THE NUCLEAR PAMA-NYUNGAN UNIVERSAL QUANTIFIER *parntung

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Introduction

In the context of comparative reconstruction, one of the most valuable lessons to be learned from Raimo Anttila's writings is encapsulated in the following injunction of his (1972:332):

> If it seems that a word is guaranteed for the proto-language, its (alleged) absence in any of the daughter languages requires an explanation. A search often finds the reason, or the missing form itself.

Kenneth Hale named the largest coherent linguistic genetic construct in Australia 'Pama-Nyungan' twenty-five years ago. In choosing this label, he was postulating no especially close, nor especially remote, relationship between the Pamic languages in the north-eastern part of the continent and the Nyungar language of the extreme south-west. Rather, he was using words for '(aboriginal) person' from these two regions as the basis for a handy label for the language family which, in its broad outline, he had correctly delineated. Given that Pama-Nyungan is clearly a language family – Dixon (1980:226-227, and elsewhere) notwithstanding – it should be possible to carry out two operations having diametrically opposed directions of focus.

In the first place it should be possible, using evidence from a small subset of diagnostic daughter languages, to reconstruct a large percentage of the word roots and affixes of the proto-language – let us say a thousand or more (Hock 1986:567). Secondly, once a given element is securely reconstructed, it would be logical to make an intensified effort to pinpoint a reflex which is allegedly absent from a particular daughter language – especially given reasonably copious documentation of its lexicon and a comprehensive treatment of its grammar.

To explain a little more in detail: in a family encompassing languages A, B, C,. . . . . X, Y and Z, let us say that about one in every four of these – namely B, G, M, O, V and Z – is chosen by the comparatist as being well documented and having diagnostic value for purposes of reconstruction. Let us further suppose that in the reconstruction of a particular word root evidence appears, on a first pass through the data base, only in languages B, V and Z. The ancestral root is then reconstructed for the immediate common ancestor of B, V and Z; on this basis the comparatist is in a position, *to the extent that the available information allows,* to predict the shape which the corresponding form would have in languages G, M and O. In the light of further

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exhaustive study, the following scholarly consensus could conceivably emerge: the etymon in question has indeed disappeared without a trace in language G; in M, it appears in a marginally used noun compound, as for example were+ in English werewolf, a cognate of Latin vir, Irish fear *man* and Latvian vīr+s *husband*; *man* (< Proto-Indo-European *wir+os); in O, it survives heavily disguised by a combination of metathesis and semantic change.

By way of further illustration from Indo-European, let us consider the case of PIE *ped+ *foot*. On the basis of cognate forms such as Bengali pa (R. Sanatani, p.c.), Armenian otn, Italian piede and English foot (< *pōd+, the lengthened o-grade form), we take this reconstruction to be 'guaranteed for the proto-language' – to use Anttila's turn of phrase. So far, so good. If we now look down from the vantage point of PIE, so to speak, into Slavic, bearing in mind the details of the phonological and other innovations peculiar to that branch, we are likely to conclude, at first blush, that the etymon in question died out of use at some point during the evolution of the Slavic languages: Russian нога nogá *leg, foot* clearly does not represent the same etymon as English foot, for example, and one might also presume that it is not cognate with any other element in English. A little digging is necessary before the realisation comes that we have been deluding ourselves twice over: the PIE root *ped+ *does* appear in native Russian forms. For instance, пешиӣ péshij *pedestrian, unmounted* is recognised by Vasmer (1955:II:353) as a continuation of *pēd+sy+os, an adjectival derivative of *ped+; and the common instrumental expression пешком peshkóm *on foot* is derived from the same root. (Note also Russian под pod *ground, base, foundation*). Nogá in turn emerges as a cognate of English nail, German Nagel (< PIE *nog^h+, with diminutive suffix *+ela+), as well as of Portuguese unha and French ongle (Latin unguis), from PIE *ong^h+. The latter alternant stands in metathesis relationship with *nog^h+.[1] A diminutive suffix is also present in fossilised form in French ongle, as well as in Russian ноготь nógot'*nail; toenail* – a shape which may, however, have been influenced by коготь kógot'*claw* (G. Schaarschmidt, p.c.).

Yidiny and Wadjuk

Anttila's injunction is thus handsomely vindicated. It is reasonable that we should attempt to follow the steps outlined in comparative work involving Australian languages also. For initial purposes of exposition, two languages will be chosen more or less from the geographical extremes of Pama-Nyungan – Yidiny[2] in the north-east and Nyungar (Wadjuk dialect[3]) in the south-west of the continent. The following pair of forms from these two languages, we feel, can be taken as plausible evidence for an etymon of some antiquity in Pama-Nyungan:

Yidiny	pantu	Adj: *all together in a mob*
Wadjuk	BANDANG	a[dj.] *all*

The determination of the precise node in a fully articulated Pama-Nyungan family tree representing the immediate common ancestor of this particular pair of Australian languages will be

[1]*The American Heritage Dictionary* (1970:1531).
[2]The four Yidiny stops, symbolised as b, d, ḏ, g in Dixon (1977), are here represented as p, t, j, k.
[3]The 'prescientific' but in some respects rather sophisticated spellings of forms in Moore (1884) are identified by the use of small upper-case letters, but in all other respects are left unchanged.

involved. It is clear, however, that the node in question will be situated well up towards the dominating node representing Proto-Pama-Nyungan. Considerations of linguistic geography lead us to exclude recent borrowing as a plausible explanation for the similarity between the two forms, though borrowing at a time far back in the history of Pama-Nyungan is certainly not to be ruled out. Still, the basic nature of the meanings of Yidiny pantu and Wadjuk BANDANG leads us to regard a borrowing hypothesis as providing for a less plausible explanation for their similarity.

Another kind of logistic nightmare would loom large in the event that Yidiny and Wadjuk each had undergone multiple cumulative sound shifts subsequent to their divergence from their immediate common ancestor. Such hypothetical far-reaching successive phonetic changes in Pama-Nyungan would ultimately lead, however, to a much surer subgrouping of the languages than is likely, in fact, to be possible. What is increasingly likely to appear is evidence of almost extreme phonological conservatism – or, putting the matter another way – overwhelming indications of a rather shallow time depth for Pama-Nyungan (4,000 years at the most, say).[1]

It would be reckless in the extreme – and quite unjustified – for a newcomer to Indo-European studies to posit a proto-form *gūs+ just on the strength of English goose and Russian гусь gus'. On the other hand, Pama-Nyungan comparative work indicates that cognates such as Umpila pii'al *kneecap* and Wadjuk BEBAL (evidently /pipal/) *kneecap* can be derived from a single proto-form in what seems almost a disarmingly straightforward manner. There is nothing even approaching the series of *six* successive innovations leading from PIE *gʰans+ through Proto-Germanic *gans+, *[gãns+], Proto-Anglo-Frisian *gã:s+, *gã:s ~ *gõ:s (Roy F. Leslie, p.c.) and Old English go:s to Modern English goose. Instead, just *one* rule is needed each for Umpila and Wadjuk in order to derive the two forms for *kneecap*, if we accept *piipal as the ancestral shape: a rule deriving a glottal stop from intervocalic *p in Umpila; and, to judge from all the available evidence (including especially Douglas 1968), a rule by which original long vowels merge with short in Wadjuk.[2] In view of the overwhelming evidence for almost monolithic phonological conservatism in most Pama-Nyungan languages, it seems reasonable to undertake *direct*

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[1]Bruce Rigsby (p.c.) feels that the Pama-Nyungan time depth may be a mere 3,000 years – or even less.

[2]Comparisons involving appropriate additional diagnostic Pama-Nyungan languages are needed to confirm *piipal as the proto-form. As an example of equally dramatic conservatism in other widely scattered languages of the Family, Proto-Nuclear Pama-Nyungan *ngaja *delicacy* can be cited. This nominal is not reflected, to our knowledge, in Yidiny or Wadjuk, but descends in Nyangumarta as ngaji *sugar*, where

$$\begin{bmatrix} +syl \\ -fr \\ -hi \end{bmatrix} \longrightarrow [+fr] \quad / \quad \#\#CV(CV...)\ [+fr]\ \_\_\_\_\_ ,$$

i.e., an *a which followed a laminal consonant in a non-initial syllable descends as i; in Bayungu, a Kanyara language (cf. Austin 1981b), the reflex is ngaja.ru *vegetable food*, in which a semantically empty ru syllable has been postposed, apparently 'for stylistic euphony' (Hale 1974:15), and semantic generalisation has occurred; in Yuulngu the outcome of *ngaja is ŋatha *vegetable food* – for *j > th, see Dixon (1970, 1980) and Heath (1981); and in Ngiyambaa this root appears as denominative verbs ngatha+L Vtr, ngatha+Y Vintr *to taste* and ngatha.y *tasty* (Donaldson 1980). Note, in passing, the fact that *two* of the languages show an identical semantic innovation – to the referent *vegetable food*. This is here taken as a tiny clue pointing toward a relatively recent Kanyara-Yuulngu unity – a unity which was maintained until perhaps a scant few centuries before the time of Christ. Independent evidence of a uniquely shared linguistic tradition involving these languages was earlier adduced by this writer (O'Grady 1959:178). The most straightforward hy thesis which would account for the identity in the referents of Bayungu ngaja.ru and Yuulngu ŋatha is as follows: in the immediate common ancestor of the Kanyara and Yuulngu languages, *ngaja supplanted ancestral *mayi as the general term for *vegetable food*.

comparisons between pairs of languages such as Yidiny and Wadjuk – at least as a preliminary to a wider search.

Turning now to the central theme of this paper, we match the consonants of Yidiny pantu and Wadjuk BANDANG, segment by segment, along the lines of the Anttila format:

(1)	Yidiny	p	a	n t	u		
	Wadjuk	B	A	N D	A	NG	

One is not at all surprised to see further examples of close matching in form and meaning, as in the following:

(2)	Yidiny	p	i	j	a	r	wanta+n[1]	Vintr: *dream*
	Wadjuk	B	I	DJ	A	R		s. *sleep...*

In particular, note that Yidiny p- corresponds to Wadjuk B- (no doubt transcribable in terms of modern linguistics as /p-/). In Pintupi, an evidently cognate form pija+Y+ *to go, come* has entered into competition with earlier ya+N+ as a general verb of motion; we take the implied semantic shift from *DREAM* to *GO/COME* to reflect the probably universal association in the human mind – but especially strong in Aboriginal Australia – between the dream state and the peregrinations commonly experienced by the human spirit while under its sway. (Bayungu malhi+L+ *return* and malhi+nma+L+ *dream*, as well as Western Aranda lhi+ *go*, confirm this semantic association.)

Another example of initial bilabial stop matching is seen in

(3)	Yidiny	p	a	p	a	Adj: *deaf, half-witted*
	Wadjuk	B	A	BB	A	a. *weak; languid; wanting strength. . .*

We also need to be assured that the -nt- : -ND- matching in (1) is part of an overall pattern of phonological conservatism in both languages. That this is so is borne out by

(4)	Yidiny	ny u	n t	u	2 sg pronoun
	Wadjuk	N-Y U	N D	U[2]	p. *Will you? Do you?. . .*

Note also Pintupi nyuntu *you* sg. The final CV sequence in this and in the Yidiny form represents a dead ergative suffix, as pointed out in Dixon (1980:340-345); but this does not affect the issue here. A further example of -nt- : -ND- matching – and a very striking one – comes from a southern dialect of Nyungaa, in which a *trisyllabic* verb is evidently a cognate of one of the handful of Yidiny *trisyllabic* verbs listed by Dixon (1977:208):

(5)	Yidiny	t	a	n t	a	p	a	+n	Vintr: *dance around, feeling lively and pugnacious*
	'King George Sound'	T	A	N D	A	B	A	+N	*to spring; to jump*

[1]Yidiny wanta+n is glossed by Dixon (1977:557) as *Vintr: fall down, drop.*
[2]This is evidently the ergative form. Moore's NGINNI *p. thou* (p.66) appears to be the form of this pronoun which marks an intransitive subject.

It seems inconceivable that such compelling evidence could reflect anything other than common inheritance. Hypotheses either of borrowing or of accidental identity in form appear highly implausible. In both languages, the final syllable probably represents a truncation of a Proto-Nuclear Pama-Nyungan verb of motion, *wapa+Y. This claim is borne out by the related forms tantanginy *climbing* and tarnt *ankle*, cited for the inland dialect of Nyungar by Douglas (1976:75) – and note also Wadjuk DENDANG *to climb; to mount; to ascend.* The semantic relationship of tarnt, in turn, to Pintupi jarntarrpa *knee* is to be explained as an instance of metonymy. Further, the semantic connection indicated between *ankle* and *knee*, on the one hand, and *dance around, jump* on the other is richly attested to in Australian languages generally: the name of the body part felt to be centrally involved in a mode of locomotion, standing or lying is often the basis of verbal derivation. Thus a nominal form nguna is *upper arm* or *armpit* in numerous Pama-Nyungan languages, while verbal nguna+Y+ is *to lie, sleep*. Compare also, for example, the semantic association implicit between Umpila pungku *knee* and pungkukuntha *good at running*, and see Dixon (1980:407-408), where he proposes, with good reason, a relationship between ancestral forms for *foot* and *to stand.*

With regard to the initial consonant to be reconstructed on the basis of (5) and the further cognates cited, we take Pintupi j- to represent the ancestral sound-type; Yidiny has shown positional assimilation to the following apical cluster; and in the case of the two Nyungar dialects, Moore's T- and Douglas's t- may reflect problems of transcription of dental stop, [ṯ] – unless, as is quite possible, latter-day speakers of Nyungar have to some extent come under the sway of Australian English speech patterns.

The -ND- of the 'King George Sound' form cited in (5) may also be illusory: early – and sometimes even quite recent – transcribers of Australian languages have frequently mistaken [ḍ], [ṇḍ] for [d], [nd]; it is quite conceivable that Moore erred in this fashion with respect to the Wadjuk form cited in (1) – of which more anon.

In regard to the remainder of the consonantism exhibited in (1), we can say that *if* Moore's spelling -NG for the final consonant of the Wadjuk form really does represent [ŋ] and not, let us say, [ñ], then it is *possible* that final velar nasals, mapped meticulously by Dixon for south-eastern and north-eastern Australia (1980:241-243), survive in the West just in Nyungaa. More plausibly, however, the final consonant in Wadjuk BANDANG is the remnant of one of numerous fossilised root extenders found in Pama-Nyungan (cf.p.119, footnote 2). O'Grady (1966:106) cites, for example, Proto-Ngayarda *maya *right hand*, which nowhere appears in simple root form: the Gariyarra reflex is maya.ngu, synchronically an indivisible root, in which a fossilised .ngu suffix of hitherto indeterminable – and most probably zero – semantic function is quite possibly cognate with the .NG of Wadjuk BANDANG. In the case of pre-Yindjibarndi, *maya.rta appears in the modern language as maa.rta for *right hand*; the earlier meaning of the .rta remains just as inscrutable as that of the .ngu in Gariyarra. Hearkening back to English nail, French ongle and Russian ноготь nógot', we remind ourselves that in Old World languages also, many an old morpheme boundary has been reanalysed out of existence.

