ ?wo-nga)*	**wa-rti?*		**wa-y*	
**ma* 'go along'	**ma-ri ~ mi-ri*	**ma-ø ~ ma-ma*		**ma-rti?*		**mi-ø*
**ngima* 'paint'	**ngimi-ri*	**ngima-ø*		**ngima-rti*		**ngimi-ø*
**kOtma* 'put down 2'	**kOtmi-ri*	**kOtma-ø*		**kOtma-rti*		**kOtmi-ø*
**numa* 'smell'	**numi-ri*	**numa-ø*		**numa-rti*		**numi-ø*
**rimi* 'hold'	**rimi-ri*	**rima-ø*		**rima-rti*		**rimi-ø*
**pu* 'hit'	**pu-ni*	**pu-rnta~ pu-rta*, or **pu-rnti ~ pu-rti*	**pu-n*		**pu-ø*	
**worlppu* 'hunt'	**worlppu-ni*	**worlppu-rti*	**worlppu-nga*	**worlppu-n*		**worlppu-ø*
**ngarnpu* 'be warm'	**ngarnpu-ni*	**ngarnpu-rti*	**ngarnpu-nga*	**ngarnpu-n*		**ngarnpu-ø*
**juppu* 'extinguish'	**juppu-ni*	**juppu-rti*	**juppu-nga*	**juppu-n*		**juppi*
**wirrppu* 'spray'	**wirrppV-ni*	**wirrppu-rti*	**wirrppu-nga*	**wirrppu-n*		**wirrppu-ø*
**ja~ji* 'eat, bite'	**ja-rra*	**ji-nyja*			**ji-ya*	**ya-ø*

Table 44: Summary of Proto Arnhem reconstructions

	PP	PI	Hab/IrrP	NP1	NP2	Irr	Imp
'see'	**na-y ~ na-ng*	**na-ni*	**na-jan*	**na-jini*	**na-n*	**na-yi*	**na-ø*
'give'	**wO-y*	**wO-ni*	**wO-jan*	**wO-jini*	**wO-n*	**wO-yi*	**wO-ø*
'spear'	**ra-m*	**ra-ni*	**ra-jan*	**ra-jini*	**ra-n*	**ra-yi*	**ra-ø*
'consume'	**ngo-ng*	**ngu-ni*	**ngu-jan*	**ngu-jini*	**ngu-n*	**ngu-yi*	
'hear'	**nga-ng?*	**nga-ni*	**nga-jan*	**nga-jini*	**nga-n*	**nga-yi*	
'follow, see, visit'	**wa-m*	**wa-ni*	**wa-jan*		**wa-n*		**wa-w?*
'get'	**ma-ny ~ miya*	**ma-ngi*	**ma-ngkan*	**ma-ni*	**ma-ng*	**ma-yi*	**ma-ø*

'go 1'		**po-ni*					
'go 2'		**ya-ngi??*	**ya-ngkan*	**ya-ngkani?*	**yV-rra?*		
Refl	**-yiny*	**-yi-ni*	**-yi-ø?*		**-yi-n*		**-yi-ø*
'die, be sick'	**thOwi-ng*	**thOwe-ni*			**thOwe-n*		
put standing'	**tha-ny*	**tha-ngi*	**tha-ngkan*		**tha-ng*		
'mimic(?)'		**ngunyja-ngi*	**ngunyja-ngkan*				*ngunyja-ng*
'scold'	**thO-ny*	**thO-ngi*	**thO-ngkan*		**thO-ng*		**thO-ng*
'chop'	**tho-ny*	**tho-ngi*	**tho-ngkan*	**tho-ni?*	**tho-ng*	**tho-yi*	
'burn 1'		**rO-ngi*	**rO-ngkan*		**rO-ng*		
'cut'					**kornta-n*		
'lie'	**yo-nginy*	**yo-y*	**yo-ri*	**yo-ngini*	**yu-ng?*		**yu*
'be standing'	**thi*	**thi-ny*	**thu-ra, *thi-ri?*	**thu-rlV*	**thi~?*		**thi*
'sit'	**ni-nginy*	**ni-ny*	**nu-ra*	**nu-rlV*	**ni~?*	**ni-ngi?*	**ni-ng*
'take'	**ka-ng~ *ka-nginy*	**ka-ni ~ ?*ka-nti?*	**ka-nyjan*	**ka-nyjini*	**ka-n*	**ka-yi*	
'eat, bite 1'		**pa-rli ~ payi-rli*	*pa-ngaN(VN?)*				**pa-y*
'cook 1'	**ki-nyeng*	**ki-nyiri*					
'burn 2'	**na(ya)-ng ~ *na-ny?*	**na-rli*	**na-nga ~ na-ja(N)?*	**na-ngana?*	**naya?*		
'throw'	**wa-ng*	**wa-ri*	**wa-nga*				**wa-y?*
(-)mV-	**ma-ny*	**ma-RV*	**ma-ø ~ *ma-ma*		**ma-R2(V)*		**mi?*
'hit'	**po-m ~ pong*	**pu-ni*	**pu-rnta*		**pu-n*		*pu-ø*
'eat, bite 2'		**ja-rring*	**ji-nyja*	*?*ji-nyjini*		**ji-yi*	

