CLASSIFICATION OF NORTHERN PAMAN LANGUAGES, CAPE YORK PENINSULA, AUSTRALIA: A RESEARCH REPORT.[1]

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0. Introduction

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0. Introduction. Although the bulk of this report will deal with Northern Paman, the group of languages located north of the Watson River in Cape York Peninsula, North Queensland, it seems advisable to introduce the discussion with a few comments regarding the position of Northern Paman among Australian languages as a whole.

It has long been recognized that linguistic diversity in northern Australia is greater than that in southern Australia. It has also been argued that all Australian languages are genetically related to one another.

The interrelated languages in southern Australia probably belong to a single phylic family, while in the north, some 28 coordinate phylic families are represented. Later, it will be shown that many languages situated geographically in the north, broadly defined, belong to the same phylic family as the southern ones, rather than constituting separate phylic families or aligning themselves with any northern group. This comment applies, in particular, to the Northern Paman languages, and detailed demonstration of this is the chief concern of the research being reported here.

In explaining the present distribution of related languages in cases like the Australian one, we choose the simplest possible

model for population spread, i. e., the one which subsumes the fewest and least complex separate migrations and against which there is no convincing counter-evidence. A theory which holds that diversity has developed where it is found is simpler than one which assumes separate migrations of distantly related languages into some area to explain diversity presently found there. This is the argument used by Sapir in his Time Perspectives (Sapir, 1916) to explain the present distribution of Athabaskan languages and by Dyen in his explication of the dispersal of the Malayo-Polynesian languages (Dyen, 1962). In general, the argument is a good one unless, as in the case of the Celtic languages of Europe and the California languages of North America, there is evidence to contradict it.

More than one kind of evidence can be marshalled to show that the simpler model is valid for Australia and that the center of dispersal is in the north. Any competing theory which holds that the center of dispersal is in the south must also imply either a large number of separate migrations from south to north or some other equally complex manoeuvre for which there is no evidence whatsoever. The south as center of dispersal is implausible not only in view of this simplicity hypothesis but also in view of the virtual impossibility that Australia was populated by peoples entering the continent from the south.

The north of Australia is itself too broad to constitute in its entirety the center of dispersal of Australian languages. The concern of this study is, in part, to determine more exactly the location of this northern center. In larger part, the concern of this study is to document our conclusions with detailed comparative evidence. We ask whether the center of dispersal is located east or west of what is now the Gulf of Carpentaria and, by extension, we ask whether populations responsible for the interrelated languages now in Australia entered the northern part of the continent through Cape York Peninsula or at some point to the west of the Cape on the then exposed Sahul Shelf. In this connection, it is crucial to determine whether linguistic diversity in Cape York Peninsula is greater than, equal to, or less than that in the northern littoral west of the Gulf of Carpentaria.

Enough data are now available to us to establish sound correspondences which exist between the phonologically deviant Northern Paman languages and languages farther south which are unambiguously members of the rather homogeneous southern

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Australian phylic family. It can be shown that all Cape York Peninsula languages, with the possible exception of the ill-attested Babaram of the Rain Forest and certain languages in the Princess Charlotte Bay area, are related to one another, indeed rather closely, and that the area as a whole articulates intimately with the mesh of close relationships extending over the southern bulk of Australia. Establishment of phonological correspondences and reconstruction of morphemes, now possible, reveal a number of sound changes peculiar to the Northern Paman languages, and to a number of languages farther south in the Peninsula, which effectively obscure their close external relationships and account for comments by earlier writers (Schmidt, 1919; Kroeber, 1923; Capell, 1956) to the effect that these peninsula languages are, in some way, un-Australian. When these obscuring factors are removed by reconstruction, the emerging phonological system is typically Australian--the "un-Australian" features are, then, relatively superficial, being the result of extensive, though probably recent, sound changes (see below).