The vocalic correspondences between Yidiny and Wadjuk in the V_1 (first root vowel) position are quite straightforward: we have a : A in sets (1), (3) and (5); i : I in (2); and u : U in (4). Further cognate sets almost universally corroborate this assertion. In the V_2 position, the pattern is

less transparent: we have a : A in sets (2), (3) and (5); u : U in (4); but u : A in (1). This last pattern is very pervasive in Pama-Nyungan, and has been given close attention by Dixon (1980:344-345) insofar as it affects first and second person singular pronouns and the ancestral past tense suffix, reconstructed by him as *+NHu. Dixon's proposal that an earlier final *u has lowered to a accords well, as he himself points out, with modern naturalness theory. The exact conditions for the implied lowering of an old *u in the V_2 position in Wadjuk (and in other languages which share this rule) are far from being understood in precise detail, but the u in the second syllable of the Yidiny form in (1) leads us to believe that such a rule *has* operated in Wadjuk or in one of its relatively recent ancestors. Further convincing examples of a V_2 u : A correspondence for Yidiny and Wadjuk momentarily elude us; but note the putative Wadjuk reflex of *puunta+L ahead under (16).

Since the data base for Pintupi is considerably larger than for the fairly closely related Wadjuk or the other dialects of Nyungar, numerous illuminating Pintupi-Yidiny comparisons are possible:

(6)	Yidiny	m	a	r	p	u	Adj: *one's own (part of oneself)*
	Pintupi	m	a	rl	p	a	*friend, relative*

Hansen and Hansen (1974:61) cross-reference their ma|pa entry (where | equals our rl) with walyja *relation, same place, one's own personal effects,* lending added credibility to the semantic matching in the above. A further example with evident u : a correspondence is:

(7)	Yidiny	j	a	k	u	j	a	k	u	Adj: *can't do some task (but thinks he can)*
	Pintupi	j	a	k	a	j	a	k	a	n. *tiredness in upper leg muscles. . .*

Study of words for *left hand* in Pama-Nyungan languages indicates very strongly that set (7) represents a reduplication of the base which Hale (1976c:58) reconstructs in Proto-Pamic as *jaku. Note, for example, Umpila thaku *left hand*, and compare also Nyangumarta jakarn *slow, gentle* with the above. The evidence points to the semantic change *TIRED/SLOW (INEFFECTUAL?) > LEFT HAND* exclusively within the history of Pamic languages; but the reported presence of the same etymon in Mangarayi with the meaning *left hand* (Francesca Merlan, p.c.) complicates the picture.

In other Pama-Nyungan roots, nevertheless, we find copious linguistic evidence of the pejorative aura which surrounds the meaning *LEFT HAND* in the Australian cultural context. In Kala Lagaw Ya, Bani and Bani list mina geth for *right hand* (geth *hand*); mina in other collocations can mean *okay* (Terry Klokeid, p.c.), and is surely cognate with the root *mini reconstructed by Hale (1976c:56) for Proto-Paman, and descending in Umpila and Wik Muminh, for example, as mini *good*. The form meaning *left hand* in Kala Lagaw Ya is boedhay geth. Cognates of the first element in this construction appear as follows:

(8)	Yidiny	p	a	n	j	a	rA	N: *madness in head*
	Umpila	p	a	ny	j	a+Y+		*to go bush, abscond*
	Pintupi	p	a	ny	j	a		N: *rubbish, fatless meat, that which is unwanted*

No cognate form appears to be recoverable for Wadjuk. Other Pintupi forms which appear to be relevant are panjanyjilpa *very bad. . .* ; pajaru+rri+Y+ *to be mad or oblivious;* and yanyjarlkaja *... child born out of an unlawful union. . .* In the latter, the y- is probably to be explained as arising prothetically after the dropping of initial *p, along the lines proposed by O'Grady (1981a:155-160).

Further semantic evidence for the relatedness of Proto-Pamic *jaku and Pintupi jakajaka is seen in the following additional set:

(9)	Yidiny	w	a	rr		a		Part: *done the wrong way*
	Wadjuk	W	A	RR		A		*bad* (Mountain dialect)
	Pintupi	w	a	rr	k	i+L+		*to swear*
	Nyangumarta	w	a	rr		a[1]		*rotten* (cf warrayi *fly [insect])*
	Yaralti	W	A	RR		A	ME	*left hand*
	Gumbaynggir	w	aa	rr		a	winy	*left hand*

There is evidence that the k in the Pintupi form represents an ancestral infix; see further at set (12).

The following is probably a further valid cognate set with Yidiny u again in correspondence with Pintupi a in the V_2 position:

(10)	Yidiny	m	a	n	u	N: *top of tree*
	Pintupi	m	a	rn	a	*bottom; a person's seat or the base of an object*

The semantic difference here is probably explainable in terms of Hale's principle of the *unity of the opposites* (p.c.), exemplified in O'Grady (1979b:121-122). Further relatedness to Pamic forms such as Umpila, Wik Muminh manu *neck, throat* is likely, but the implied semantic development requires independent corroboration.

Additional sets are to hand in which V_1 is a in Yidiny and representative Nyungic daughter languages, and V_2 appears as u in both. Consider, for example, the following:

[1]This form is only attested in epithets involving the sex organs.

(11)	Yidiny	w a l		u		N: *side of head above ear, side of hill*
	Wadjuk	W A LL		U		s. *an interval or open space between two points or objects. . . partial baldness ... the interval between night and day*
	Pintupi	w a l		u		*flat rock surface, horizontal or roof of a cave; rockhole; lower grindstone*

Moore's later entry WAULLU s. *light; dawn. . . clear open space without trees. . . interval or open space. . .* appears to represent a variant transcription of Wadjuk WALLU, above. Note also

(12)	Yidiny	m a l		u	way (Tablelands)	N: *spirit, shadow*
		m a l			way (Coastal)	N: *spirit, shadow*
	Wadjuk	M A LL		O		s. *shade*[1]
		M A L		I	JI	s.*a shadow*
	Pintupi	m a l	p	u		*evil spirit*[2]
	Gidabal	m a l		u	ng	N: *shadow, shade*

Here the semantic cohesion is strong, and it is clear that the ancestral shape was *malung, with *u > I in Wadjuk preceding the laminal J, but not in the bare root form, MALLO. Consider also

(13)	Yidiny	m a r	u	n	N: *cloud*
	Pintupi	m a r	u		*black. . .*

in which the implied semantic connection is supported by examples such as Warlpiri mangkurdu *cloud* : Wirangu mangkuru *black*. Wadjuk MAR s. *a cloud; wind* appears at first blush as a likely candidate for inclusion in the above set, but Douglas's lexical data for the inland dialect (1976:64) includes the minimal pair marr *cloud* : mar *hand*, suggesting that Wadjuk MAR represents an entirely different etymon from that which appears in (13).

A further example is:

(14)	Yidiny	y a r	u	ny	Adj: *silly, stupid (person)*
	Pintupi	y a r	u		*shallow. . . ; light (sleep); loose*

in which the semantic difference is less obviously reconcilable.

A preliminary hypothesis based on the above examples can be formulated as follows: ancestral Pama-Nyungan roots of the shape *CaCu(C) undergo lowering of the *u in Pintupi (and, probably, also in Wadjuk) if the internal consonant is an obstruent or a nasal; an internal liquid inhibits this lowering. There are indications that this rule will ultimately need to be more tightly formulated; in any event, however, the favouring in Pintupi of such canonical root shapes as Caru – as in karu, nyaru, waru, etc. – seems to lend it added plausibility.

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[1]'To the no th the word is applied to Europeans' (Moore 1884:48).

[2]I consider the p, like the k in (9), to represent a fossilised Pama-Nyungan infix. Compare also, for example, Pintupi ngarri+Y+ *to lie, sleep, copulate* with Wirangu ngarrpi+ *to lie, sleep.*

While it is clear that many more cognate sets remain to be marshalled, it is hoped here that a reasonably strong case has been made for the reconciliation of the vocalic differences in (1). On the basis of just the Yidiny and Wadjuk evidence, we posit a Proto-Yidiny-Wadjuk universal quantifier *pantu.

If it can be accepted that approximately 160 Australian languages belong within the Pama-Nyungan Family, then it follows that a reconstruction such as that just offered would be more securely grounded, to say the least, if it rested on evidence from more than just *two* of these languages. Capell (1956) considers *ng to be a possible word-final consonant in Common Australian, and Wurm (1972) and Dixon (1980) are in accord with this finding. Dixon (1977:35) indicates that Yidiny has lost root-final velar nasals, and ancestral Pama-Nyungan vocalic length in this language has ceased to be distinctive. There is every reason to believe that Wadjuk has also undergone loss of distinctiveness at these two levels; moreover, we have already indicated that Moore may at times have made the common Australianist's error of mistranscribing retroflexed consonantism as alveolar; hence his spelling BANDANG may have been in error for *BARNDANG [páṇḍaŋ].

In view of the above considerations, we will now examine ten further Pama-Nyungan languages representing a wide geographical scatter and, evidently also, a number of branches of the Family. Out of fairness to Dixon, we will also research the available published materials for Ngandi, Maung and Ungarinyin for evidence of cognate material to add to set (1). The aim will be to present what we take to be the least controversial cases of cognation with (1) first, so that the reader can 'tune out' in the face of what he or she may consider to involve a progression towards excessively convoluted or implausible argumentation. In point of fact, however, this writer feels that the argument for cognation is quite strong in *all* of the cases that will be discussed; it is simply that much more space is necessary for supporting evidence than is available here.

As languages preserving vocalic length in the first syllable of a root, we choose to examine Bandjalang, Guugu Yimidhirr, Umpila and Gupapuyngu (Yuulngu) – cf Dixon (1980:406); of these, Bandjalang is also diagnostic for final peripheral nasals. Bayungu, Nyangumarta, Pintupi, Warlpiri, Gawurna and Wembawemba are drawn on as maintaining distinctive retroflex and alveolar series of apical consonants (Gupapuyngu also distinguishes these).

Bandjalang

In the Smythe appendix to Crowley (1978:400) there appears the following Bandjalang lexical entry:

panang	(indef. pronoun)	*all, the mob*

This form differs from Wadjuk BANDANG only in the absence of an internal apical stop, but the sharing of final velar nasals may well be misleading – we have already concluded that the Wadjuk .NG is probably the remnant of a semantically empty stylistic root extender, whilst in Bandjalang panang the -ng appears to be an integral part of the original root.

It is clear from comparative evidence such as will be presented in sets (15)-(18) that the Bandjalangic dialects typically preserve both the nasal and the stop in old *nt and *rnt sequences.

It follows, therefore, that a process other than regular sound change has led to the replacement of an earlier homorganic apical nasal + stop sequence, resulting in the shape panang in Bandjalang. There is strong reason to believe that this process was analogical: a *panang+ alternant became generalised following a period in the history of the language when it occurred in a context involving a further nasal + stop sequence, as when the LOCATIVE case alternant *+ka was suffixed, yielding the form *panang+ka; cf Black (1980) on this point. A closely parallel alternation will be noted herein as being present in Bayungu.

Elsewhere in the Bandjalangic dialect area, in point of fact, Waalubal provides a hint of the presence of an alternant in -nt-: pantang *other*. If convincing independent evidence could be brought to bear to verify the semantic relatedness of *ALL* and *OTHER* in Pama-Nyungan, then we would have a case for counting Bandjalang panang and Waalubal pantang historically as alternants of the same root. Such evidence is indeed forthcoming – from Yidiny and Nyangumarta. Dixon (1977:146-148) reports for the former that +jamu *only, all* and +pi *another* have some degree of overlap semantically. In the Strelley dialect of Nyangumarta, Hale, Bradman, Bucknall and Brown (1980:40) document a form nganirnnganirn *everything; etc.; others of that sort* (apparently < *'whatever'*; cf ngani *what* < *ngaani < *ngaana *what*, discussed in O'Grady 1979b).

In light of this evidence, it seems reasonable to conclude that Proto-Bandjalangic was host to a universal quantifier *pantang, whose LOCATIVE case-form was *panang+ka. The latter provided the basis for the derivation of *panang, a competing variant of the ABSOLUTIVE (uninflected) form, which continued to function semantically as a universal quantifier and survived into the modern Bandjalang dialect with this referent; *pantang, meanwhile, drifted semantically toward the meaning *other*, and survived only in the Waalubal dialect. Unrelated mapeerr and kumpii filled the semantic void so created – both now answer to *many, all* in Waalubal; in Gidabal, kumpi+pu is the universal quantifier, and in Bandjalang kulkii is *other*.

As a result of the addition of the above Bandjalangic evidence to (1), we now posit a Proto-Yidiny-Wadjuk-Bandjalangic universal quantifier *pantung.

Bayungu

To move from Bandjalang to an examination of Bayungu, spoken on the opposite side of Australia, may seem reckless to a practitioner of *rigorous* comparative method linguistics. But after all, the claim made here is that these two languages are genetically related within the Pama-Nyungan *Family*, along with approximately 160 other Australian languages.

This claim is borne out by extensive grammatical evidence as well as lexical cognates such as the following transitive verbs:

(15)	Bandjalang	p	a		n	t	+e	*to smell*
	Gidabal	p	a		n	t	i+	*to sniff*
	Waalubal	p	a		n	t	i	*to smell*
	Pintupi	p	a	r	n	t	i+L+	*to smell, sniff*

Bayungu	p	a	r	n	t	i+L+	*to smell, sniff*
Nhanda		a	r	n	t	i+	*to smell*

Yidiny appears to miss this root. In the same sense, while German Holz *wood* flourishes as an everyday word, its English cognate, holt (< Proto-Germanic *hulta+ < *kl+d+, an extended zero-grade form of PIE *kel+$_2$ *to strike, cut*) languishes as an archaism beyond the competence of most present-day speakers. Such absences merely reflect an overall pattern whereby a scattering of forms suffer obsolescence in a language over a given period of time. This attrition is much less, however, than one might judge from superficial appearances – witness the fact that after 5,000 years PIE *wir+os, as noted earlier, still lives on in English in the old Germanic compound werewolf,[1] even if primarily through the medium of horror movies and comic strips only.[2]

Wadjuk BINDA.NG v. *to smell* clearly belongs in (15) also, even if the vocalism, at first blush, appears to pose a problem. Douglas (1968) lists no verb of olfactory perception in his lexicon, and we are left with the thought that either (a) if the internal consonants in this form were indeed [ṇḍ],[3] then Moore may have overreacted to the retroflex and centred allophone of a preceding /a/ and written <i>, or (b) *a was indeed replaced by /i/ in the V_1 position here. In this event, the most reasonable explanation would take into account a metathesis rule whereby, in verb roots at least, $*C_1V_1C_2V_2+ > *C_1V_1V_2C_2V_2+ > C_1V_2C_2V_2$. That is, in a disyllabic verb root the consonant and the vowel of the second syllable metathesise, while a copy of V_2 is left in its old position; V_1 is then deleted, and the copy of V_2 is subject to a rule partly assimilating it to the following consonant. Thus ancestral *parnti+L > *pairnti+ > *pi(r)nti+ > BINDA.(NG), with the final *i assimilating to presumed /ng/ for [bk]. Since /ng/ is [+hi], it must be assumed that the A of BINDANG is the product of analogy – verbs documented with -ANG by Moore, such as NURDURĂNG *to snore* or GOTANG *to bag, carry in a bag* clearly represent a highly favoured pattern in this language. Further support for this hypothesis can be derived from the inland dialect of this language, documented by Douglas, where Proto-Nyungic *yuka+ *to stand* > *yuaka+ > *yaka+; the combination of this form with a /ny/ extension results in the attested form yaki.ny *standing* (cognate with Wadjuk YUGO.W /yuka.wu/). So also in this dialect, PNPN *pu.ma+ *to hit* > *puama+ > *pama+(ny) > pami.ny *hitting* (cognate with Wadjuk BUMA); and Proto-Nyungic *yu+nga+ *to give* > *yuanga+ > *yanga+(ny) > yangi.ny *giving* (Wadjuk YONG-A ~ YUNG-A, presumably /yunga/). It is evident that the scope of the metathesis and V_1 deletion rules was considerably more constrained in Wadjuk than in its inland neighbour.

