

# WESTERN TORRES STRAIT LANGUAGE CLASSIFICATION AND DEVELOPMENT

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## 1. Introduction

The language of the Western Torres Strait Islands (WT) has long been regarded as a member of the Pama-Nyungan (PN) family of Australian languages.<sup>1</sup> It was Sidney Ray, a member of the Cambridge Expedition to Torres Straits, who first published explicit evidence from pronominal paradigms linking WT to an Aboriginal, and PN, language of the Australian mainland, Guugu-Yimithirr (1907: 267–8).<sup>2</sup> Some 70 years later, Terry Klokeid and Ephraim Bani showed that like languages of the Australian mainland WT distinguished an apical series of stops (/t, d/) from a laminal one (/th, dh/), and they presented full pronominal paradigms in which there was a perfect correspondence between laminal stops in WT and in languages that had come to be regarded as Pama-Nyungan (O'Grady, Voegelin, and Voegelin 1966). The pronoun paradigms (see below) constitute some of the most striking evidence for the PN membership of WT.

While we, among a number of scholars, consider it to be, in a sense, self-evident that WT belongs genetically with PN, much nonetheless remains to be demonstrated. We are currently engaged in assembling a list of etyma and in enumerating the sound changes that have characterised this language as it has evolved from proto-Pama-Nyungan (pPN). A number of sound correspondences are problematic, though we do not go into these data in detail here. The phylogenetic position of WT within PN constitutes a further set of problems. Again, we do not deal with these issues here, beyond repeating the observations of others that the languages of the nearest portions of the mainland do not appear to be closely related: that is, WT is not Paman.

It is thought that WT reflects heavy linguistic influence from Meryam, the language of the culturally similar people of the Eastern Torres Strait Islands. Meryam has been shown (e.g. Evans 2005: 255–256) to be related to languages of the Papua New Guinea mainland—to be a “Papuan” language of the Trans-Fly family (Eastern subgroup). Some features of WT seem consistent with a hypothesis that WT is a superstrate language, carried by migrants from the

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<sup>1</sup> For the genetic status of Pama-Nyungan, see Alpher (2004) & Evans (2005) and references. For the position of the Western Torres languages in this classification, see O'Grady, Voegelin and Voegelin (1966:25,55), Capell (1956), and Schmidt (1919). We thank the audiences of ICHL 2007 and LingAd (ALS) 2007 for feedback on a summary of the work presented here.

<sup>2</sup> Although note that Ray (1897:16) describes WT as a ‘Papuo-Australian’ language; that is, he classed it as Papuan, with considerable Australian features.

Australian mainland, with a “Papuan” substrate.<sup>3</sup> But it is possible that some (or none) of the changes we discuss here have their origins in language contact or language shift. The details of WT’s shared history with Meryam remain to be studied.

The most abundantly documented WT dialects are Kala Lagaw Ya (KLY; of Mabuiag Island; Bani and Klokeid 1971; Ephraim Bani pers. comm.) and Kalaw Kawaw Ya (KKY; of Boigu, Dauan, and Saibai Islands; Kennedy (nd), and Ford and Ober (1991)). In this paper we deal mostly with data from these dialects. We consider some of the more striking correspondences between WT and other PN languages and their status as evidence for WT’s genetic affiliation.

## 2. *PN-only features in WT*

In order to demonstrate the classification of WT, we present features which are indicative of membership of this family. While we privilege grammatical and morphological features, we do not rely on these exclusively and our claims of morphological cognacy are accompanied by lexical reconstructions.