    In sharp contrast to the relative ease of reconstruction in Cape York Peninsula is the virtual impossibility of over-all reconstruction for the languages spoken across northern Australia west of the Gulf of Carpentaria. It is immediately evident that these languages do not belong to a single phylic family. Indeed, it is evident that many coordinate phylic families occur in the area. This is especially puzzling in view of the fact that, unlike the situation in Cape York Peninsula, most languages west of the Gulf share similar and often identical phoneme inventories and interphonemic specifications. The number of putative cognates shared by members of different phylic families, however, is exceedingly small and the possibility of tabulating regular sound correspondences is almost completely nil. Comparative work in this part of Australia falls into the category of what Carl Voegelin has called "phylum" linguistics as opposed to the more feasible "family" or "sub-family" linguistics. The American analogue would be reconstruction in Macro-Penutian as opposed to reconstruction in Uto-Aztecan or even Aztec-Tanoan.

    West of the Gulf of Carpentaria, typological similarities in phonology are superficial from the point of view of genetic relationship, whereas, east of the Gulf, typological dissimilarities are superficial and easily erased by reconstruction. If the diverse phylic families west of the Gulf are related to one another and to the geographically extensive southern phylic family to which the

peninsular languages also belong, then, following the simplicity argument mentioned earlier, the center of dispersal for all these related languages is certainly west of the Gulf of Carpentaria.

The bulk of the research being reported here has been devoted to detailing, with accepted comparative methods, the evidence supporting the position taken above. In this regard, the actual accomplishments have been:

> (1) reconstruction of Proto Paman, the common parent of the majority of peninsular languages, and

> (2) description of the reflection of Proto Paman phonology by 13 modern Northern Paman languages and dialects.

Proto Paman is reconstructed on the basis of a comparison of some 30 linguistic corpora, obtained by Hale in 1960, from various areas in Cape York Peninsula. The term Paman is derived from the stem *pama person and is applied as a tentative label for the family to which most, if not all Peninsular languages belong. The precise subclassification of Paman languages is only partially understood at present. It is known, however, that Northern Paman forms an unambiguous subgroup identifiable not only on the basis of shared innovations in phonological change but also on the basis of shared innovations in lexicon.

Although only the Northern Paman languages have been fully treated to date, a corresponding treatment of the remaining Paman languages for which adequate samples have been obtained is now under way and will, hopefully, be completed in the near future.

1. The Northern Paman languages. The Northern Paman languages are collectively termed Wik Way (/wik/ language + /way/ bad) by the Wik speaking peoples south of them, and are distinct from the languages of the latter by virtue of the startlingly different phonological system. The Watson River is the topographic correlate of the collection of isogosses separating Northern Paman from its Wik neighbors. The Northern Paman languages extend from the northern side of the Watson to the tip of the Peninsula. They share more cognate vocabulary among themselves than to the south of the Watson and they share at least the most conspicuous of the phonological innovations (see 2. below) which so clearly distinguish them from the Wik languages south of the Watson.

Thirteen samples representing most if not all the major
subgroups of Northern Paman were obtained in 1960 from informants
now living at Weipa and Aurukun Missions. These are listed below
according to the subgrouping which emerged on the basis of a
consideration of shared developments in phonological change and,
partly, on the basis of shared lexicon.

    (A)   Uraδi.
    (B)   Mpalit^{y}an̯, Luṯiɣ.
    (C)   Yinwum.
    (D)   Liṇɲiṯiɣ , Alŋiṯ.
    (E)   Ṭyaṇɲayṯ-Maṇɲayṯ-Nt^{r}wa$^?$ŋayṯ (collectively termed
            Awŋṯim), Nt^{r}a$^?$ŋiṯ.
    (F)   Ŋkot.
    (G)   Ariṭiṇɲitiɣ.
    (H)   Mbiywom̂.

In the following paragraphs, each of the languages is
identified in terms of its geographical position and, as far as
possible, in terms of published ethnographic literature.

