

PAMA-NYUNGAN SEMANTICS: *BRAIN, EGG AND WATER*

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Hercus (1969:347) recognised a *brain : egg* semantic association in south-eastern Pama-Nyungan languages. It is the purpose of this paper to demonstrate a further connection with *water*, and to bring into focus the implications which this observation has for Pama-Nyungan comparative studies. If this can be successfully achieved, a further minuscule advance will have been made in the gargantuan task of elaborating a more or less complete set of strategies for the realistic identification of cognate elements in Pama-Nyungan languages. Only on this basis can one hope for an eventual first approximation to the correct establishment of the one to two thousand etyma upon which comparative Pama-Nyungan will, without a doubt, be securely founded in the end.

It cannot be emphasised too strongly that the sound correspondences between, say, Proto-Ngayarda and Proto-Pamic are extremely transparent. In fact, the sound shifts from Proto-Nuclear Pama-Nyungan to Proto-Ngayarda or Proto-Pamic are conspicuously fewer than subsequent changes leading to the more innovative of the modern daughter languages. A case in point is provided by Kurrama *nhuurtka* *ankle* and Anguthimri *kwe* *foot*, which are just as surely cognate as English *in* and Russian *в* (*<* PIE **en*).

If we assume ancestral Nuclear Pama-Nyungan **nyukal* *ankle* (using *all* available evidence), the KUR and ANG reflexes given can be plausibly derived by way of the following two series of rules (O'Grady 1966 and Crowley 1981, with modification and elaboration).

PNPN **nyukal* [nhukal] *ankle*

Vowel Assim	nhukul	nhukal	Sem encroachment on
Retroflexion	nhukurl (PNY)		<i>*jina</i> <i>foot</i>
Stem Accretion	nhukurlka (PNG)	(PP) nhukal ~ nukal	Fluctuation in initial
Intervocalic Voicing	nhugurlka	ukal	Initial-dropping
Spirantisation	nhughurlka	kual	Metathesis
Lenition	nhuwurlka	kwal	Desyllabification
Syncope	nhuurlka	kwaly	Palatalisation
Vowel Coalescence	nhu:rlka	kway	Delateralisation
Rhotacisation	nhu:rka	kwey	Raising
Fortition	nhu:rtka	kwe	Apocope
Practical Orthography	nhuurtka <i>ankle</i> (KUR)	kwe <i>foot</i> (ANG)	

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Other reflexes include PIN nyiku(.ny+pa), WJK NOGYT (appar nhuka.j) and GRY nyuku.ru *elbow*, in which the ny, j and ru extensions are probably contentless suffixes (O'Grady 1966, Wordick 1982) – cf BLG nhuku *ankle-bone, talus*. In YIM nukal *ankle*, the apparent rule whereby *ny- > n- is confirmed in PP *nyipi(.ma) *one* (Hale 1976b:24) > nupuu.n, and less directly, but at least in an areal sense, in PNPN *jaya+L *to send* (q.v.) > GYA taya ~ *to give*.

It is clear, then, that while the number of rules for the derivation of KUR nhuurtka or ANG kwe rivals that needed in Indo-European for cases such as Panjabi jīb and French langue (< *dngwha: *tongue*), in the majority of Pama-Nyungan languages the phonological changes are relatively few. If instead of KUR and ANG we had chosen another Ngayarda language – Ngarluma, and another Pamic language – Uradhi, say, we would have provided the basis for a greatly simplified picture: PNPN *nyukal descends by way of just three stages to Proto-Ngayarda *nhukurlka and on to Ngarluma nhukurlka, while *ten* rules are need in the derivation of KUR nhuurtka! And *nyukal descends in Uradhi n(h)ukaw *foot* by way of two semantic and two phonological changes only, while ANG kwe requires six further phonological rules.

The conclusion to be drawn on the basis of this and massive comparable evidence is inescapable: Ngarluma and Uradhi (and, by implication, Kurruma and Anguthimri) are languages showing absolutely clear-cut indications of genetic connection. Relatedness of this order of closeness can in no way be demonstrated for such suffixing/prefixing' pairs of languages as Ngarluma and Mawng.

Capell (1956) must now be considered as fully vindicated, *contra* the assertions of Crowley (1976), when he claims that

... *usually* in the Australian field words are either fairly obviously cognate as between languages, or equally obviously not cognate. There has not appeared the same necessity of establishing sound laws to prove connections (O'Grady's emphasis on *usually*).