### 2.1 *Pronouns*

One very clear piece of evidence for WT’s membership in PN is the paradigm of the 1st-Sg pronoun (Table 1), with its four partially suppletive case-forms matching those of a number of other PN languages.<sup>4</sup> It is so unlikely that suppletive forms of this type would be borrowed that we are confident in the assumption that they are inherited from pPN.<sup>5</sup>

The nominative forms of most of the WT pronouns (Table 2) continue pPN originals in a fairly straightforward manner. Those that do not have no apparent antecedents in the “Papuan” languages (See Evans 2005: 255, Table 1) or in the non-PN languages; rather, they appear to be developments within WT. The discrepancy in the initial consonants (*n* vs. *ng*, respectively) in the KLY and KKY 2nd-person pronouns is of interest here. As Table 2 shows, the KLY second-

<sup>3</sup> Dixon (2002: 129–130) holds the relationship to be the other way around: WT is the substrate. In terms of the normal understanding of the term “substrate” (see, for example, Hock 1991: 481–485 and Sankoff 2002), this claim makes no sense. His corollary claim that WT is a “Papuan” language has no basis, given the language’s clear genetic affinity with Pama-Nyungan. Clearly, however, the next stage in research on WT requires a detailed investigation of the language contact situation.

<sup>4</sup> Dixon (2002: 301) notes this correspondence in his reconstruction of Australian pronouns but does not draw the conclusion, to us obvious, that WT belongs genetically with PN. Evans (2005: 254), on the other hand, reads this evidence correctly.

<sup>5</sup> Note that the Ergative *ngath* ‘I’ continues \*ngacu (with a laminal \*C<sub>2</sub>) rather than the \*ngayku which apparently underlies the non-ergative obliques with lamino-alveopalatal /c/ (/j/) contrasting with lamino-dental /th/ (dh) in numerous PN languages. For the differing treatments, compare Kuku-Yalanji *ngayku* ‘my’ (Gen), Bidyara *ngaju* ‘my’, on the one hand, with Kuku-Yalanji *buyku* ‘paperbark’, Bidyara *buju* ‘bag’, Djambarrpuyŋu *buyku* ‘paperbark raft’, on the other. Bidyara normally continues pPN intervocalic \*c as a lamino-dental, *dh*.

person pronouns all begin with *n* whereas their KKY counterparts begin with *ng*. This correspondence can be accounted for as an analogical adjustment by KKY to bring the “speech-act participant” pronouns under a single canonical form.<sup>6</sup> However, the matter is not quite so simple, as there is some reason to believe that, at some pre-WT stage, the 2-Sg pronoun began with \**ng*.

	WT (KLY)	Diyari	Arabana- Wangkangurru	Ramindjeri	CE Arrente
Nom	<b><i>ngay</i></b>	<i>nganhi</i>	<i>anhtha</i> <sup>7</sup>	<i>nga:pe</i>	<b><i>ayenge</i></b>
Erg	<b><i>ngath</i></b>	<b><i>ngathu</i></b>	<b><i>athu</i></b>	<b><i>ngathe</i></b>	<b><i>the</i></b>
Acc	<b><i>ngoena</i></b>	<b><i>nganha</i></b>	<b><i>anha</i></b>	<b><i>ngañ</i></b>	<i>ayenge</i>
Dat	<b><i>ngayka</i></b>	<b><i>ngakarni</i></b>	<i>anhthirida</i>		<b><i>atyenge</i></b>

Table 1: First-person singular pronouns in KLY and other PN languages

The 3rd-Pl forms continue pPN \**cana* (\**dhana* is a notational variant), and additionally show oblique forms based on *thanama-*, which is shared by a number of other Pama-Nyungan languages, including those of the Yolngu subgroup (cf. Yan-nhangu *dhana* ‘they’, *dhanama* ‘theirs’). The 3rd-Du forms are also widespread, although there is evidence both for \**pala* and for \**pula*.

The WT 3rd-Sg pronouns distinguish feminine from non-feminine gender (Bani 1987) with pronouns (see Table 2) that are clearly cognate with forms that evidence this distinction in a number of other PN languages. Alpher (1987:174), Bowern (1998:158–159), and others (probably including Dixon 1980:360) argue that the gender distinction is archaic. In the Karnic subgroup, the masculine singular pronoun is reconstructible to \**nhulu* in the ergative, with variable (and analogically formed) nominative, and accusative based on \**nhi-*. The feminine forms are all based on a stem of \**nhan-*. (See also Alpher 1987 for some comparative data).