Uraδi

The informant's designation, /uraδi/, conforms to a common
pattern of language naming in northern Cape York Peninsula, being
formed from the demonstrative /ura/ this. The speech so labelled
is similar to the one which Ray called Yaraikana (Ray, 1907) and
shares some 83% of basic vocabulary with it. It is also similar to
Capell's Bandji (Capell, 1956) and somewhat less so to Jardine's
Gudang (in Curr, 1886), also called Dyaraga (McConnel, 1939) and
Kekoseno (Sharp, 1939). Other terms which appear in the ethno-
graphic literature for the area are Ngamiti, Wɔːtati, Yumakundyi,
Muːtyati (McConnel, 1939, 1950); these, together with Uraδi, are
probably dialects of a single language spoken from the tip of Cape
York Peninsula south to the Dalhunty R. on the west and Cape
Grenville on the east. The informant whose speech is represented
in the data stated that he learned Uraδi from his father who was
from McDonnell, on the Skardon River.

Mpalit^{y}an and Luṯiɣ

These two closely related dialects were spoken in the middle
and upper Ducie River area. Judging from a comparison of our
data with the kinship terms collected by McConnel (1950), our

Mpalit^{y}an appears to correspond to her Lɔːtig, located north of the Ducie, and her Tepiti, south of the Ducie, corresponds to our Lutiɣ. At all events, the two forms of speech are closely similar. The term Lutiɣ is formed in the familiar way (cp. /lu/ this), while the term Mpalit^{y}an, not located on any published tribal map, conforms to a different pattern of tribal and horde nomenclature not uncommon in the area, cp. Itinadyana, Mba·tyana, Ulwauwutyana (McConnel, 1939).

Yinwum

This term (cp. /yin/ this) is easily identifiable in the ethnographic literature (see, e. g., McConnel, 1939). The language so designated was spoken south of Moreton on the Batavia River and west to Cox Creek.

Liṃiṭiɣ and Alŋit

Liṃiṭiɣ (cp. /lin/ this) was spoken southwest of the Embley River and west of the Hey in the area called Winduwinda (Roth, 1910). This location, given by informants, does not agree with McConnel who locates her Leningiti much farther south, although still in the Winduwinda area (McConnel, 1939). Sharp's Lenngeti is located by him in the Alŋit area on the northeast side of the Embley River, at the present site of Weipa Mission--across the Embley from Liṃiṭiɣ, according to our location. It is probable that his informants gave him the term /layṃit/ (cp. /layn/ this), an alternate designation for Alŋit, and that his informants were of the latter group rather than of the closely similar Liṃiṭiɣ (Sharp, 1939).

Awŋtim and Nt^{r}a$^?$ŋit

The three virtually identical dialects subsumed under the term Awŋtim are clustered about the embouchure shared by the Embley and Mission Rivers. Mamŋayt is on Urquhart Point, while Tyanŋayt and Nt^{r}wa$^?$ŋayt (cp. /nt^{r}wa$^?$/ this) are on the lower Mission River. The term Tyanŋayt (from /tyan/ spearthrower) appears as te-ana-nadi in Roth (1910), and the other two terms are easily identified as McConnel's Mamangiti and Ndra$^?$angit (McConnel, 1939). The dialects are close to Wimaranga and Tainikwiti (McConnel, 1939) and to the Nggerikudi, alias Yupŋayt, described by Hey who rightly regarded all of the dialects spoken along the "coastline extending from Cullen Pt. to the northern side of Duyfken Point..." as belonging to the same language (Hey, 1903). The term

Awŋtim (from /awŋ/ I) is presumably McConnel's Angutimi.

Although it is separated from Awŋtim by Liɱitiɣ and Aritiɱitiɣ, Ntᵀa?ŋit (cp. /ntᵀa?/this) is more closely related to Awŋtim than to these intervening forms of speech. It was spoken around False Pera Head and the Norman River (cp. McConnel's Ndra?angit, and Sharp's Anda?aneti).

Ŋkot

The language known by this name (cp. /ŋko/ this) was spoken between the Embley and Hey Rivers south of their junction. The original site of Weipa Mission is said to have been in Nkot country. Informants state that Nkot and the presumably extinct Tᵀotɣ are closely related dialects. Both terms are identifiable in McConnel's work as, respectively, Nggɔt and Tɔːtj (McConnel, 1939).