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[1]Not to mention Latinate forms such as trium.virate.

[2]Then, too, Dixon points out that he is preparing a Yidiny Thesaurus, which will contain much more lexical data than the vocabulary given in his Grammar. Further cognate material will then assuredly come to light. Dixon estimates (1980:2) that a full dictionary of an Australian language would contain something like 10,000 lexical entries. The late T.G.H. Strehlow's unpublished Aranda work could well provide an opportunity for testing this estimate. Hale (p.c.) reports that the MIT Australianist team has assembled 7,000 Warlpiri entries so far – suggesting that Dixon's estimate is entirely realistic. This being so, it is clear that in cases where 1,500 to 2,000 lexical entries have been assembled for a given Pama-Nyungan language, many proto-forms will not appear to have reflexes simply because the relevant evidence did not happen to turn up in the linguist's data set. Thus the 'absence' of a reflex of ancestral *ngirri+ *to bare (the teeth)* in such-and-such a Pama-Nyungan language may well be more apparent than real: the researcher may not have thought to elicit such a form, nor stumbled across it in spontaneously generated material. Nyangumarta ngirri+R+ *to bare (the teeth)*, Warlpiri ngii.ny.karri+Y+ *to grin, leer, smile with teeth showing*, Gupapuyngu lirra+ŋirr'+yu+N *to smile* (lirra *tooth* < *rirrang) and Gidabal ngirri.ny *angry* may barely represent the 'tip of the iceberg'!

[3]Interpreted herein, following Hoard and O'Grady (1976), as /rnt/.

Further evidence of the stability, by and large, of Pama-Nyungan *nt clusters is provided by *puunta+L *to pluck (e.g., feathers), to pull out*, the prenasalised variant of *puurra+L.

(16)	Kala Lagaw Ya	P	U		D	A+I	Vtr: *to let fall; pull out, dig out, stretch out*
		p	u		d	a+n	Vtr: *to pull out, extract*
		P	U		D	I	Vtr: *to fall (drop down); undress; COME OUT, OF FEATHER*
	Yidiny	m	u	n	t	a+L	Vtr: *to pull*
	Dyirbal	p	u	n	t	i+L	Vtr: *to take out*
	Bandjalang	p	uu	n	t	+a	*to singe*
	Gidabal	p	uu	n	t	a+	*to pluck, to break by pulling*
	Waalubal	p	uu	n	t	a	*to pick, pluck*
	Warlpiri	p	u	n	t	a+L+	*to take it from. . .*
	Nyangumarta	p	u	n	t	a+R+	*to pluck*
	Pintupi	y	a	n	t	a+L+	*to pull out and break off*
		m	u	n	t	a+L+	*to snatch, grab. . .*
	Bayungu	m	u	rn	t	a+L+	*to snatch*
	Wadjuk	B	Ă	RN		A.N	*to sweep; to clean; to clear away. To pluck out hair or feathers*

The Kala Lagaw Ya and Wadjuk forms alone, coming from virtually the north-easternmost and south-westernmost parts of the Pama-Nyungan speech-area, would seem to guarantee that *TO PLUCK (e.g., FEATHERS)* was at least part of the referent range of *puunta+L. This strong indication is still further buttressed by the meanings of the Bandjalangic and Nyangumarta forms; note further, e.g., Dyirbal punti+L. The apparent doublet in Pintupi may well result from the incursion of yanta+L+ as a loan from Arandic. For the three m-forms, see ahead at the discussion leading up to Gupapuyngu manda. More study is needed of the two forms recorded as retroflexed. Wadjuk BĂRNA.N falls into place as being plausibly derivable from *puunta+L, quintessentially via the same rules as were applied to *parnti+L, above (after allowing for the merger, in Proto-Nyungic, of PNPN long and short vowels): *puunta+L > *punta+L > *puanta+ > *pa(r)n(t)a+ > BĂRNA.(N). Concerning the disappearance of *t, see the accompanying discussion of Bandjalang panang and Bayungu parna+, which is synchronically derivable from parnta; note, moreover, the Yindjibarndi reflex of *pinti(.pinti)+, given under (18).

Yet another PNPN form with internal *nt consonantism is *pintam *stick, thing(s), belonging(s)*:

(17)	Proto-Pamic	* p	i	n	t	a		..., *arm*
	Uradhi	w	i	n	t	a		*arm*
	Linngithigh			n	trr	ae	[æ]	*arm, upper arm*

Umpila	+	p	i	n	t	a		PROPRIETIVE suffix
Guugu Yimidhirr		p	i	n	t	a		*stick, twig, splinter*
Yidiny		p	i	n	t	a		*shoulder, top of tree, top of waterfall*
Gidabal		p	i	n	t	i	m	*driftwood in a river*
Nyangumarta		p	i	n	t	i		*sticks used in making string-cross*
	#	p	i	n	t	i		INSTRUMENT, *thing for. . .*
Bayungu		p	i	n	t	i.	rra	*yamstick* (Austin, n.d.)
Wadjuk		B	I	N	D	I		*the stick, or skewer, with which the cloak is fastened*
		B	I	N	D	A.	RT	*personal effects. . .*
Nyungar		p	i	rn	t			*skewer, button, pin, fastener, clip*

The referent *STICK* must be seen as ancestral, since it is documented in languages as far apart as Guugu Yimidhirr and Wadjuk. A larger *STICK*, i.e. *BRANCH/LIMB*, is in turn widely associated semantically with the body part *ARM* in languages of the world (see the Umpila and Mawng examples below; in the mythology of the Old World ancients, Daphne flees from Apollo and is transformed into a tree, her arms turning into branches). The further semantic development from *ARM* to *SHOULDER* in Yidiny appears as a straightforward case of metonymy followed, in the case of the *TOP OF. . .* meanings, by metaphor. The grammaticalisation of *pintam in Umpila took place through the developments *STICK > WOOD/TREE/THING > PERSONAL POSSESSION (ONE'S 'THINGS') > POSSESSED OF, i.e. PROPRIETIVE.* That in Nyangumarta #pinti (O'Grady 1960:2) was even more straightforward: *STICK > THING > THING FOR. . . ING* (as kaja+rna#pinti *chair* from kaja+rna *sitting*) or *THING USED AS AN ADJUNCT TO. . .*, e.g., janyja#pinti *thermometer* from janyja *heat of the sun.* In the case of Gidabal pintim (which provides key evidence for *-m), it seems reasonable to claim that the Gidabal experience of the real world centred ofttimes around flooding and the subsequent deposition of branches and sticks along the high water mark. Worthy of note on the phonological level is the evidence of vocalic assimilation in Nyungic (*pinta > pinti); this assimilation was evidently inhibited in the evolution of Wadjuk by the prior presence of what may well have been a stylistic rightward root extension of the shape *.rta, giving *pinta > *pinta.rta > BINDA.RT, while the Wadjuk non-extended counterpart, BINDI, underwent vowel assimilation. Note further that in the closely related Ngayarda languages, 1,400 km to the north, .rta is the fifth most favoured of 31 endings on trisyllabic or quadrisyllabic nouns, every one of which could conceivably turn out to be stylistic in nature.

Many of these root extenders were no doubt present in a fairly early stage of Pama-Nyungan. The shape *.rra clearly enjoys the highest frequency of occurrence in the Ngayarda daughter languages (O'Grady 1966:96), and is also present in Bayungu pinti.rra, above. Clearly the addition of *.rra to this form is quite recent, since the cognates in Nyangumarta and Wadjuk lack

it. Furthermore, unlike in Wadjuk BINDA.RT, vocalic assimilation was able to run its course, and the *.rra extension was *subsequently* added.

Umpila palnta *branch of tree, arm* may be obscurely related to the foregoing reflexes of *pintam (if, say, *palntam in some way could be shown to represent an earlier form, with subsequent developments whereby *palntam > *payntam > *piyntam > *pintam. But to judge from surface indications at least, the implied chronology doesn't make sense, and as of now we take it that Umpila palnta is simply not related to *pintam. At least the semantics of palnta provide backup for the *BRANCH:ARM* association imputed in (17) – as do, for example, Mawng i+mawurr (Noun Class I) *a man's arm,* ma+mawurr (Cl. V) *branch,* u+mawurr (Cl. IV) *arm of a river* (Capell and Hinch 1970:47).

In point of fact, Umpila palnta probably forms a doublet with a form panti *bullet spear* in this language, and goes back to PNPN *palntan *spear*. Other cognates include Guugu Yimidhirr panta *rear part of spear,* Warlpiri warnti *lance* and, probably with ANTONYMIC semantic shift, Bandjalang pantaan *axe*; and the Bayungu denominative parnta+L+ *to split, cut off, sever, chop down* may have undergone parallel semantic development. Note also Warlpiri panti+L+ *to spear* and Nyangumarta yarnta+R+ *to spear, stab, sew, write* (with *p- > Ø > y- in the latter denominative, for reasons unknown as yet). Further attestation is still needed. Such a semantic association as that between *ARM* and *SPEAR* in the Australian context is, however, no longer a mystery – the arm and the spear held poised count as parts of a whole, in the speaker's conceptualisation. Or, putting the matter a little differently, the spear is seen as being an extension of the arm. Independent corroboration of this claim is provided, for example, by PNPN *marang *hand* (Capell 1956) > Nyangumarta mara *fire saw,* and by reflexes of *kajun, apparently the name of an ancestral implement, including Proto-Pamic *kajin *digging stick* (> Umpila kajin with this referent); Arabana, Pintupi kaji *spear;* Bayungu kajiri *spear;* and Wadjuk KADJO *a native hammer. . .,* probably diffused northward with the spread of Europeans – cf Bayungu, Ngarluma, Nyangumarta kaju *axe.* In particular, this etymon makes its appearance in Kala Lagaw Ya *kajun > *kajin > *kaji > *keji >. . . geth *hand.*

The population of PNPN forms of the shape *pV(r)ntV also includes a transitive verb of opening, *pinta+L. Representative attestation is as follows:

(18)	Umpila	p i n t i+	Vtr: *to open*
		p i n t i. pi	*gap in scrub; crack which extends right through ('opening')*
	Gidabal	p i n t i+	*to spread one's legs to form a V-shape*
	Nyangumarta	p i n t a+R+	Vtr: *to open, force open – e.g. a person's mouth*
	Pintupi	p i n t i. ri (< *pinta.ri)	*camp area (< 'open (ground)', 'cleared area')*

This etymon may be related ultimately to a PNPN verb of running (< *'TO OPEN UP a considerable distance between'*?), which in any event is independently reconstructible as *pinti(.pinti)+ – witness Umpila pinti.pinti(i)+TH+ *to run,* Nyangumarta pinti.rri.nti.rri

wapa.ka+R+ *to take a running jump* (wapa.ka+R+ *to jump* < *wapa+Y *to go* – cf the mode of locomotion of marsupials), Yindjibarndi pini.ngka.rri+Y+ *to go fast, run* (< *pinti.ngka.rri+Y+ by haplology, followed by analogical new-formation pini *fast, quick* (Wordick 1982)) and Pintupi pirnti.rri *star ('that which runs/races (across the sky)'* – cf the semantics of Malgana wapa.rnu *sun,* from *wapa+Y, just cited).

It is also possible, though unlikely, that a set of forms having to do with *DIGGING* may belong in (18). These include Kala Lagaw Ya (Muralag) PIDA+I *to dig?* and Bandjalang piint+a, Waalubal piinta *to bury* (conceptually, these actions are perhaps seen as *OPENING UP* a hole in the ground). Waalubal pinta *to put in* is conceivably the second member of a doublet here which resulted from dialect mixture. The meanings *TO BURY* and *TO PUT IN* (a hole?) can reasonably be regarded as closely related: in the Nyangumarta of Wallal, for example, the usual verb *to bury* is pirti+ngi+ji+L+ (hole in the ground+LOCATIVE+CAUSATIVE+L-Conjugation marker). Gawurna PINDI *pit; den; ditch; grave; the habitation of souls before birth, and after death; European. . .* constitutes southern evidence for a probably cognate nominal – and note Pintupi yinta *durable water supply. . .* (< *'(water)hole'?*). Nyangumarta and Pintupi pirti *hole in the ground* may also be related, albeit obscurely so from a phonological viewpoint. Thus for the present, we *tentatively* reconstruct a further root, *pInta.

To return to the primary quest of this paper: we are concerned to identify, if possible, a cognate from Bayungu which we could with justification add to set (1). To judge from sets such as (15) and (17), the sound correspondences will be anything but convoluted. Nevertheless, we experience a momentary setback in our search when, in the English-to-Bayungu printout, we find wurrayi+mpa for *all* (wurrayi *many*) – clearly not cognate material. We therefore consult the Bayungu-to-English file, and immediately the following entry comes into focus:

parntanyjarri *they* (PL)

On the basis of research so far, this appears as an alternate form to thana (< *jana). From a semantic point of view, it appears entirely reasonable to match this form to Yidiny pantu, Wadjuk BANDANG, Bandjalang panang and Waalubal pantang. If such a matching can be accepted, the problem of the suffixal extension on the Bayungu form must be tackled. This turns out to be immediately and transparently amenable to analysis – it is the productive allomorph of the PLURAL suffix in this language, as in kaparla+nyjarri *dog*+PL. That it is, in fact, also in productive use with a root parnta is clearly seen in parnta+kutharra *they two* and parnta [páṇḍa] *he, she.* Many genetically related languages in all landward directions from Bayungu show a reflex of *pa+lu *that+ERGATIVE* with third person singular reference, or functioning as a mid-distal deictic: Wadjuk BA.L, Nhanda a.la, Nyangumarta pa.li+ny *he, she, it;* Pintupi, Nyangumarta pa.la *that (mid-distal);* and note Gupapuyngu wa.la.la *they* PL. In Bayungu itself, pa.la is also *he, she*; whether it differs functionally from parnta or is a variant way of making third person singular reference is not yet known. Considering the evidence already cited from Yidiny, Wadjuk and Bandjalangic bearing on *pantung, it becomes abundantly clear that the *function* of this etymon in Bayungu has undergone an innovation. It remains to posit plausible stages through which this development could have occurred.