Brain, egg and water

On this note, let us now build on the observations of Hercus (1969) by focussing on the comparative implications of her work. We take as our starting point Gupapuyngu (Yuulngu) nurrku *brains*. Given the task of assembling further cognate sets in (Nuclear) Pama-Nyungan, and given the obvious genetic relatedness of most of these languages, we conclude that there is a distinct possibility of finding a cognate of GUP nurrku in, say, Wadjuk in the south-west of the continent. The WJK form which counts as the phonologically most plausible candidate for cognation is, in fact, NURGO (appar n(h)urrku *egg; seeds*) (Moore 1884:63). The work of Hercus shows conclusively that there is not the slightest cause for hesitation, from the semantic point of view, in counting the two forms as cognate. For the ultra-sceptical, however, we note that in an inland (Kellerberrin) metathesising variety of Nyungar (of which WJK is a dialect), kat+nuruk *brain* is a compound of kat *head* and nuruk *egg*. There remains the question as to whether GUP nurrku and WJK NURGO, despite their formal near-identity, could in fact be counted as cognates from a phonological point of view (just as Proto-Germanic *mu:s and Proto-Italic *mu:s *mouse* bespeak common inheritance, not borrowing). There are, in fact, two factors which in combination must count as ironclad evidence that this is so.

Firstly, the correspondence between GUP -rrk- and WJK < -RG-> is attested also in GUP garrku.rlu.k, WJK KARGY.L-YA (appar karrka.lya) *clean*, GUP garrkany *chicken hawk* and WJK KARGYN (prob. karrkany). . .*hawk*, and GUP darrk.thu+N *to bite*, WJK DARGA.NGAN *to strike*. . .

Similarly, -u-u- vocalism in the one language can be shown to appear in replica in the other. There is a shortage, however, of direct evidence for an N-:n- correspondence, for the simple reason that non-peripheral nasals – and especially the apical nasal – occur only rarely as initials in phonologically conservative Pama-Nyungan languages.

The second factor, then, is the highly marked nature of the morpheme shape which we are dealing with. The initial apical nasal, even in those Pama-Nyungan languages which retain it as such, typically occurs in not more than one in a hundred forms; and the cluster rrk, while well favoured, is still only one of many possible internal consonant sequences, and is found to appear in approximately one of every thirty forms. Assuming that n- and -rrk- count as independent variables, and ignoring the fact that -u-u- vocalism is in competition with a number of other patterns, we conclude that there is something of the order of one chance in 3,000 that a morpheme of the shape nVrrkV will occur in one of these languages. We are thus put in the position of a person who is searching for a length of iron railing in a haystack rather than for a needle.

Gawurna NIRKINYA (appar nirrki.nya) [*eggs of lice; nits*] thus fairly leaps out of the pages of Teichelmann and Schürmann (1840). One feels 99% confident that this form is cognate with GUP nurrku and WJK NURGO. Assuming ancestral *nurrku, we posit the addition of a semantically contentless -nya syllable (Wordick 1982), yielding *nurrku.nya > *nurrki.nya > nirrki.nya by successive rules of anticipatory assimilation. That this is entirely plausible is seen in the closely related Pankarla, where NULKÜ.NYU is likewise *eggs of lice; nits*. German native speaker Schürmann (1844:40) confirmed the full-blown fronting and unrounding of the two ancestral *u's in the GAW form by no doubt correctly recognising the phonetically high front rounded vowel in the PNK form. The appearance of < L > rather than < R > in the spelling of the PNK form cannot as yet be explained. We surmise that it could be a matter of mistranscription or else of native speaker hyper-correction in the face of an *lk > rrk shift in closely related nearby Yura languages – witness *nga+lku+ *will eat* > GAW NGAR.KO+ (appar nga.rr.ku+) *to eat; drink; enjoy* – a case of drift paralleled in YIN nga.rr.ku+ *to eat*. As for the difference in the referent of WJK NURGO vs PNK NULKÜ.NYU and GAW NIRKI.NYA, this seems reasonably assignable as a case of semantic narrowing or specialisation in the latter two forms (cf Bynon 1977:62-63).