Aritiɱitiɣ

Aritiɱitiɣ is the term applied by the Liɱitiɣ to the language originally spoken around the head of the Hey River. The term is derived from a form of the Aritiɱitiɣ verb /ari-/ to go. It is the Aritingiti of McConnel, the Aditinngeti of Sharp (McConnel, 1939; Sharp, 1939), and the Aratiniti of Capell (1956). The informants for this language used either this Liɱitiɣ term or the Ntᵀwa?ŋayt designation /aritiɱayt/.

Mbiywom

Mbiywom (cp. /mbiy/ camp) was spoken on the middle and upper Watson River and, more recently, on Myall Creek. York Downs and Merluna cattle stations are regarded by informants as being in Mbiywom country. The term is easily identified in the published literature (Mbeiwum, McConnell, 1939; Kok Mbewan, Sharp, 1939).

2. General phonological developments in Northern Paman. This part of the report consists of an abstract of the section, now complete, which details the reflection of Proto Paman phonology by each of the 13 modern Northern Paman languages and dialects.

The reconstruction of Proto Paman must still be regarded as tentative although it is believed that it will not be greatly altered by further research.

The inventory of Proto Paman consonants and vowels is as follows.

	bilabial	apical	laminal	velar
stops	*p	*t	*t^y	*k
nasals	*m	*n	*n^y	*ŋ
lateral		*l		
flap		*r		
glides	*w	*R	*y	

	front	central	back
high	*i		*u
low		*a	

Vowels may combine with the series generating component of length, thus, in addition to the short vowels above, there are the corresponding long vowels: *i·, *u·, *a·.

The comparative data indicate that all stems began in consonants and most stems ended in vowels. Most reconstructable stems are disyllabic, and long vowels occur in the initial syllable only. Clusters in reconstructions are medial only and consist of a resonant (nasal, lateral, flap, or glide) plus a stop (e. g., *mp, *nt, *lp, etc.). Of these, clusters of nasal plus stop are by far the most common. The seldom attested final consonants in reconstructions are resonants only, in particular *n, *l, *r, *R, *y. In initial position, all consonants except *l and *r are attested.

Reconstruction in Cape York Peninsula reveals a phonology which is extremely familiar in Australia, although the modern Northern Paman languages look decidedly un-Australian because of phonological developments peculiar to them.

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Most conspicuous among the many developments which characterize Northern Paman reflection of Proto Paman is the reduction of initial syllables (*CV_1) by loss of initial consonants (*C_1) and loss or other reduction of immediately following vowels (*V_1). Associated with initial reduction, and at least partially responsible for it, is a shift of primary stress (a strictly phonetic feature) from the initial to the second syllable (*CV_2) in Paman stems.

In all Northern Paman languages, except Uraδi and its sister dialects, *C_1 was lost invariably. Even in Uraδi, the prevailing tendency has been toward initial loss, although *C_1 is sometimes positively reflected in that language. Short *V_1 was lost in some languages, retained in others, and metathesized in still others. Long *$V·_1$ was shortened in all.

There was, then, a general merger of phonemic distinctions in initial position. However, these distinctions, although lost themselves, often left residual effects in segments which followed them and which survived in the modern languages, thereby giving rise to phonemic distinctions which were absent in the parent language. The ways in which phonemic split may occur in languages of the world are well known. One of them--the one which is particularly germane to Northern Paman phonology--relates to the well known fact that any phonological segment, being character-ized by a particular position and manner of articulation, has an influence on the phonetic actualization of other segments in its immediate environment. This is forcefully attested by spectrograms which show intricate phonetic intersection of structurally successive phonological elements--nasals have the effect of nasalizing adjacent vowels; laminal and palatalized consonants tend to advance or raise back vowels, and so on. In this way, conspicuous allophony develops. If a conditioning element is removed, the effect it had on adjacent segments may remain. Where different conditioning elements, each having its own particular effect, are lost from the same phonological environment, their separate effects may survive in the adjacent phones so that the latter, which were formerly allophones of a single phoneme, later stand in contrast.