It appears that the innovation occurred in just three stages: (a) at some point in the evolution of Bayungu, *parnta *all* drifted semantically in the direction of third person plural reference; (b) in this emerging function, it came under paradigm pressure from forms such as ngunha+nyjarri *that (distal)*+PL and began to take on overt plural marking with the suffix +nyjarri also; (c) subsequent speakers generated parnta *he, she* by back-formation.

Bayungu also provides evidence contributing towards a principled explanation of the absence of t noted earlier in Bandjalang panang: when Bayungu parnta carries a suffix +mpa, apparently an emphasis marker, the t fluctuates with its own absence: parnta+mpa+ya ~ parna+mpa+ya. We have already noted that Paul Black has shown this type of alternation to be pervasive in Pama-Nyungan. It is clearly a phenomenon of haplology.

Before we leave the discussion of Bayungu, it should be noted that Davidson recorded an adjective PANDA.BULA *big* in this language. This is historically a compound (cf. Wadjuk BULA *abundant; many; much, plentiful)* and reflects a further outcome of the etymon being studied here – as also does Arabana parnta *big*. The semantic development in both forms (*ALL > MANY/BIG MOB > BIG*) surely falls within Bynon's conception of 'plausible' (1977:62).

Yuulngu

As already stated, we projected earlier (O'Grady 1959; the *Sydney Morning Herald*, 26 February 1960) that the Australian languages which are genetically the closest to the Murngin (later: Yuulngu) dialects of north-east Arnhem Land might well turn out to be those of the Kanyara Subgroup spoken in the Exmouth Gulf area – half a continent away. These include Bayungu. It therefore seems reasonable, since no Australianist appears ever to have contradicted this claim, to turn next to a representative Yuulngu dialect – Gupapuyngu.

As in the case of Bayungu, pursuit of forms meaning *all* in Gupapuyngu leads nowhere relevant to the present quest: Gupapuyngu warrpam' *all, every* and nhanbinya *all* show no conceivable phonological congruence with Wadjuk BANDANG, etc. We also draw a blank in a careful search of the 17 pages of forms with initial bilabial stop, b, in the Lawton/Lowe MS. 'temporary Gupapuyŋu dictionary'. Where else to search?

In Pama-Nyungan comparative work, experience teaches one to expect sporadic exceptional shifts between an initial stop and (1) the homorganic nasal or (2) the homorganic glide. Examples of the former are not at all rare: Nyangumarta pinga *small black ant,* Warlpiri pingi *ant* (with progressive vowel assimilation) but Pintupi minga *ant (generic)* must surely count as being related forms, even though the evident replacement of the *p- in *pinga with m- in the Pintupi form remains unmotivated (cf. *pinang *ear* > Pintupi pina, not *mina). So also, *punyja+L *to drink* > Ngarla, Wangkangurru and Umpila puntha+ *to drink;* but this etymon appears in Nyangumarta as munyja+R+ *to kiss* – i.e. with the initial consonant altered, perhaps as part of a phenomenon of sound symbolism. Alternatively, the phenomenon may at least in part originate in child language – cf McConvell (1985:9), though according to his suggestion, the direction of change is the opposite to that imputed here.

This seeming contradiction is probably to be resolved in the following sense: (a) children in many Pama-Nyungan speech communities have re-created certain nasal-initial forms, e.g., conceivably, *ngamu, in such a way that the initial nasal has been replaced with the homorganic

stop; thus *kamu would have resulted as the corresponding child language output; (b) adult speakers have been at pains to 'correct' these as unwanted innovations; but in so doing, they have created sporadic, but by no means rare, hypercorrections within the large set of forms never modified in child language use.

The *converse* of McConvell's rule for the generation of child language forms is thus probably to be seen at work in new-formations based on old *p- entries in the ancestral Pama-Nyungan lexicon such as Pintupi munta+L+, cited under (16), Pintupi minga, or Nyangumarta munyja+R+, above.

That such a process of hypercorrection has operated on the grammatical as well as on the lexical level is amply demonstrated in the descent of the *nine* different Pama-Nyungan monosyllabic *pa elements (q.v.). Most of these are reflected as ma in one or the other daughter language, and whatever the source of the innovative consonantism, it must in the majority of cases have nothing whatever to do with regular sound change.

A further relevant set can usefully be portrayed in tabular form:

(19)	Kala Lagaw Ya	p	aa			d	a		*mountain*
	Yidiny	p	u		n	t	a		N: *mountain, big hill*
	Wirangu	p	a	r	n	t	a		*stone*
	Mirniny	p	u	r	n	t	a.	ngu	*stone*
	Kaititj		a	r	tn	t			*stone*
	Warlpiri	y	a	r	n	t	a.	ru	*stone*
	Ngarluma	m	a	r	n	t	a		*stone*

Here Kala Lagaw Ya appears to show the regular voicing of stops in nominals following a homorganic nasal, with subsequent loss of the nasal (the vowel length is separately motivated); cf *mungka > KLY muugu *anthill*, and note also boedha.y geth *left hand,* cited in the context of (8), where boedha.y reflects ancestral *panyja. It is possible, however, that Kala Lagaw Ya paada is a loan from a Papuan source; cf Kiwai PODO, Bugi PAD *hill, mountain.* Yidiny and Mirniny independently show rounding of the first vowel in *pArnta (following bilabial *p).[1] Kaititj shows the regular Arandic loss of initial consonants, loss of contrast in final vowels, and the prestopping of nasals conditioned partly by a short V_1 and partly by initial non-nasal consonants (Kenneth Hale, p.c.). The Warlpiri form with initial y is possibly, but *not necessarily*, an Arandic loan. The likelihood of an entirely different kind of genesis for initial y and l in certain roots in Pintupi (and perhaps also in Warlpiri) is broached in O'Grady (1981a:155-160), where the claim is made that this language has joined the ranks of the numerous Pama-Nyungan Initial-dropping languages. Ironically enough, speakers have continued to react to the ironclad constraint that *all* words begin with a consonant by 'patching up' the damage caused by loss – so far primarily only of certain instances of *p- and *k- – with y or l. See also under (8).

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[1]Yidiny pantu, cited in (1), shows no comp r ble effect. In Mirniny, however, there re cle r ex mples of the rounding of *a following initi l *m. Comp re, e.g., Wir ngu mama, Mirniny muma.rlu *father*; Wir ngu mapa.rla, Mirniny mupa *ashes*; Nyangumarta, Western Desert ma+rra, Mirniny mu+rra *take it!* It is cle r from other Pama-Nyung n evidence th t in each case Mirniny u reflects ancestral *a.

From the point of view of *systematic* language change, the m- in Ngarluma marnta remains unexplained. Yet by the same token, common sense dictates that this form represents the selfsame etymon as in the other six languages. To reject it as not being related to Wirangu parnta, for instance, would be quite unrealistic. In the same sense Lockwood, in discussing the reflexes of PIE *ni+sd+os (> English nest), has this to say about the Lithuanian form (1969:180):

> Peculiarly enough, Lithuanian has lizdas instead of the expected *nizdas. Bearing in mind all the circumstances, one must here assume an exceptional shift of n to l, for some reason unknown; it would be unrealistic to regard the Lithuanian as an unrelated word.

GUP lurrkun' *three* is likewise no stranger to Nyamarl and Mangarla murrkurn *three*, despite the superficially unmotivated difference in the initials. PIN murrkamurrka *very many*. . . lends strength to the argument that *m was the ancestral initial. Again in Gupapuyngu, no straightforward reflex of *pArnta *stone* appears in the available materials, but in another Yuulngu dialect, Galbu, Capell has recorded baṇḍa (i.e., ba<u>nd</u>a in the local orthography) with this meaning. In Gupapuyngu itself, gu<u>nd</u>a *rock, stone, money* is probably to be counted as a version of the same etymon reshaped for reasons so far unknown. Judging from the above Yidiny and Mirniny evidence, however, the innovation may well have taken place through two stages: (a) *parnta > *purnta; (b) *purnta > *kurnta (> kurnda, i.e., <gu<u>nd</u>a> after a separately motivated fortis/lenis contrast arose in medial stops); an explanation for the replacement of *p- by k-, <g->, in this form would then be required. A precedent for such an innovation elsewhere in Pama-Nyungan – also preceding *u – is seen in PNPN *pu.ma+ *to hit* > Wayilwan ku.ma+ (Donaldson 1980).

We return to the central theme of this paper clearly with good reason to seek a Gupapuyngu cognate of Wadjuk BANDANG, etc., under the heading m- as well as under b-. Immediately the following pronominal form comes into alignment:

ma<u>nd</u>a *they two*

Any comparatist, seeing this form placed directly alongside Yidiny pantu, for example, would presumably be deeply sceptical of possible cognation, on grounds of both phonology and semantics. The plausibility of cognation with Bayungu parnta would presumably be perceived as being far greater. The feeling is strong, in fact, that the evolution of specifically third person pronominal reference in the etymon under study may well have occurred in the *immediate* common ancestor of Yuulngu and Kanyara (and, perhaps, of the Yura languages of South Australia, of which Gawurna is discussed below). One would assume that subsequent to the breakup of Proto-Kanyara-Yuulngu, the etymon being studied here came under strong paradigmatic influence from long-established pronouns with initial nasals – *ngali *you and I,* and so forth – in an early Yuulngu stage, and was re-created in the shape ma<u>nd</u>a. Semantically, meanwhile, it underwent a shift from third person plural to third person *dual* reference.

The fact that this etymon is documented in both Bayungu and Gupapuyngu with *retroflex* articulation of the apical nasal + stop sequence is taken here as evidence that this distinctive variety of apical articulation is fairly old. If, in fact, it is regarded as being at least of Nuclear Pama-Nyungan age, then it finally becomes possible in this paper to posit – hopefully with good reason

– the most archaic shape of the root from which Yidiny pantu, etc., descended, namely *parntung. In terms of naturalness theory, the Yidiny form, for example, would then be derived historically through two quite straightforward developments:

	PNPN	*parntung
1. loss of final		
$\begin{bmatrix} +nas \\ -cor \\ -ant \end{bmatrix}$	segment:	*parntu
2. cluster simplification:		pantu

It should be noted that the second of these rules has had wide application in a large swathe of languages in eastern Australia; in particular, (15) shows its effect in the Bandjalangic dialects in a vocalic context far removed from that which Dixon (1980:155-156) claims as having been responsible for the genesis of distinctive retroflexed consonants in Australian languages other than those of the east. If indeed distinctive retroflexion arose in Australia in something like the manner proposed by Dixon, i.e., first after *u, and later spreading to other vocalic environments, then this development is clearly of greater age than Pama-Nyungan.

In point of fact, we believe the manner of genesis of a two-way contrast for apical consonants in Australia to have been distinctly different from that posited by Dixon. In our view, the original triggering mechanism was afforded by the presence, apparently since very ancient times, of a contrast between two kinds of rhotic sounds – an alveolar flap or trill, *rr [ř ~ r̃], and a retroflexed continuant, *r [ɽ]. That this contrast is extremely archaic, and certainly pre-Pama-Nyungan, is seen in its presence even in Tiwi, a language isolate virtually on a par with Haida or Basque. There appear to us to be two ways in which distinctive retroflex sounds could have arisen elsewhere in the phonology. (a) Assimilation, especially anticipatory assimilation, could have led to the phonetic retroflexing of an apico-alveolar segment appearing in the syllable *immediately preceding* a further syllable beginning with [ɽ]; subsequent innovations could have led to the establishment of a /t/ : /ʈ/ contrast, for example, if we had, say, *mataɽa > *maʈaɽa > *maʈaa > *maʈa. Another form, *mata, would have emerged at the end of the same period of linguistic history completely unchanged. (b) The precedent existing in the form of *ɽ could well have led to a general predilection, in *part* of the Australian speech-area, to pronouncing *t, *n and *l with conspicuous retroflexion. Retroflexing would have evolved into a highly favoured way of pronouncing the single series of apical consonants – but especially, as Dixon suggests, following *u. Modern Umpila could well stand as an example of this prototype – witness /kangkul/ *elbow*, pronounced [káŋ:kʊḷ], or /pata/ 1. *flat*, 2. *death adder,* heard as [pát̪ʌ]. In such a language, [ʈ, ṇ, ḷ] would have counted as the 'unmarked' apical sounds (unexpected as this may seem in the light of current phonological theory); in borrowing from neighbouring languages with phonetically non-retroflex apicals, speakers would have learned to pronounce the 'exotic' apico-alveolars [t, n, l], and so contrasts /ʈ/ : /t/, /ṇ/ : /n/ and /ḷ/: / l/ (here represented as /rt/ : /t/, /rn/ : /n/ and /rl/ : /l/ respectively) would have arisen (in contexts other than word initial).

Such a manner of genesis could thus have closely paralleled that of the contrasts /th/ : /j/, /nh/ : /ny/ and /lh/ : /ly/, which sprang from a single series of laminal consonants (Dixon 1970).

In the ancestral Pama-Nyungan tongue, spoken probably 3,000-4,000 years ago, we feel that two distinctive series of apicals would have been present, but only one of laminals (as well as of bilabials and velars). The functional load carried by the alveolar:retroflex contrast would probably have been quite low, with retroflex sounds occurring in words much more frequently than alveolars. In a sense it would seem reasonable, then, to represent the retroflex series as unmarked *t, *n, *l (and *r), and the alveolars as *t-ʳ, *n-ʳ, *l-ʳ, i.e. counting as apical sounds from which retroflexion has been subtracted. For convenience of exposition, however, and bearing in mind the requirements of practical orthographies as well as phonetic conventions, we will rest content with that part of the system of representation proposed for Nyangumarta (Hoard and O'Grady 1976) in which /t, n, l, ṛ/ are written as t, n, l, r, and /ṭ, ṇ, ḷ/ are symbolised rt, rn, rl. That is, retroflex segments are interpreted as clusters of /ṛ/ with /t/, /n/ and /l/ respectively. The alveolar flap /r̃/ (typically with trilled realisation syllable finally) is not now held by this writer to be derived in any sense from /ṛ/, and is written here as rr for convenience' sake only.