While the broad picture clarifies the status of the Maningrida languages as a separate branch of the Arnhem family (?), it raises a new problem with regard to the other languages included here. Ngandi and Nunggubuyu (which Heath (1990) has demonstrated form a branch of their own) were included in the reconstruction of Proto Gunwinyguan verbs by AEH. This paper shows that much of what has been proposed for Proto Gunwinyguan verbs is attributable to the parent language of a much wider grouping of languages, which I have called Proto Arnhem. It is also evident that, if all or any of Mangarrayi, Ngandi and Nunggubuyu, Kungarakayn and Kunbarlang are considered to be Gunwinyguan languages, then Proto Gunwinyguan must have had reflexes of the column 3 and 4 categories (and the existence in Rembarrnga, a core Gunwinyguan language, of reflexes of these categories for the stance verbs confirms that they must be reconstructed for Proto Gunwinyguan for these verbs at least). It is for this reason that I have labelled the row showing AEH's Proto Gunwinyguan reconstructions as 'AEH' rather than Proto Gunwinyguan.

To what extent, then, does 'Gunwinyguan' form a distinct grouping characterised by identifiable innovations? And what other branches can be demonstrated on the same basis?

One possible line of argument would be that, rather than the PP being lost in the development of Proto Maningrida, it may be an innovation that characterises the development of Proto Gunwinyguan. It is true that reflexes of the PP are not found (or at least are not clearly found) in Marra, Warndarrang and Gaagudju, nor in the Maningrida languages. However, as AEH note, cognate forms are found in the non Gunwinyguan languages Kamu and Tyemeri, and in (Proto) Pama-Nyungan, making this argument unsustainable.

Given the lack of a coherent picture of a deeper proto-level, it is unavoidable that genetic groupings proposed on the basis of shared morphology may actually turn out to be based on shared retentions from that higher proto-language. Unless the retention is in some way distinctively different from retention in other languages (as I suggest the retention of the Precontemporary and Contemporary forms in the Maningrida languages is), exclusive relationship will not have been shown. However, as my own experience has shown, proposing small language groupings with demonstrations of the putative evidence for that grouping is vital to building the full picture. It is almost certain that cognates to the forms proposed here will be found outside this comparatively large group of languages, and that this may change our view of which forms are retentions and which are innovations.

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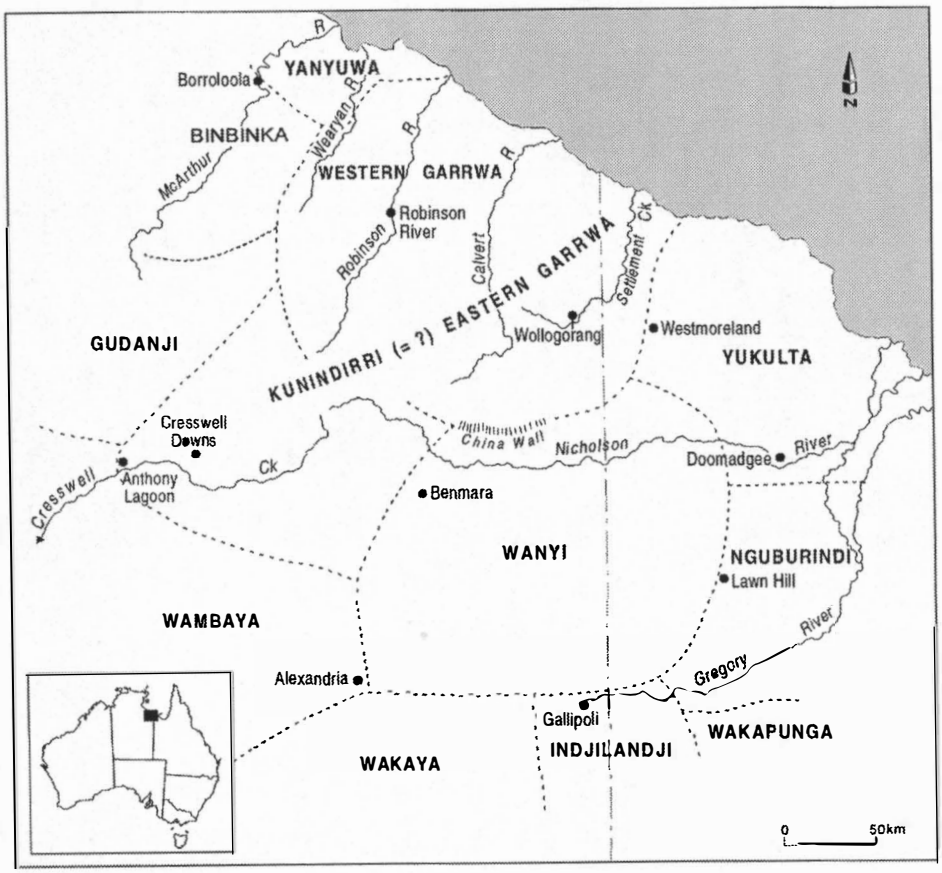
V. The Barkly



Map 4: Wanyi, Garrwa and neighbouring languages

Green, R. "Proto Maningrida within Proto Arnhem: evidence from verbal inflectional suffixes". In Evans, N. editor, *The Non-Pama-Nyungan languages of northern Australia: Comparative studies of the continents most linguistically complex region.* **PL-552:369-421**. Pacific Linguistics, The Australian National University, 2003. DOI:*10.15144/PL-552.369*