Phonemic split of this kind is common in Northern Paman, and the conditions under which it occurs are often statable in terms of *C_1 or *V_1. In Yinwum, for example, medial stops (*S) were nasalized after *CV_1 in which *C_1 was a nasal. After loss of the

initial, this prenasalization survived, and, in modern **Yinwum**, prenasalized stops contrast with plain stops which also reflect medial *S but do so only where the preceding syllable began in a non-nasal. Thus,

*n^{y}ipul	>	^{n}pyul <u>you non-sg</u>,
*n^{y}at^{y}i-	>	^{n}t^{y}i- <u>to see</u>,
*ŋi·t^{y}a-	>	i^{n}t^{y}a- <u>to put on, apply</u>,
*mukuR	>	^{n}kur <u>mother's older brother</u>;

but,

*yapu-t^{y}u	>	pyu-y <u>younger brother</u>,
*ku·t^{y}i-ma	>	ut^{y}i-m <u>two</u>,
*pakay	>	kaR <u>down</u>.

It is clear from this example, and this is only one of many that could have been given, that the technical exposition of Northern Paman historical phonology must allow for relative ordering of events. Thus, the rule for prenasalizing medial stops in Yinwum must precede the general rule whereby all *C_1 were lost; otherwise, the obvious regularity in this development could not be captured. Without ordering of rules it would, in fact, be necessary to posit phonological distinctions for the proto-language which were surely lacking. In pre-Yinwum, i.e., before loss of *C_1, prenasalization of medial stops was allophonic--predictable after initial nasals. There is, therefore, no need to posit a contrast between plain and prenasalized stops for Proto Paman as there would be if there were no initial consonants to which the split could be attributed. But more important, it is also abundantly clear that linguistic change in Northern Paman can be understood only in terms of a generalized theory of Paman phonology which attempts to account for developments in languages which retain initial consonants as well as those in which initials were lost. Without this more generalized theory, the very reconstruction of initial consonants and, therefore, the correct interpretation of modern Northern Paman phonology would be impossible.

The details of the Yinwum development outlined above are unique to that language, although the point they illustrate is universally valid in Northern Paman. In the paragraphs which follow, seven major phonological developments, each attested in more than one Northern Paman language, are listed and briefly exemplified.

1. Lenition of *C$_2$.

In many Northern Paman languages, long *V˙$_1$ had the effect of leniting stops (*S) and clusters of nasal plus stop (*NS) which immediately followed them. The lenited reflexes of *S and *NS are normally voiced fricatives. Thus, in the leniting environment, */p, mp/ > /β/, */tʸ, nʸtʸ/ > /δ/, and */k, ŋk/ > /δ/, as in Liṇḭitiγ :

*pi˙ pa	>	iβa- father's younger brother,
*Ni˙ mpi	>	iβi ashes,
*wa˙ tʸa	>	aδa crow,
*mu˙ nʸtʸi	>	oδi- to swim,
*Cu˙ŋku	>	oγo- long, far;

and in Uraδi:

*pi˙ pa	>	iβa- father,
*wa˙ tʸa	>	waδa crow,
*Ca˙ nʸtʸa-	>	aδa- to hurt, pain
*pi˙ ku	>	wiγu rib,
*pa˙ ŋkal	>	aγaw shoulder.

2. Reduction of *NS.

This development is at least as wide spread as lenition. Medial clusters of nasal plus stop lost the nasal segment after *CV$_1$ in which *C$_1$ was a nasal. That is, in sequences of the type *NVNSV, both nasals were lost in the process of initial reduction. Liṇḭitiγ examples follow:

*ŋampul	>	puy we pl incl,
*ŋantu-na	>	tʳo-n where,
*ŋuŋku	>	ko there;

but, where C$_1$ was non-nasal:

*kumpu	>	mpu urine,
*wuntu	>	ntʳo- to seek,
*puŋku	>	ŋko knee.