In languages such as Warlpiri and Nyangumarta, the imbalance in the frequencies of occurrence of the two apical series is maintained down to the present day – the retroflex segments occur in lexical items much more frequently than the alveolars. In modern Warlpiri, moreover, speakers from different dialect areas vary in their internalisation of certain lexical items containing an apical segment or segments; some will use a retroflex pronunciation, others an alveolar (Kenneth Hale, p.c.).

Gawurna

The next language to be examined is the extinct Gawurna tongue of South Australia. Considerations of geography might lead one to expect that the *genetic* linguistic distance between this language and, say, either Bayungu or Gupapuyngu might be also as remote as for any conceivable pair of Pama-Nyungan languages. This is quite clearly far from being the case. It comes as no great surprise, then, that the third person plural pronoun documented for this language in Teichelmann and Schürmann (1840) is PARNA. This is clearly the etymon being investigated here. The indications are that it has supplanted a reflex of the Pama-Nyungan pronoun *jana *they* (PL) in the not-too-distant past – the closely related Initial-softening language Parnkala had YERDNA, probably /yartna/, for *they* (Schürmann 1844), a clear reflex of the latter. It seems reasonable to claim, in fact, that in the history of Gawurna the reflex of *parntung came under analogic pressure from the not-yet-obsolete reflex of *jana, with the result that the internal consonantism was reanalysed as just *rn.

There is strong reason to believe that *parntung descends in Gawurna also as the first element in a compound form, namely WORTA.BURRO (presumably /wartapur(r)u/) *all; the whole.* The apparent lenition of *p- to w is not clearly motivated, but may be related to the nasal element in the *rnt cluster; cf *parna+Y *to fall – as of rain* > Gawurna WORNE+ /warni+/ *to fall, be born.* If this is correct, then the loss of *n in WORTA. would have occurred subsequent to lenition; cf *wanyja *where* > Gawurna WĀDA and Proto-Nyungic *warnti *tail, penis* > WORTI (evidently /warti/, with rounded allophone of a) *the tail of an animal; membrum virile.*

Umpila

In Cape York Peninsula, amid a seeming sea of languages whose phonologies have undergone drastic innovation, Umpila stands out as a language in which the ancestral Pamic phonology is preserved *relatively* intact, as indicated in a preliminary fashion in O'Grady (1976). Methodologically, of course, it is our duty to scan the extant rosters of ancestral Pamic or Pama-Maric proto-forms generated by Hale, Alpher, Rigsby, Sutton, Black and others for the appropriate sub-Proto-Nuclear Pama-Nyungan reconstruction reflecting Proto-Nuclear Pama-Nyungan *parntung. In the apparent absence of such, it seems reasonable to proceed directly to the alphabetised Umpila computer printout, wherein the entry paantiku *all* (with which cf Bāgandji parnti *full, complete*) appears. Semantic agreement with the Yidiny and Wadjuk cognates is excellent, so that the areas in which some accounting is due are phonology and morphology. There are four stages, in fact, through which the Umpila form is to be derived historically:

		PNPN	*parntung
1.	loss of final peripheral nasal		*parntu
2.	cluster simplification, with compensatory lengthening of *a		*paantu [*pá:ntu]
3.	fronting of final *u following *t		*paanti
4.	high-frequency association with *+ku suffix (or stylistic root extender), followed by fossilisation		*paanti+ku > paanti.ku

Rule 1 here is shared with a decided majority of Pama-Nyungan languages. Rule 2 is strongly reminiscent of a process reported on by Dixon for the Ngajan dialect of Dyirbal, for example (1980:213), where 'a vowel plus syllable-final l, r or y (but not rr) has been replaced by a long vowel', as in *kupar > kupaa *scrub wallaby* and *jalkur > jaakuu *meat*. O'Grady (1981b) cites examples in Umpila in which an initial *y has dropped, with compensatory lengthening of the following vowel.

Rule 3 appears harder to motivate on articulatory grounds, but is attested in Umpila also in the development *ngurru *nose* > *wurru > *wutu > wuti *fingernail* (in which the semantic change is independently attested in Pama-Nyungan a number of times over); for further documentation, see O'Grady (1981a:156-157), and note Gugu-Yalanji tanti (pp.145-146 below). We have also noted, in the phonetics of Canadian Western Arctic Inuktitut, that /u/ which is flanked by alveolar consonants is fronted to [ü], as in pinngasut *three*. It would only require a subsequent unrounding rule to produce a result identical to that seen in the second vowel of Umpila paantiku and wuti. Interestingly enough, Rischel (1974:136) reports for West Greenlandic that 'the most advanced position of the tongue occurs before coronal consonants, i.e. /t, s, l/ etc., particularly if the vowel is also preceded by a coronal consonant. In such environments /u/ may be advanced so much that it lies somewhere between [ʉ] and [y] (= our [ü]) in quality (example: both syllables of /tuttut/ *reindeer,* PL)'. To cap these examples, note Egyptian Arabic [ü], consistently heard by us in the place name Asyut.

Umpila Rule 4 reflects an all-pervasive conspiracy in Pama-Nyungan, elaborated on at length in O'Grady (1966; and see pp.121, 123 herein) whereby a disyllabic root often acquires a suffixal third syllable. Even within the scope of this short study this phenomenon has surfaced in a considerable number of forms. Consider, for example, Wadjuk BANDA.NG in (1), Yaralti WARRA.ME, Gumbaynggir waarra.winy in (9), and Mirniny purnta.ngu, Warlpiri yarnta.ru in (19).

Guugu Yimidhirr

To the south-east of Umpila, beyond the territory occupied by speakers of the phonologically highly innovative Lamalama dialects, Guugu Yimidhirr is host to the form panpaarrku *whole, complete, full. . .*, as listed in Haviland (1972). Considering the relative geographic proximity of this language to Umpila, it seems reasonable to suspect that the final ku syllable counts as evidence of a shared tradition, either areal or genetic. In any event, the sharing of a third syllable, -ku, in these two languages seems hardly likely to be accidental, and impels the comparatist all the more energetically to seek a plausible reconciliation between ancestral *parntung and Guugu Yimidhirr panpaarrku. The most reasonable hypothesis which would account for the second p in the latter must presumably appeal to a rule of lag assimilation, with *parntung > *parntu > *parnta > *panta, suffixally augmented to *pantaa+rr+ku (with lengthening of V_2) > panpaa.rr.ku. The chain of arguments implied here is perhaps the most vulnerable offered in this study, and is set out with the hope either of decisive refutation or confirmation by other Australianists.

This innovation is reminiscent, in a roundabout way, of a development which Dixon (1980:177) proposes for Yidiny:

> For instance, gunda-l *to cut* in Yidiny is undoubtedly cognate with gunba-l *to cut* in neighbouring Dyirbal; the stop b has assimilated in place of articulation to the preceding nasal.

We feel that he is missing the point completely here. If he were not so dogmatic in his desire to throw out Pama-Nyungan as a genetic construct, he would note Wirangu kurnta+ *to hit – as with the hand,* Pintupi kunta+L+ *to cut. . .*, Bayungu wurnta+L+ *to cut* and numerous other cognates of the Yidiny verb gunda-l (i.e. kunta+L in the system of representation followed here). Yidiny kunta+L clearly reflects an old Pama-Nyungan verb, where by 'old' we mean something of the order of 4,000 years – not 40,000! It is thus Dyirbal kunpa+L that requires some explanation. It is highly probable that this form is not related to Yidiny kunta+L at all, but is *also* an old Pama-Nyungan root which *still* retains an original *np sequence. An excellent candidate for cognation with Dyirbal kunpa+L *to cut* is Parnkala KUNMA+ *to kill;* the latter form shows plausible evidence of a process of progressive assimilation for the feature [nasal], reinforced, in the case of *verb* roots, by nasal-initial suffixes such as +NTU+ CONTINUATIVE. . . or +NNA IMPERFECT, PRETERITE. Since neither Dyirbal nor Parnkala preserves Pama-Nyungan ancestral vowel length, the proto-form must be symbolised for present purposes as *kUnpa+. The extreme positional stability of old *np and *rnp clusters in Pama-Nyungan is abundantly in evidence, e.g., in Nyangumarta /janpa+Y+/ *to bathe,* Gidabal janpa+ *to wash,* transparently from *janpa+; or Warlpiri kurnpu *edible sap. . .*, Yindjibarndi kurnma *delicious* (Wordick, p.c.) and Gupapuyngu

gunba.la. . . *sugar bag, jam,* which we refer to *kurnpa. Yindjibarndi kurnma and Parnkala KUNMA+ show an identical type of assimilation to a nasal.

It should be pointed out that Parnkala KUNMA+ coexists with a verb KUNDA+ *to strike, beat, kill,* a cognate of Yidiny kunta+L, and reflecting *kurnta+L.

In all of the above argumentation – including that having to do with Guugu Yimidhirr panpaa.rr.ku – a major point that should be noted is that we are operating at all times in the context of a *coherent* perspective – i.e., a Pama-Nyungan one. Given the massive Australia-wide evidence for postulating *parntung as the shape of the universal quantifier under study, an argument for a particular kind of assimilation logically follows. The alternative – to regard Guugu Yimidhirr panpaa.rr.ku as lacking cognates anywhere in the continent – would be to take a stance in defiance of powerful counter-indications.

Warlpiri

For the deeply studied Warlpiri language in the north-central part of the Pama-Nyungan speech area, Hale (1974:59) reports a quantifier panu *many.* An identical form with the same meaning appears also in Mangarla. Although Warlpiri and Mangarla panu are taken here as plausibly reflecting *parntung, several troubling questions arise in this connection.

Firstly, we are claiming here that Bayungu, Gupapuyngu and Gawurna each show an /a/ reflex of the *u vowel of *parntung. If, as seems probable, these three languages are members of a relatively low-level genetic grouping within Pama-Nyungan, then this lowering rule may well be part of their recent common inheritance. The presence of /u/ in the Warlpiri and Mangarla forms raises the question as to whether the immediate common ancestor of these two languages is derived from a higher node in a Pama-Nyungan family tree than that of Bayungu, Gupapuyngu and Gawurna. Alternatively, it is conceivable that Warlpiri and Mangarla panu is a loan from some external, hitherto unidentified source.

The second question concerning panu stems from the presence of /n/ rather than /rn/ in this form. We take a cue here from Kenneth Hale (p.c.). As noted earlier, he has pointed out that in Warlpiri dialect variation, certain forms show fluctuation between the two kinds of apical sounds: in one dialect, a word is pronounced with alveolar /t, n, l/, and in another with retroflexed /rt, rn, rl/.

With regard to the loss of *t in the presumed development *parntung > *parntu > *parnu > panu, we take this to be motivated in similar fashion to, but independently of, the corresponding innovations in Bandjalang and Bayungu.

Pintupi

From the point of view of the correct identification of a reflex, plus possible derivatives, of *parntung in representative Pama-Nyungan languages, Pintupi is the most problematical member of our sample. This is the case despite, or perhaps in fact because of, the so far unprecedentedly large size of its published lexicon. Hansen and Hansen are, indeed, affording us a glimpse into

what a full-fledged Pama-Nyungan etymological dictionary would look like: an assemblage comprising from 1,000 to 2,500 roots and their reflexes in representative daughter languages, with histories every bit as convoluted as is routinely the case in Indo-European.

If one assumes that the lowering of *u took place in Pintupi in the context *Carnt__ as well as with preceding *rn or *rl, exemplified in (6) and (10), then the Pintupi form which phonologically can be taken to represent the outcome of *parntung in this language is parnta.ny+pa *very old female animal. . . old woman who has had MANY offspring* (our emphasis). Semantically, it remains for the implied development to be justified as being 'reducible to generally attested semantic associations' (Bynon 1977:62). If the association involving *OLD FEMALE ANIMAL, OLD WOMAN* with *ALL* was indeed mediated by way of *MATURE, ALL-KNOWING* here, then Pintupi puntu. . . *initiated man. . .* ; *big, great, important* would appear as a further possible outcome of *parntung, with the u vowels possibly replacing pre-Pintupi *a's through being symbolic of bigness or importance.[1] Alternatively, puntu could have evolved semantically as follows: *ALL* > *MANY* > *BIG/IMPORTANT* (and hence *INITIATED*).

From a semantic viewpoint, it is not possible to feel highly confident that Pintupi parntu *salt; salt lake* has anything to do with *parntung; still, it is conceivably a loan from an unknown source lying outside the domain of the *u > a shift implied in (6) and (10). Possibly the horizon-to-horizon sweep of some of the larger inland playas was conceptualised as being *ALL*-encompassing.[2]

Perhaps *parntung has its least problematic reflection in Pintupi yarna.ngu *people, body. . .* This could have happened by way of borrowing from an Initial-dropping source such as Arandic, but as emphasised already, we feel that there is excellent reason to claim that the Initial-dropping process already has a good head start *in Pintupi itself!* If phonological and semantic comparison is made directly between Pintupi yarna.ngu and Gawurna PARNA, then a strong case can be made for the sharing of an innovation: *ALL* > *THEY* (> *PEOPLE, BODY* in Pintupi). In Pintupi also, *p- > Ø- > y-; and the ubiquitous Pama-Nyungan stylistic root extender *.ngu made its appearance on *yarna in numerous forms. In possible contradiction to this claim, it should be pointed out that the semantic change *THEY* > *PEOPLE, BODY* and the addition of *.ngu may just possibly be shown ultimately to be correlated; most evidence seems to indicate, though, that such striving for deeper analysis is a reflection of a vain hope. If the .ngu in Mirniny purnta.ngu *stone,*

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[1]Later herein, we make the claim that ancestral *tarntu(+rr) *tight, taut, firm* appears in Pintupi as tuntu.rn+pa *...nipple of a girl at the* yukarra *stage*, in which the vocalic substitution may reflect the same symbolism. See, however, pp. 147-148.

[2]The same kind of conceptualisation is perhaps reflected in the history of *kuju (> Pintupi kuju *one, only*, Gawurna KUTYO *little, few, the rest*, Umpila kuthu *some*) – cf. Nyangumarta kuju.rl *alone, lonely*, kuju.ngu.rru *sea;* the semantics of the latter may have been mediated through *UNIVERSAL (WATERY DOMAIN)*, and Wadjuk GUDJYT *the sky; the firmament* could belong here also. An alternative hypothesis relating to the semantic history of Pintupi parntu appeals to ANTONYMOUS meaning shift: if we assume the semantic change *ALL* > *NOTHING* for one of the reflexes of *parntung, then by specialisation the latter could have come to focus on the *NOTHINGNESS* of the seemingly limitless dry salt lakes. Fuel for this theory is provided by PPN *paki *everything*, which descends in Lardil as paki *everyone, everything*, in Nyangumarta W as /waki.ji.kirra/ wakijikirri *all, everyone* and in Yidiny as paki.l *another* (cf. Waalubal pantang and the relevant Yidiny and Nyangumarta evidence cited on p.126). By way of semantic contrast, the Gupapuyngu reflex, waki.n.ŋu, is glossed *nothing* by Capell (p.c.) and as *illegitimate, belonging to no one, uninhabited place* by Lawton and Lowe. Heath (1980:219) cites Ritharngu wakin(ŋu) as meaning *bad, no good.*

Whatever the correct etymology of Pintupi parntu may be, the problem of its a...u vocalism must count as remaining unresolved.

cited in (19), be the same creature as the .ngu in Pintupi yarna.ngu or in Gariyarra maya.ngu *right hand,* then any attempt to recover earlier semantic content for presumed ancestral *+ngu would appear doomed to failure.