We assume that the 2nd-Sg KKY forms beginning with *ng-* are analogical creations based on the first person, and that the forms in KLY beginning with *n* (< \**ñ*) are archaic.

## 2.2 Case inflection

A summary of WT case endings is given in Table 3. Not all forms are reconstructible, and the system itself is rather unusual in Pama-Nyungan terms: plural number forms part of the same morphological system as case, with all case distinctions neutralised in the plural.

<sup>6</sup> The claim that the WT and pPN originals were \**ni* (pPN \**ñi*) and not \**ngi* is at present a matter of controversy, and the finding that pPN \**ki* > *ci* in most of the modern languages (see below) is clearly relevant to the question.

<sup>7</sup> From the dative; cognate with \**ngañca* in the rest of Karnic. In the table, forms in bold continue archaic material.

		KLY (B&K)	KKY (K, F&O)	pPN (Alpher)
<b>1 Sg</b>	Nom	<i>ngay</i>	<i>ngay</i>	* <i>ngayu</i>
	Erg	<i>ngath</i>	<i>ngath</i>	* <i>ngacu</i>
	Acc	<i>ngoena</i>	<i>ngoena</i>	* <i>ngaña</i>
	Dat	<i>ngayka ~ ngaykika</i>	<i>ngayapa</i>	* <i>ngayku/a (KLY)</i>
<b>1 ExDu</b>	Nom	<i>ngalpa</i>	<i>ngalbe</i>	* <i>ngali</i>
	Poss	<i>ngalpun</i>	<i>ngalben</i>	
<b>1 ExPl</b>	Nom	<i>ngoey</i>	<i>ngoey</i>	
	Poss	<i>ngoelmun</i>	<i>ngoeymun</i>	
<b>1 InDu</b>	Nom	<i>ngaba</i>	<i>ngoeba</i>	
	Poss	<i>ngaban</i>	<i>ngoeban</i>	
<b>1 InPl</b>	Nom	<i>ngalbay</i>	<i>ngalpa</i>	* <i>ngali (1 InDu)</i>
	Poss	<i>ngalbayn</i>	<i>ngalpan</i>	
<b>2 Sg</b>	Nom	<i>ni</i>	<i>ngi</i>	* <i>ñun</i> or * <i>ñin</i>
	Erg	<i>nidh</i>	<i>ngidh</i>	
	Acc	<i>nin</i>	<i>ngin</i>	
<b>2 Du</b>	Nom	<i>nipel</i>	<i>ngipel</i>	* <i>ñupal(a)</i> / <i>*ñipal(a)</i>
	Poss	<i>nipen</i>	<i>ngipen</i>	
<b>2 Pl</b>	Nom	<i>nitha</i>	<i>ngitha</i>	
	Poss	<i>nithamun</i>	<i>ngithamun</i>	
<b>3 non-F Sg</b>	Nom	<i>nuy</i>	<i>nuy</i>	* <i>ñu</i>
	Erg	<i>nuydh</i>	<i>nuydh</i>	
	Acc	<i>nuyñ</i>	<i>nuyñ</i>	
	other <sup>8</sup>	<i>nubi-</i> (poss <i>nungu</i> )	<i>nube-</i>	
<b>3 F Sg</b>	Nom	<i>na</i>	<i>na</i>	* <i>ña</i>
	Erg	<i>nadh</i>	<i>nadh</i>	
	Acc	<i>nan</i>	<i>nan</i>	
	other	<i>nabi-</i> (poss <i>nanu</i> )	<i>nabe-</i>	
<b>3 Du</b>	Nom	<i>palay</i>	<i>palay</i>	* <i>pula</i> , * <i>pala</i> (?)
	Poss	<i>palaymun</i>	<i>palamun</i>	
<b>3 Pl</b>	Nom	<i>thana</i>	<i>thana</i>	* <i>cana</i>
	Acc	<i>thanamun</i>	<i>thanamun</i>	