In Yinwum and in Mpalityan, *NS lost the nasal segment itself, but the stop remained as prenasalized. Thus,

$$\text{*n}^y\text{u·ŋka-} \quad > \quad \text{i}^n\text{kwe-, u}^n\text{ka- to } \underline{\text{smell.}}$$

3. Vowel umlaut.

Vowel umlaut is not widespread but does occur in more than one language. In Yinwum, initial laminal consonants (*t^y, *n^y, *y) had the effect of fronting central or back vowels which followed in the same stem. Thus, in *CV_2, *a was fronted to /i/ if *CV_1 was short and began in a laminal:

*t^{y}ampa-	>	mpi- <u>to give</u>,
*t^{y}alan	>	lin <u>mouth</u>,
*yana-	>	ni- <u>to go</u>,
*yinta-	>	nti- <u>to spear</u>.

The vowel in *CV_1 also exerted an umlauting effect on *V_2 in some languages. In Yinwum, *i in *CV_2 was lowered to /e/ if *V_1 was *a and if the intervening *C_2 was non-laminal. Thus,

*kami	>	me- <u>mother's mother</u>,
*kampiy	>	mpeR <u>up</u>,
*ŋali	>	le- <u>we du incl</u>,
*waRi-	>	te- <u>to dig</u>;

but, with laminal *C_2:

*ŋat^{y}i-	>	^{n}t^{y}i- <u>mother's father</u>,
*ŋan^{y}i	>	n^{y}i <u>me</u>,
*may i	>	ay i <u>vegetable food</u>.

4. Loss of *C_1.

As mentioned earlier, loss of *C_1 is general in Northern Paman. Exemplification here is from Linŋitiɣ in which short *V_1 was also normally lost in initial reduction:

*pama	>	ma <u>person</u>,
*puŋku	>	ŋko <u>knee</u>,
*t^{y}alan	>	lan <u>tongue</u>,
*t^{y}aŋkaR-	>	ŋka ʔ- <u>laughter</u>,

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*kali-	>	li- to go,
*kuŋka(r)	>	ŋka- δ north,
*min^ya	>	nʸa animal,
*mulir	>	liδ tooth,
*n^yat^yi-	>	t^yi- to see,
*n^yipi-ma	>	pi-m one,
*ŋat^yu-	>	to- 1st sg oblique,
*ŋana	>	n̂a- we excl,
*wanta-	>	nt^ra- to leave it,
*wuntu-	>	nt^ro- to seek,
*yinta-	>	nt^ræ- to spear (with multi-prong).

5. Metathesis of $*V_1$.

With loss of $*C_1$, a short vowel immediately following it metathesized with $*C_2$ in many Northern Paman languages. Metathesis of $*i$ and $*u$, and especially of the latter, is quite widespread; and metathesis of $*a$ occurs in several languages. High vowels reduced to the corresponding glides, /y/ and /w/, when they metathesized and also when following /a/ which metathesized from an initial syllable. The following examples are from Awŋ̂tim:

*minya	>	nya animal,
*n^yiŋku-	>	ŋ̂kyu- 2nd sg oblique,
*t^yuma	>	mwa fire,
*mulir	>	lwiδ tooth,
*ŋali	>	lay- we du incl,
*ŋat^yu-	>	taw- 1st sg oblique.

A common restriction on metathesis is that $*V_1$ and $*V_2$ should be nonidentical, but in Aritiŋ̂itiɣ , and apparently also in Mbiywom, $*u$ metathesized from $*CV_1$ where $*V_2$ was also $*u$. Thus,

*puŋku	>	ŋkwu knee,
*yuku	>	kwu tree.

6. Loss of short $*V_1$.

In Uraδi, short $*V_1$ was neither lost nor metathesized. In Mpalit^yan̂ and Lutiɣ, $*V_1$ was sometimes lost, sometimes retained, and sometimes m̂etathesized. South of these languages, short $*V_1$,

except where, it was metathesized, was ordinarily lost. Loss of
short $*V_1$ is not examplified here, since the Liɲitiɣ examples
given earlier, to illustrate loss of $*C_1$, provide ample illustration
of it.