Although Koch, as indicated elsewhere, views a large segment of Pintupi y-forms as loans from an external Initial-dropping source, we would reiterate that *many* such y-forms which ancestrally began with *p underwent a *p- > Ø- > y- innovation spontaneously within the Western Desert language. We cited Yidiny and Bayungu evidence (O'Grady 1981a:160) to demonstrate that in contradistinction to these two typical Pama-Nyungan initial-retaining languages, Pintupi has undergone the innovation in question in roughly one-fourth of pre-Pintupi *p- forms. A further argument along these lines centres around final high vowels: if ancestral *piku(+ny) descended in Arandic, say, and then entered Pintupi as a loan, then how does it appear in the latter as yiku *face...*? Did it pass from Arandic into Western Desert *before* the merger of vowel finals in the former? If it is such an old loan, i.e. borrowed by Proto-Wati (including Warnman) or even Proto-Nyungic, does it show this by appearing with initial y- in a goodly scattering of their descendants? These are searching questions indeed, and force us also to face the question of whether, e.g., Arandic Initial-dropping is much older than Arandic merger of vowel finals. To sum up: the most plausible hypothesis concerning the evolution of Pintupi yiku is, to us, one that posits Initial-dropping *within the Western Desert language.*

Nyangumarta and Wembawemba

Two further Pama-Nyungan languages examined for the purposes of this study – Nyangumarta and Wembawemba – are not documented as showing plausible reflexes of *parntung. Quite possibly, the etymon under investigation is still present in the former, but lies hidden in a little-used part of the lexicon – much like the ancient Indo-European element were. lying half hidden in English were.wolf. Otherwise, Nyangumarta is to be seen as being entirely analogous in this regard to the hypothetical Language G used in exemplification in our opening remarks, since (a) *parntung appears *guaranteed* as having descended at least into Proto-Nyungic, an intermediate ancestor of this language,[1] and yet (b) Nyangumarta appears nevertheless to lack a reflex.

The lack of a documented reflex of *parntung in Nyangumarta, then, is of no particular significance with regard to the genetic affiliations of this language. Rather, as noted earlier, it is to be seen as a typical example of the largely random give-and-take pattern of lexical retention and loss in languages of the world.

Wembawemba, on the other hand, appears to have no close relatives among the other eleven Pama-Nyungan languages being studied – conceivably its genetic relationship to each of them is not a great deal closer than that of English to Russian. The chances are greater, then, that this language will not be represented in a given Pama-Nyungan cognate set; a given proto-form could,

[1]Note that we adhere wholeheartedly to Hale's assignment of Nyangumarta to the Nyungic (~ South-west) Branch of the Pama-Nyungan Family – a genetic grouping whose members' territories cover over 40% of the area of Australia. Our evidence for the reflection of *parntung in Nyungic comes from Wadjuk, Gawurna, Warlpiri and, putatively, Pintupi. As indicated elsewhere, Bayungu (as well as some of its neighbours) and Yuulngu may belong in a closely related, but distinct, Kanyara-Yuulngic grouping.

for example, be assignable to a *sub*-Proto-Pama-Nyungan level of reconstruction only – to the common ancestor of Nyungic and Kanyara-Yuulngic, let us say.

At times, this paper has seemed to raise more questions than it has answered. Perhaps this is inevitable in a field such as comparative Pama-Nyungan in which perhaps three hundred person-years of basic research still needs to be done – let alone in comparative Australian! Despite the tentative nature of some of the conclusions offered herein, much seems to be emerging in the nature of backup for Hale's claim of the early 1960s to the effect that Pama-Nyungan is the largest *coherent* genetic construct in the Australian linguistic picture.

Ngandi, Mawng and Ungarinyin

As indicated earlier, we have yet to turn the spotlight on Ngandi, Mawng and Ungarinyin as examples of languages seen by Hale as lying *outside* his large Pama-Nyungan Family. To the extent that Hale is correct in envisaging such languages as being ultimately 'relatable' to Pama-Nyungan only in a phylic, rather than in a familial, sense, there should be far less likelihood that a run-of-the-mill Pama-Nyungan proto-form such as *parntung could be mapped in some sense across to plausible cognates in these languages. We now turn our attention, then, to these three prefixing tongues.

Search through Heath (1978b) and Capell and Hinch (1970) does indeed confirm our negative expectations: no element – either root or affix – appears to be present either in Ngandi or in Mawng which could be counted as being plausibly relatable to *parntung. Ungarinyin, on the other hand, *does* show strong surface indications of a nugget which could conceivably be mapped across to this Pama-Nyungan etymon. The third person non-singular independent pronoun in this language is pantu![1] The possibility for a justifiable mapping of this form across to *parntung may be more apparent than real, however: Coate and Oates (1970:28) clearly identify the p as a plural prefix – witness antu *he* (Noun Class I), ny+antu *she* (Class II), w+antu *it, e.g. tree, stone* (Class III) and m+antu *it, e.g. shade, cave* (Class IV). We are clearly faced with a root antu here. Hale assigned Ungarinyin to the Wororan Phylic Family (O'Grady, Voegelin and Voegelin 1966:35), and what is obviously needed now is a detailed reconstruction of the evolution of Ungarinyin from Proto-Wororan through Proto-Ungarinyinic, so that the history of Ungarinyin antu might be more confidently assessed.

In the meantime, we would venture the following speculation: at a point far back in the pre-Proto-Pama-Nyungan past – possibly 8,000 to 10,000 years ago – *parntung may already have 'pre-existed' in something like ancestral *pa(r)ntu shape and functioned as a universal quantifier. During a remote past stage in the evolution of the Wororan and other northern 'prefixing' languages, *pantu, the generic noun *mayi *vegetable food* and possibly one or two other generic forms came to occur 'in syntactic construction with a specific noun, most frequently immediately preceding it' (Dixon 1980:273). Thus there arose noun class systems highly similar in a number of respects to those of Bantu languages. In the process, *mayi underwent truncation, when

[1]Fluctuating to pantun when it has specifically *plural* reference.

occurring in such syntactic constructions, to *m(a)+; conceivably *pantu contracted to *p(a)+[1] in entirely parallel fashion. In another context, *pantu survived into modern Ungarinyin as a general third person pronominal element antu (cf. Bayungu parnta), allowing speakers to generate the forms cited above.

The extremely archaic, and quite possibly Proto-Australian universal quantifier *pa(r)ntu would meanwhile have come under pressure to acquire a final consonant, as the Pama-Nyungan scenario put forward with superb insight by Hale (in Dixon 1980:318-320) began to unfold. In addition, contrasts such as *-nt- : *-rnt- ([-nt-] : [-ṇt]) would have become firmly established, so that *pa(r)ntu would have evolved into *parntung. Subsequently, in later Pama-Nyungan, the final velar nasal would have gone into limbo again in *roots* in all of the languages being examined here excepting the Bandjalangic dialects. In languages such as Warlpiri, however, it was destined to survive as a result of the reanalysis of ERGATIVE and LOCATIVE case markers.[2]

With regard to the appearance of material in a given Australian language which can plausibly be counted as a reflex (or cognate) of *parntung, Nyangumarta and Ngandi, say, equally score a 'minus'. In the same sense, however, neither modern German nor Hungarian shows a reflex of an extended zero-grade form of PIE *d^heu+$_1$, namely *d^hw+el+ (> PGmc *dwel+ > Old English dwell+an > Modern English dwell). On the basis of extremely copious inherited IE material in German, of course, there is no question whatever but that this language is an integral member of the Indo-European Family; Middle High German twell+en *to delay, harass* was simply not destined to survive into modern times, so that we are merely being treated here to yet another example of the obsolescence of a form in a language. The absence of a reflex of PIE *d^hw+el+ in Hungarian, on the other hand, is part of a *systematic absence* of Indo-European material in this language (apart from loans such as barát *friend; friar,* mediated through Slavic from PIE *b^hrāter+ *brother,* or hét *seven,* thought to represent PIE *septṃ in this language).

In view of the Dixon attack on the validity of Pama-Nyungan as a genetic construct, it behoves conscientious Australianists who are doing continent-spanning comparative work to make a concerted, impartial attempt to trace a given etymon ultimately in *each and every Australian language in which it appears,* as well as its borrowed form in whichever Papuan languages, such as Miriam, it has penetrated. Contrariwise, if a strong case can be made for the entry of Papuan (e.g. Kiwaian) or Austronesian loan material *into* an early stage of Pama-Nyungan, then an exhaustive search for the etyma in question should likewise be made in *all* Australian languages. The results of such research, weighed together with the results of the further intensive comparative study of Australian phonological, morphosyntactic and semantic systems, should lead once and for all to *balanced* genetic and typological classifications of the Australian languages.

In the context of such exhaustive study we are confident that the vast majority of widely distributed etyma will turn out to have a provenience correlating closely with the boundaries of the Pama-Nyungan Language Family as delineated by Hale. When individual languages are then sampled with a view to determining the population of such etyma, we feel strongly that tongues

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[1]Unless, perhaps, *p(a)+ is to be derived from *paarru *person,* which may be the source of the Ungarinyin third person plural subject prefix pirri+.

[2]Nyangumarta /+lu ~ +ju/ 'ERGATIVE' shows not a trace of this, but /+ng.a ~ +ja/ 'LOCATIVE' reveals a survival of what was formerly a noun-final *ng.

such as Yidiny, Pintupi and Wadjuk will be found to reflect 40-70% of the total inventory of proto-forms – even given the fact that no reasonably complete dictionary of an Australian language has yet been published (cf. Dixon 1980:2). Tiwi will presumably figure in 1% or less of all instances. Where languages such as Ngandi, Mawng and Ungarinyin will exactly fit in this picture, only time will tell. We hazard the estimate herewith, however, that each of these three languages will be represented in not more than, say, 3% of the 1,000 to 2,500 cognate sets which will without a doubt eventually be assembled.[1]

A control form: PNPN *tarntu(+rr)

In the case of *parntung *all,* it would be useful for present purposes to be able to cite the reflexes, across Pama-Nyungan, of a further proto-form of minimally differing shape. In this way, we may reasonably hope to count such a form as offering at least a *partial* control over the degree of reliability with which the hypotheses advanced concerning purely *phonological* innovations can be invested. We aver 'partial control' advisedly, since the rôles of analogy, expressive formations, baby talk, taboo-deformation, sound symbolism and diffusion in Australia are still far from being understood in detail, though recent important work by Heath especially (1978a, 1980, 1981) has thrown much new light on the lastmentioned.

The reconstruction selected for this purpose is PNPN *tarntu(+rr) *tight, taut, firm; stubborn.* The reader is urged to judge independently – allowing for the abovementioned six factors – the proportion of the hypotheses generated which can stand the test of searching scrutiny from scholars in this enormous field.

Our choice of *tarntu(+rr) as a control form is motivated not only because it shares a string of five medial segments, *__arntu(__), with *parntung. It also represents a highly marked morpheme shape in PNPN. This is partly due to the fact that only 5% or so of all proto-forms of PNPN appear to be reconstructible with an initial *t. A further contributing factor is the strong pressure, in ancient times as well as in modern, for configurations such as *tV(r)ntV to bow to the effects of dissimilation or haplology. Among the thin scattering of surviving forms, the task of identifying potential cognates is made relatively straightforward. The reduction in the degree of difficulty (vis-à-vis the 'average' situation) in unearthing correct etymologies is roughly comparable to that experienced in the study of PNPN *yamu (cf. O'Grady 1981b:267-269).

Of the twelve Pama-Nyungan languages drawn on in the reconstruction of the Universal Quantifier *parntung, eight show plausible reflexes of *tarntu(+rr). One of the four languages lacking a reflex in the available data base is Yidiny. For the geographically close Dyirbal language, however, Dixon (1972:400) documents a pala-class noun tantu as meaning *tree, wood* in the Dyalnguy (mother-in-law language) of its Dyirbal dialect. We take this form as constituting evidence for the same tradition of phonological conservatism in the descent of vocalic segments whereby the vocalism of *parntung remains unchanged in Yidiny pantu. Whether this Yidiny-Dyirbal tradition might result from *diffusion* rather than direct inheritance, manifested in the borrowing of forms with conservative vocalism, let us say, by one or the other language in which

[1]In view of the gargantuan amount of work involved, this will far more be by dint of the efforts of others than of this particular writer. What is required is clearly a team effort.

a rule such as *Ca(C)Cu > Ca(C)Ca may have operated, is not possible at this time to demonstrate. It does seem clear in an areal sense, though, that the geographical region in which the Yidiny and Dyirbal speech-areas are included constitutes a zone of conservatism in the reflection of certain vocalic configurations in disyllabic roots – including *Ca(C)Cu. Sets such as (17) would appear to point to an overlapping but much larger area in which shapes of the type *Ci(C)Ca(C) retain their vocalism – witness PNPN *pintam > PP *pinta > Uradhi winta, Guugu Yimidhirr pinta, etc.

The diachronic semantics of Dyirbal D Dyalnguy tantu (TAUT > HARD/HARDWOOD > WOOD/TREE) represents a by no means unique development in Australia: witness PNPN *mankarr *hard, hardwood* > Gidabal mankarr *red gum (several sp.),* Waalubal mankarr *sp. gum-tree.*[1]

To the north of Yidiny and Dyirbal appears a zone of languages in which evidence is slowly accruing for a vocalic innovation, albeit of an extremely constrained nature: *u > i /t__#, i.e., *u fronts to i word-finally following *t. This is seen in Umpila in *ngurru *nose* > *wurru > *wutu > wuti *nail, claw,* (noted above), as well as in *parntung *all* > paanti.ku *all.* What of a possible reflex of *tarntu(+rr) in Umpila? The answer, frustratingly, is that no form for *hard* (as the antonym of *soft*) was elicited in this language, nor appeared in texts; note, however, the intriguing Wik Mungkan form yanta.mp *hard* and Kaantju yanta.pa *hard,* both recorded by Hale (*t- > *j- > y- ?). To the south, the lexical item tanti is documented in Gugu-Yalanji, and answers to *hard, unbreakable, tough, strong, durable* (Oates and Oates 1964b:88). Note also Mulurudji tanti *hard,* documented in Hale's Test List for the language. The final i is seen here as indirectly corroborating, i.e. in an areal sense, the above claim that unstressed *u following *t descends as i in Umpila. What is emerging, in other words, is evidence for a Yidiny-Dyirbal-... zone of conservatism in the descent of unstressed *u which followed *t, and to the north, an Umpila-Gugu Yalanji-... innovative area. Clearly a great amount of further research is necessary before it will be possible to delineate the boundaries of these two areas realistically. In the case of Guugu Yimidhirr, the available evidence is inconclusive, since the etymon under close study as a control form appears in its extended variant, *tarntu+rr (> tuntu.rr *white gumtree sp.*). Final liquids certainly exert a profound effect in Pama-Nyungan in blocking or triggering vocalic change, and the tuntu.rr reflex here may well betray the former effect resulting from the [+bk] feature of the final rhotic. This, in turn, could have triggered – or permitted – the anticipatory assimilation of the *a to the *u – a stage not yet attained in Bandjalang tantu.rr *strong, hard, able, capable; hot – of sun* or Waalubal tantu.rr *hard* (Waalubal tanta.y.kam *old man ('capable/knowledgeable one')* and perhaps tanti *to embrace, cuddle ('hold TIGHT'?)* appear as further reflexes illustrating the varying effects exerted on V_2 – diachronically at least – by consonantal segments following it).