Further perspective on GAW NIRKI.NYA comes from Bāgandji, in which Hercus (1982:282) lists a root thirrkinya *nits*. . . This form matches GAW NIRKI.NYA segment for segment except for the initial th. Borrowing from the direction of South Australia, documented by Hercus for a number of other forms, may well be the explanation for BAA thirrkinya as well. The nasal:stop matching is conceivably to be explained in terms of the interface between adult and child language (McConvell, p.c.), and is exemplified in detail elsewhere in this volume.

Additional direct synchronic evidence for a *brain* : *egg* semantic association comes from Pitta Pitta pampu *brain, egg* (Blake 1979b:230). Consider also MDI mik+puwu *brains*, in which mik+ is a truncated form of miki *egg*.

Examination of the lexicons of a still wider range of Pama-Nyungan languages reveals a further semantic relationship – namely, that between *egg* and *water*. The following display of cognate

sets provides a mere preliminary glimpse of the massive network of evidence which goes to back up this claim.

*kaping *water*. PIN kapi, NYU kep, WJK GABBI ~ KYPBI, GUP gapu, DJN gapi, BNJ kapiing *water*; GAW KAPPE+ *to vomit*; WJI kapu.rtu, DIY KUPPIE kapi, DJR kampi.n *egg*; BAY kapu.rtu.rtu.ny *kidney* (PKM *kapu.rti.ny; see NYA W mukurtukurtu, below).

*miiju *egg, seed*. NYU mija.l *rain*; NYL miji *blood*; NYA W mija *newly-laid flies' eggs*; PIN miji.la. . .lice; WJK MINJI.NING *eggs of lice* and METJO *seed-vessel*. . .; GUP medju.ru *newly hatched fly*; DYI miju *brain*.

*muka *egg*. NYA W muku.rtu.ku.rtu *kidney* (cf BAY kapurturtuny); GAW MUKA, ARW kwa.rt *egg*; GAW MUKA.MUKA *brain*.

*ngApu *water*. NYA, DIY ngapa *water*, DYI DM ngapa+L *to immerse in water, soak*, GIP panga *rain*; PIN ngampu *egg, testes*, ngampu.ly.ka *lump which develops from infection*. . ., WLB ngipi.ri *egg*; THL ngapu.ru *brains*.

*nguku *water*. KLY NGUKI ~ MUKI/nguki/nguuki, GID kung, BAA nguku, ARW kwa.j yar *nguke water*; OOL nguku.rn+pa *egg*; PIN nguku.rta *testes*, WLB nguku.ny.pa *brain*.

*nurrku *egg/brain*. Note NYA W nurrku.l *red ochre*, and see above.

*pApu *egg/brain*. NMA, YGN, YGS papa *water*; ARB papu *egg*; PIT pampu *brain, egg*; GUP bambu.ru.ng.bu.ru.ng *brain*; YIM pampu *pus* (cf GUP boya.ra, below).

*pipi *water/egg/brain*. PP *pipi *water* (> UMP pi'i); PNK BEBI pipi *egg; any jelly like* (sic) *substance, as the brain, marrow, etc.*), KAKKA BEBI, kaka pipi *brain* (KAKKA head); NYA W extended nasal-grade form mimi.mi *brain*.

*pUyang *egg*. WJK BOYE.R *certain stones of a smooth ovate shape*. . ., KGS BWYE, 'Uduc' BOYA, GIP puyong, 'Snowy River' BOOYANG (Bulmer in Curr 1887:III:560) *egg*; GUP boya.ra ~ buya.ra *brain, pus* (cf YIM pampu, above).

Conclusion

It should by now be abundantly clear that future researchers in comparative Pama-Nyungan will be fully justified in unhesitatingly assigning as cognates forms with such seemingly disparate senses as *water, kidney, testes, egg, brain* and *pus*. A pair of forms such as Nhandawarla *egg* and Yoda-Yoda wala *water* (Hercus 1969) must needs merit more than a cursory glance. It will behove the comparativist to scan the lexical data bases of additional representative Pama-Nyungan languages and consider, e.g., PIN warli.ly.warli.lya *large hailstones about the size of a golf ball* for possible assignment to still another cognate set bearing witness to a root *wArla. (In the real world, such hailstones are, after all, both [+ovate] and [+aqueous]!)

It goes without saying that an important part of the comparative Pama-Nyunganist's task is to extend the study of semantic associations such as the above through the entire lexicon of each language. Once a further association such as *snake : meat* is suspected, it behoves the researcher to seek independent parallel evidence for the association in other Pama-Nyungan languages. Only on this basis can Pama-Nyungan cognate search move forward in a realistic manner.