7. Shortening of long $*V\cdot_1$.

Long vowels, reconstructed only in initial syllables of
Paman stems, became short in all Northern Paman languages.
In some languages, they developed discontinuous reflexes flanking
$*C_2$--i. e. , a portion remained preceding the medial consonant or
cluster, and a portion metathesized to appear as a corresponding
glide following the medial. Examples are from Yinwum, first
without the partial metathesis:

$*n^{y}i\cdot ri$	>	iyi nose,
$*Cu\cdot ŋku$	>	uwu- long, far,
$*wa\cdot t^{y}a$	>	ata crow;

and, second, with partial metathesis:

$*yi\cdot pa(r)$	>	ipya-t south,
$*pu\cdot la$	>	ulwa- father's father.

In Awŋtim, contrasts among long vowels have been partially
neutralized--all $*V\cdot_1 > /ə/$. But where partial metathesis occurred,
the quality of the original vowel can be determined from the portion
which remains following the medial. Thus,

$*Ci\cdot puy$	>	ə β yuR smoke,
$*ku\cdot t^{y}i-$	>	ə δwi- two,
$*ŋa\cdot ni$	>	ənay what;

but without partial metathesis, i. e. , in cases where $*V\cdot_1$ and $*V_2$
were homorganic:

$*n^{y}i\cdot ri$	>	əRi nose,
$*Cu\cdot ŋku$	>	əγu- long, far,
$*ka\cdot t^{y}a$	>	ə δa- mother.

3. Northern Paman vocabulary. In this section a "cognate density matrix" is presented. It is given to show, in a very tentative way only, the internal relationships of the Northern Paman languages as reflected by lexicon. The figures in the matrix are the numbers of basic meanings (body parts, motion and stance verbs, pronouns, etc.), out of a list of 100, which are represented by morphs shared as cognates by the members of each pair of Northern Paman languages in the sample.

	Mpa	Lu	Yin	Tya	Mam	Nt^{r}w	Nt^{r}a	Al	Lin	Ŋko	Ari	Mbi
Ura	51	48	35	47	46	46	46	45	41	43	35	28
Mpa		80	60	53	51	52	50	51	48	45	40	40
Lu			53	59	58	59	57	52	49	39	35	38
Yin				40	41	42	42	43	40	46	48	47
Tya					89	93	86	73	54	49	41	35
Mam						91	83	69	60	47	38	35
Nt^{r}w							86	73	63	49	41	35
Nt^{r}a								80	74	50	44	36
Al									87	52	45	36
Lin										53	47	36
Ŋko											51	45
Ari												40
Mbi												

The average numbers of morphs shared as cognates by each language or dialect with the rest of Northern Paman are as follows: Uraδi shares an average of 43 cognates, out of the 100 item list, with the rest of Northern Paman; Mpalityan shares 52; Lutiɣ 52; Yinwum 45; Tyaŋayt 61; Nt^{r}wa?ŋayt 61; Mamŋayt 59; Nt^{r}a?ŋit 61; Alŋit 59; Linŋitiɣ 55; Nkot 47; Aritinŋitiɣ 42; Mbiywom 38.

The Northern Paman languages appear to share consistently
more cognates among themselves than with any outside group. This
corroborates our conclusion, based on shared innovations in
phonological change, that the Northern Paman languages form a
distinct subgroup. The closest external relationship of these
languages is with what we have tentatively designated Middle
Paman, the group of languages spoken from the Watson south to
the Holroyd River and from the headwaters of the Archer River to
the east coast of Cape York Peninsula. The average numbers of
cognate morphs, again out of the 100 item list, shared by the
Northern Paman languages with six Middle Paman languages are
appreciably lower than the averages obtained for comparisons
within Northern Paman--they are as follows: Uraɓi shares an
average of 26 with Middle Paman; Mpalitʸaṇ 26; Lutiɣ 29; Yinwum
28; all Awŋtim and Ntʳaʔŋit 27; Alŋit and Liṇŋitiɣ 26; Nkot 25;
Aritiŋŋitiɣ 28; Mbiywom 25.

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