The domain of the Umpila-Gugu Yalanji-... rule whereby unstressed *u fronted to i following *t is extremely limited – perhaps only one in five hundred forms would have had the necessary

[1]Evidence for the ancestral referent of *mankarr comes from Bandjima, Yindjibarndi mankarr *hard,* Ritharngu man'ga 1. *hard ground* 2. *white clay* and Gupapuyngu maṉ'ka *red and white clay (mixed).* Pintupi mannga *stubborn* illustrates another direction which semantic innovation has taken. This form is a blend of *mankarr and *puulngu *soft* (the latter descending in Umpila puulngu *soft, gentle – of wind,* Gupapuyngu bul̲ngu *soft (ground fruit),* Ritharngu bul̲nu' *fine, powderlike, in fine pieces; ashes*); and contrariwise, Pintupi nyunnga *soft* is a blend of *puulngu and *mankarr (O'Grady 1981b:269), with its evolutionary history being still further complicated by Initial dropping.

*CV(C)tu configuration in PPN or PNPN for it to be able to operate. It is worth noting, however, that elsewhere in the Pama-Nyungan speech-area, Yuulngu shows independent evidence, though of a slightly differing nature, for the fronting of *u in the V_2 position following an alveolar: Gupapuyngu mani *neck, creek,* a probable cognate of the forms cited in (10), and mali' *shadow, photo, image* (also attested for Ritharngu), no doubt to be added to (12). The seemingly haphazard appearance of the final glottal stop in the latter form almost certainly has nothing to do with the *-ng of ancestral *malung, but instead bespeaks an interdialectal borrowing history in which the influence of the Arnhem Land glottalisation *Sprachbund* was decisively felt in certain forms, but passed others by.

On the basis of instances of the reflection of *parntung such as Bayungu parnta, Gupapuyngu manda and Gawurna PARNA (all showing assimilation of *u to *a), the question arises as to whether the *u of *tarntu(+rr) has undergone the same assimilation in these three languages. The answer in *all three* cases is positive. In Bayungu, the reflex is tharnta.rn *firm – as of breasts* (with which compare Nyangumarta W tarnta.rn 1. *tight, taut* 2. *faultless (enunciation),* the non-etymological .rn having the effect of creating a pseudo-reduplication; cf also the English loan purarnpurarn *frying pan*). In Gupapuyngu, dana.tju+N is *to be or become stiff, taut, tight,* in which dana. reflects *tarntu and .tju+N is a verb formative descended from PNPN *juu+N *to put; to put (words in a person's ear),* i.e. *to say* (cf. Dixon 1980:405, where he reconstructs *DHu+n *to put*). The loss of the second *t here is seen as part of such a commonplace phenomenon that it should by now appear plausible as an innovation (once again, cf Black 1980), even though it cannot yet be predicted for any given starred form (the high-frequency association of suffixes having homorganic nasal + stop initial consonantism with particular roots only, leading to haplology, must surely to some extent be idiosyncratic).

Other parallels to this *t loss in Yuulngu exist. Consider, for example, PPN *walngka *breath, voice* > Gupapuyngu waŋa *to talk, speak, tell* and Ritharngu waŋa *to speak, talk;* other reflexes include Pintupi wangka *speech, talk* and wangka+Y+ *to talk,* Dyirbal walngka (pala-class) *breath,* Gumbaynggir ngaawa *language* (*walngka > *waangka, followed by C_1C_2 metathesis and deletion of *k); and, questionably, Lardil kang/kangka *to speak, talk – of a person; to produce characteristic sound. . .* Further examples are: PNPN *wunta *fired area, burnt country* > Nyangumarta wunta *country burnt out less than a year ago,* Gupapuyngu wuna.ki.na *fire,* Umpila unta+L+ Vintr *to burn* and (either through conscious alteration in word play, or Initial-dropping, with *w- > Ø > l-) Pintupi lunta *blackened country after fire,* lunta+L+ *to burn off a grass area and make it black;* PNPN *jalmpi ~ *yalmpi *flank, side* > Gupapuyngu djamu.rr *ribs* (*i > u following [+lab] segment and preceding [+bk] rhotic – cf PNPN *piku(+ny) *forehead* > Gupapuyngu buku *forehead,. . . cliff, face,* noted in O'Grady 1981a:156), Ngarluma, Yindjibarndi thampi *rib,* Kala Lagaw Ya thaba.y *shoulder* and Umpila yampa *ear.* In case the implied semantic developments here may be viewed as implausible (or inconceivable?), the reader is urged to suspend all disbelief at least momentarily – long enough to study the entirely independent evidence afforded by PNPN *palngkam ~ paangkal *rib.* Reflexes of the latter fully confirm, in the sense intended by Bynon (1977:61-63), the semantic correspondences shown by reflexes of *jalmpi ~ *yalmpi. These include Proto-Pamic *paangkal *shoulder* (> Uradhi, Linngithigh aghaw, Mpalitjanh angkal – Hale 1966, 1976a,b); Bakanha palngka *rib, side;* Jaabugay (Tjapukay) wangki.rr, Arabana pangki, Proto-Kanyara *pangku.rru *rib* (> Bayungu,

Thalandji pangku.rru – Austin 1981b:322); Nyangumarta pangka *section, part* S, *half of carcass cut lengthwise* W; Wadjuk BANG-GA *part of; half of anything;* Ngarluma pangkarl.pi+L+ Vtr *to split;* Pintupi yangkarl+pa *buttock area; meat cut,* yangku.ru *ear* (< *'side (appendage)'*) with Initial-dropping (*p- > Ø > y-); Bandjalang pangkim *temple, cheek* (< *'side'* < *'rib'*). Kala Lagaw Ya baaga *jaw* is possibly a further reflex, but Miriam BAG *cheek* and Mawata BAGO *chin* must surely count as pointing to possible diffusion; more study is needed to determine its direction. Further to the south, the Brother-in-law equivalent of pilu *hip, pelvis, side of hip* and a half dozen other body part terms in Guugu Yimidhirr, palngki.rr, is clearly a further outcome of the *palngkam alternant, and probably is part of a recent tradition, either areal or genetic, shared with Jaabugay wangki.rr, above. The vocalic development whereby *a > i here is apparently triggered by the rhotic extension; further documentation is needed, however.

Turning now to the reflex of *tarntu(+rr) in Gawurna, we note TANTA.NNA.KO *a heavy stick to fight with; club. . .,*[1] plausibly /thanta.nha.ku/, as fulfilling our expectations concerning the assimilation of *u to *a, based on the example of *parntung > Gawurna PARNA. The semantic change is comparable to that observed in Dyirbal D Dyalnguy tantu or Guugu Yimidhirr tuntu.rr.

In the West, Nyangumarta W turntu.rurru *firm – of breasts* shows another end result in vocalic evolution from that noted in tarnta.rn, above – and cf also Warlpiri turntu.rn.pa *incipient breasts* and Pintupi tuntu.rn+pa. . . *nipple of girl at* yukarra[2] *stage.* More work is needed to determine whether the u...u pattern here stems from an innovation in the immediate common ancestor of Nyangumarta, Warlpiri and Pintupi; whether it reflects diffusional forces at work; and over and above these considerations, whether it arose through being symbolically expressive of largeness, as we have suspected in these pages. The accruing weight of evidence points more and more strongly to the probability that a straightforward process of assimilation is involved. Consider, for example, the following pairs of cognate forms in which Pintupi u...u vocalism corresponds to a...a vocalism in certain other Pama-Nyungan languages:

(20)	Pintupi	puntu	*big, great, important; initiated man :*
	Waalubal	pantang	*other* (for the semantics, see *infra*)
(21)	Pintupi	turlku	*social corroboree :*
	Gumbaynggir	taalka	Vtr: *to sing*
(22)	Pintupi	tuntu.rn+pa	*nipple of girl. . . :*
	Bayungu	tharnta.rn	*firm – as of breasts*
(23)	Pintupi	yumu	*without a care, unconcerned :*
	Dyirbal	yama	*gently, slowly. . .*

To judge from surface appearances, at least, the Pintupi evolutionary pattern which is in evidence here directly contradicts that of sets (1), (6) - (7) and (10): *both* groups of forms reflect ancestral *a...u vocalism (as in *parntung *all*). But whereas the assimilation that was identified in

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[1]This form is indirectly glossed by Teichelmann and Schürmann via a cross-reference to KATTA.

[2]yuka.rra: *girl who has reached puberty ...,* etymologically *'standing (-out breasts)'*, from Proto-Nyungic *yuka+ *to stand, stand out, extend;* his root is itself cognate with Proto-Pamic *yuku *tree, stick.* The semantic relationship *TO STAND:TREE* is recapitulated in its entirety on Vancouver Island in Kwakw'ala (Kwakiu l) λawəs; cf. also English expressions such as *a stand of pine.*

(1), etc., was seen to operate rightwards (i.e., was a phenomenon of *lag*), that seen in (20) - (23) clearly operates in a leftward direction; that is, it is *anticipatory* in nature.

A theory which recognises both lag and anticipatory vocalic assimilation in the diachronic phonology of one and the same language may not be so self-contradictory as may seem at first blush: in Warlpiri, for example, Kenneth L. Hale (p.c.) recognises different dialects, in one of which vocalic assimilation has been leftward-operating, and in another, rightward. Conceivably, then, the modern Pintupi lexicon could be of a complex stratified nature, with different layers reflecting a variety of phonological rules that have operated over the centuries in various communalects from which Pintupi has subsequently borrowed. If this be the case, then phonological innovations will superficially appear to have operated selectively as in (24), where *g- in PIE *genə+ *give birth, beget* has six different outcomes in Modern English – zero, z, ž, ǰ, g and k:

(24)

	Ø	nation – from OFR, from Latin (g)nāscī *to be born*
Mir	z	a (title of honour) – from Arabic amīr + Persian zād *born*
	g	endarme – from French gens d'armes, from Latin gēns *race, people, sex*
	g	eneral – from OFR, from Latin generālis *relating to all*
pre	g	nant – from Latin praegnā(n)s (prae *'before')*
	k	in – from PGmc *kuny+am, from PIE suffixed zero-grade form *gn̥+to+.

Elsewhere in English, a seventh reflex, č, appears – witness chin, reflecting PGmc *kinn+uz, from PIE *genw+, itself a variant form of *genu+$_2$, *jawbone, chin.*

Yet in the case of Pintupi, other possibilities exist. In at least some instances, the *consonantism* of a form may have determined the direction which vocalic assimilation has taken; consider, for instance, the rounding of *a to u which is conditioned in Mirniny by a preceding bilabial consonant, and is attested in four examples (see footnote, p.133). Then too, in a small number of cases, sound symbolism may have been at work, as has already been suggested in these pages.

If the Pintupi and other Pama-Nyungan lexicons are as multi-layered as that of Modern English, then the correct assigning of Pama-Nyungan etymologies for the vocabulary as a whole will indeed be a formidable task – even if ultimately achievable, probably, for at least 80% of the entries. But by the same token, the gain in our understanding of the nature of the evolution of natural languages will be truly enormous.

For present purposes, we leave open the possibility that we are dealing with at least two layers of vocabulary in modern Pintupi. This stance is reflected in the notations PIN_1 and PIN_2 which are employed in Figures 1 and 2 below.

In the task of moving closer to an eventual resolution of the above questions, the correct identification of many hundreds of further cognate sets will clearly be both necessary and feasible.

Within the realm of Pintupi forms which can be mapped in some sense back to *tarntu(+rr), further possibilities exist – but with still more problems in the vocalism whose full resolution eludes us as yet. Consider, for instance, tinta.rl.ka *a stiffening of body after constant lying usually associated with death.* This form, in turn, appears to share morphemic content with tinta.rl.ka+N+ *to kill* and tina.ju+N+ 1. *to hold the butt of a rifle against the body to steady it. . .* 2. *to stand one's patient in a posture with an arm outstretched. . . – of a doctor. . .* In the Dyirbal Dyalnguy note, further, the *transitive* verb tinta+L *to stand.* The implied ancestral root *tinta+L may, in fact, have existed independently of *tarntu(+rr) throughout the Pama-Nyungan era, but be mysteriously related to it in a pre-Pama-Nyungan epoch. The semantics certainly point to the plausibility of a relationship, as well as the highly marked *t...(r)nt... consonantism. The possibility seems strong that Gupapuyngu dana.tju+N *to be or become stiff. . .*, cited earlier herein, is to be assigned as a *direct* cognate of Pintupi tinta.rl.ka, etc. and Dyirbal Dyalnguy tinta+L, and should be flagged as perhaps being related further, and rather indirectly, to Pintupi tuntu.rn+pa and the other forms assigned here as direct reflexes of *tarntu(+rr).

Even greater difficulties in the secure establishment of cognation are presented by Pintupi tin.k.i+L+ *to attach. . .* (< *'to make a tight/secure connection'*, with k-infix?), tirnu+L+ *to cause to adhere to. . .* and tirna *big, great – of older men* (perhaps from *'of firm resolve, strict, authoritarian'*). Guugu Yimidhirr tintaa.l *quick, quickly,* its possible polar opposite tani *slow, quiet* and Pankarla TARNA *fast, strong* may count as further cognates, and have semantic histories extremely similar to that of English fast (< Old English fæst *firm* < Proto-Germanic *fast+ <PIE *past+ *solid, firm* – cf Armenian hast *firm*).

In view of its phonology, Wadjuk DANDA *angular; having corners like a square bottle* (Moore 1884:18) also demands consideration as a possible reflex of *tarntu(+rr). The possibility of semantic reconciliation, however, seems quite remote, and Moore's sometimes problematic transcription system militates further against the correct identification of any given etymon. If his spelling of this form in fact represented /tharnta/, then cognation with inland Nyungar tarnt (sic) *ankle* and Pintupi jarnta.rr+pa *knee,* discussed earlier at (5), seems much more likely. Such an assignment of cognation would appear to be corroborated on universal semantic grounds – English angle and ankle, for instance, represent the Italic and Germanic outcomes of the same PIE root *ank+ ~ *ang+ *to bend.*

While Bayungu murti.ny.kaji, nyama and putu.piriny /purrupiriny/ *knee* clearly represent different etyma from the above, the expression nyama tharnta.rr *bent knees* (nyama *knee*) in the close sister language Thalandji clearly provides a further cognate pointing to an ancestral (Proto-Nyungic) *jarnta. At first blush, Gawuma TARNDA *a large reddish species of kangaroo. . .* might seem semantically quite remote from what has been presented so far. There is excellent reason to believe, however, that the fleet-footed marsupials have often been named in Pama-Nyungan languages for this very characteristic – their speed being seen as a concomitant of energetic *knee action,* i.e. rapid and coordinated flexing and unflexing thereof. Note, for example, Proto-Pamic *pungku *knee* (> Umpila pungku, Uradhi wungku, Linngithigh ngko, Kuku-Thaypan nggɨ in this meaning, and cf also Umpila pungku+kuntha *good at running* cited under (5)). Bayungu provides a further cognate in pungku.rti *grey kangaroo.*

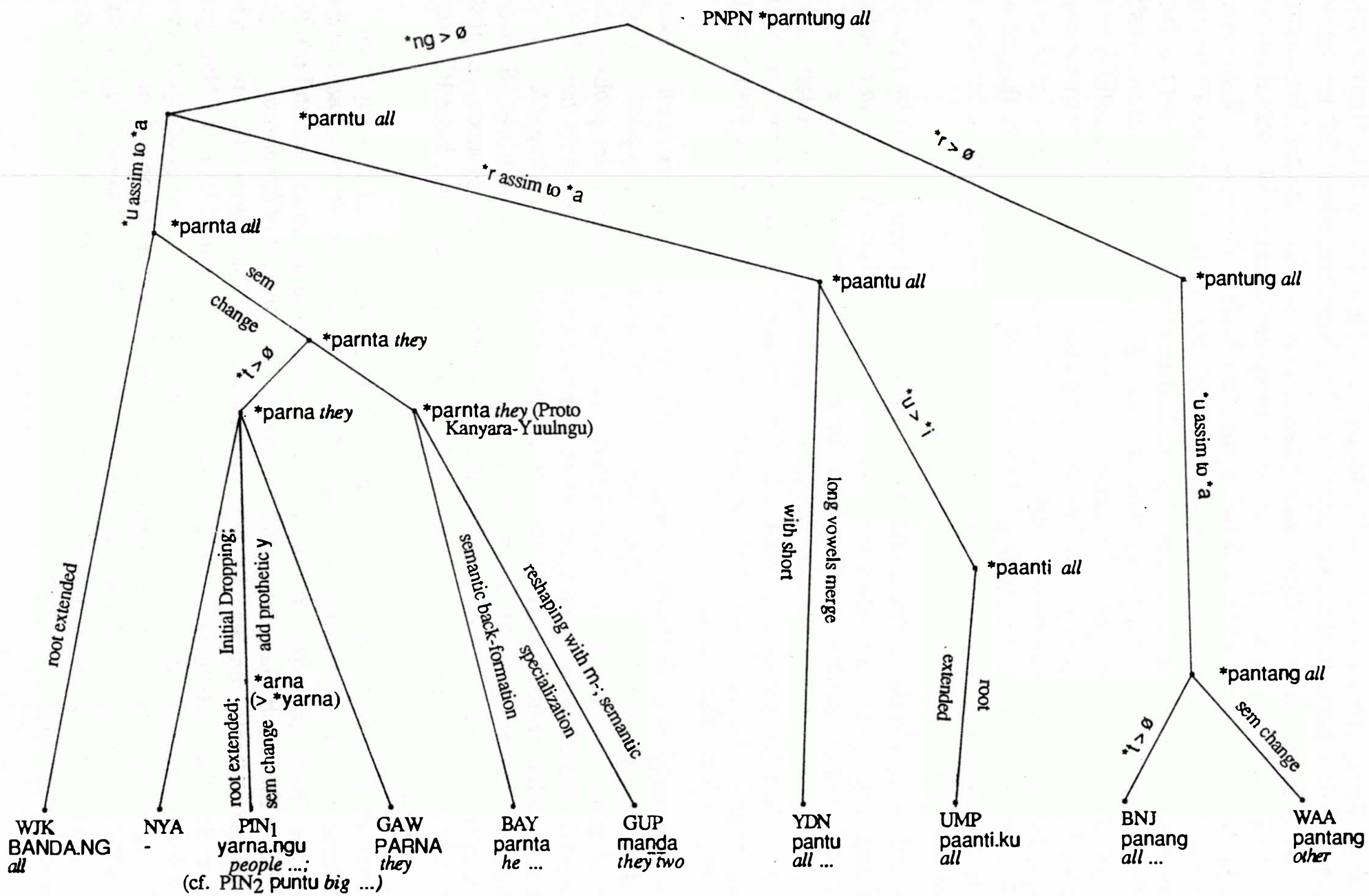

Figure 1: The evolution of selected reflexes of PNPN *parntung

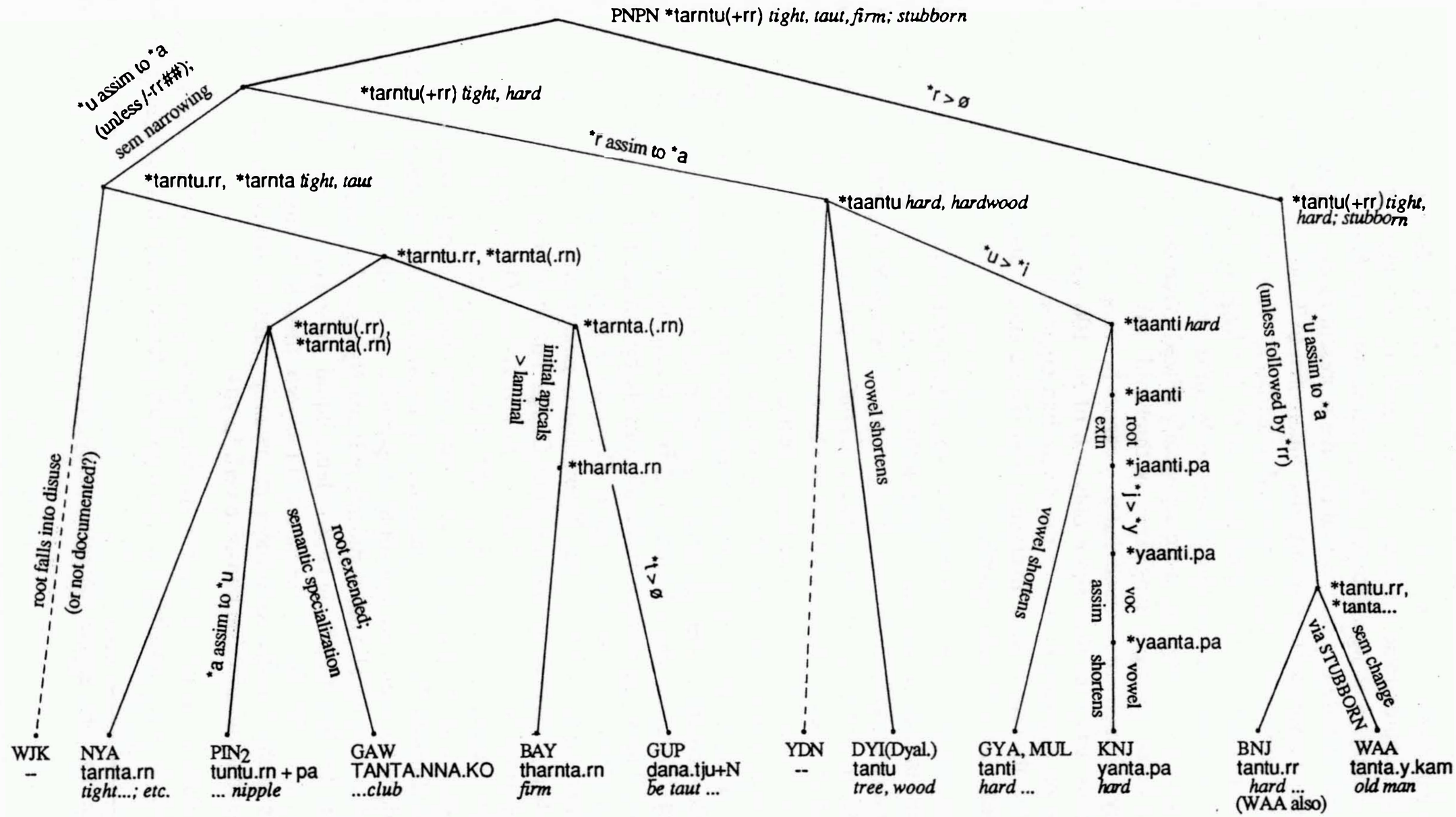

Figure 2: The evolution of selected reflexes of PNPN *tarntu(+rr)

Returning to *tarntu(+rr), we tackle the remaining task of demonstrating that the alternant with a final rhotic is approximately as much of Nuclear Pama-Nyungan age as is *tarntu. Towards this end it is necessary, pending a detailed subclassification of the Pama-Nyungan languages, that the reader accept the node in a putative family tree representing the immediate common ancestor of Bandjalang and Nyangumarta as virtually tantamount to 'Proto-Nuclear Pama-Nyungan' (cf. the question of Yidiny and Wadjuk, referred to earlier). This being so, higher-level nodes will represent the branching off of Pama-Nyungan Outlier languages only – i.e. Lardil, and possibly also some languages of the south-east such as Wembawemba. The reason for our implied claim that Bandjalang and Nyangumarta are genetically related as remotely as any other conceivable pair of Nuclear Pama-Nyungan languages is threefold: (a) their grammatical structures differ considerably – though not so much that they cannot be recognised as being genetically related in a fairly obvious way; (b) they share only 9% of the 100 items of a lexicostatistic Test List; (c) they lie on opposite coasts of the Australian continent – a circumstance pointing to the likelihood that the time of their divergence from their common ancestor lies back in the very dawn of the Nuclear Pama-Nyungan epoch.

The Nyangumarta W form which appears to be the direct cognate (except for its initial segment) of Bandjalang tantu.rr *strong, hard. . .* is parntu.rr *muscle.* But why the discrepancy in the initial? The answer appears to lie in the typical collocations in which Nyangumarta W parntu.rr occurs: it is attested far more typically in the compounds marrja+parntu.rr *physically strong* (marrja *hard, forcefully, energetically*) and manyu.rla+parntu.rr *physically weak* (manyu.rla ~ manyu.rlu *tired, lazy*) than independently. This circumstance seems to have led to a dissimilative replacement of *t with p in what would otherwise have been a long sequence of syllables containing [+cor] consonants. Earlier *tarntu.rr would then have been re-created in *all* contexts as *parntu.rr, by analogy. Conceivably, Nyangumarta W parntu *calf of leg* subsequently came into existence through back-formation when the root-final *rr was reanalysed as having derivational properties. That this could have happened is made more likely by virtue of the evidence in Nuclear Pama-Nyungan for a *+rr noun-deriving suffix. Compare, e.g., Nyangumarta pirlu *guts* (cognate with Umpila pilu *hip, thigh* < *pirlu) with Nyangumarta pirlu.rr *doughy part inside loaf of bread* or Nyangumarta piya+R+, Kaititj ya+ *to grind,* Guugu Yimidhirr piya.l *persistent, determined, hard* (< *'grinding away (at a task)'*) (< *piya+L *to grind*) with Pintupi paya.rr+pa *lower grinding stone.* The acceptance of Pintupi piyu.rr+pa *pink and grey galah* as forming a doublet with the foregoing, as well as of Nyangumarta piyu.rr.piyu.rr *galah* under the same rubric, demands merely a minimum of ornithological and phonological awareness: (a) that birds of the parrot order of creation reduce nuts, etc., to digestible proportions by a side-to-side *grinding* action of their beaks[1]; and (b) that vocalic developments in Pama-Nyungan languages repeatedly turn out to be crucially affected by a following tautosyllabic liquid consonant, as seen already, e.g., in Guugu Yimidhirr tuntu.rr. The innovative nature of the u-vocalism in Nyangumarta piyurrpiyurr, Pintupi piyurr+pa is further attested to in Bayungu piya.rl.ji *galah,* in which formatives other than *+rr appear suffixed to the ancestral transitive verb *piya+.

If dissimilation *was* the mechanism by which pre-Nyangumarta *tarntu.rr was reanalysed as parntu.rr, then it is just possible that Wirangu karnti.karnti *hard* also evolved from the *tarntu

[1] As pointed out to this often blissfully unaware writer by his practical-minded, ever-down-to-earth wife, Alix O'Grady.

alternant by way of dissimilation, but with the [+cor/+ant] specification for the *t- showing a *twofold* feature value change.

Only in the context of a massive, full-fledged comparative study of Nuclear Pama-Nyungan can alternative hypotheses to account for the evolution of such forms either be fully vindicated or decisively rejected. In the former event, Nyangumarta parntu.rr and Wirangu karnti.karnti would appear in a full-fledged Nuclear Pama-Nyungan etymological dictionary under the lemma *tarntu(+rr).

Since the surest ultimate correction to arise out of the ashes of the various classifications of Australian languages will probably be the one which rests on a careful study of *shared innovations,* it would appear reasonable to conclude this essay at least with an attempt to construct tree diagrams depicting the evolution of the various reflexes imputed to the PNPN roots *parntung and *tarntu(+rr). These are given in Figures 1 and 2.

It is clear that considerable difficulties remain to be surmounted. Thus, for the present, we are forced to recognise a minimum of two strata of vocabulary in Pintupi (PIN_1 and PIN_2 in the diagrams); in the first of these, Initial-dropping is clearly well under way (though primarily, as yet, affecting only *k- and *p-forms), and an *u in the V_2 position which is *not* preceded by a liquid is seen to have undergone assimilation to an *a in V_1. In the second, the status of Initial-dropping is less clear, but an *a which occupied the V_1 slot has unquestionably assimilated to an *u in V_2.

While difficulties remain, it must be emphasised that much has emerged that shows an essential regularity. In view of the fact that most of the materials examined (except the Hansens') probably encompass only 10-20% of the total actual lexicons of the various languages, the conclusion appears inescapable that Pama-Nyungan languages in general are indeed quite closely related genetically.

A heavy onus rests on the shoulders of those Australianists who continue to deny the *genetic* validity of Pama-Nyungan; what they are assuming is that it is possible to expand such tree diagrams for reconstructed (Nuclear) Pama-Nyungan elements as the two attempted here so as to include, more or less as a matter of course, cognate material from reasonably well-documented non-Pama-Nyungan languages, e.g., Mawng and Ngandi. If this turns out to be possible – as seems unlikely in the extreme – then they will have equalled the miracle, imputed to certain of the ancients, of transmuting base metals into gold!