Table 2: KLY and KKY pronouns

The WT ablative ending *-ngu* (all nouns and pronouns) has cognates of the form *-ngu* in a number of PN languages, and the cognates occur over a wide area. Examples include Dyirbal *-ngum* (ablative) Yandruwandha *-ngura*, Punthamara<sup>9</sup> *-ungu*, and Proto-Yolngu *\*-ngu(ru)*.<sup>10</sup> The pPN dative ending *\*-ku* continues in WT either in *-w* genitive (common nouns except A-declension; cf. also the 1st-Sg

<sup>8</sup> The “other” stem is used for cases other than those mentioned above.

<sup>9</sup> The initial *-u-* of the suffix in Punthamara is a relic of the case marker’s status as a former article (Bower 1998:56–57). In Wangkumara and Punthamara, many cases are reflexes of inflected pronouns which functioned as articles when suffixed to nouns.

<sup>10</sup> Both *\*-ngu* and *\*-nguru* are reconstructed for pPN.

masculine genitive *ngaw*) or in *-ka* dative (all nouns and pronouns); we are unable at present to justify one of these hypotheses over the other.

	‘foodstuff’ <sup>11</sup>	‘grandchild’	‘woman’
<b>Abs</b>	<i>ayza</i>	<i>ngep</i>	<i>yæpkaz</i>
<b>Erg/Ins</b>	<i>ayzapun</i>	<i>ngepan</i>	<i>yæpkæzin</i>
<b>Poss</b>	<i>ayzaw</i>	<i>ngepaw</i>	<i>yæpkowziw</i>
<b>Dat</b>	<i>ayzapa</i>	<i>ngepapa</i>	<i>yæpkæzipa</i>
<b>Abl</b>	<i>ayzangu</i>	<i>ngepangu</i>	<i>yænkæzingu</i>
<b>Loc</b>	<i>ayzanu</i>	<i>ngepanu</i>	<i>yækkæzinu</i>
<b>Com</b>	<i>ayzaya</i>	<i>ngepiya</i>	<i>yæpkæziya</i>
<b>Imit</b>	<i>ayzadh</i>	<i>ngepadh</i>	<i>yæpkæzidh</i>
<b>Pl</b>	<i>ayzapul</i>	<i>ngepal</i>	<i>yæpkæzil</i>

Table 3: Select Western Torres case paradigms (after F&O 1991:136)

Relics of other PPN morphology include the *-l* in *kubil* (plural *kubilal*) ‘nighttime’ (added to a base \**kubi*, as recorded in *kubikub* ‘black’<sup>12</sup>), which continues the pPN locative ending \*-*la*. The locative is commonly used in PN languages to derive time adverbials; compare Bidyara (Breen 1972: 61–2) *gunda* ‘dark, nighttime’, *gundanga* ‘in the nighttime, at night’ and the more locational *bala* ‘leg’, *balanga* ‘on the leg’. PN \*-*la* (and the corresponding ergative ending \*-*lu*) is otherwise apparently lost in WT. This in itself is not very surprising, since elsewhere in the family we have evidence for the stranding of allomorphs precisely in contexts such as this. Compare, for example, Yolngu *yalala* ‘later’ (continuing the pPN demonstrative \**yala* ‘that’) with the more usual Yolngu locatives in \*-*nga*.

The ergative *-dh*, occurring on pronouns, very probably continues the \*-*ñcu* ergative alternant that is reconstructible for pPN (and to some earlier more inclusive grouping as well).

### 2.3 Verbal tense-aspect-mood

WT verbs are inflected in two conjugations, termed N and Ø (B&K for KLY) or transitive and intransitive (F&O for KKY), respectively. Tense-endings with affinities to the rest of PN (see Alpher 1990) include:

- (1) *-ngul* Yesterday Past (*-dhinnngul* with Dual subject, *-ayngul* with Ø Conj Singular subject): *ngula* is widely attested as a free-standing adverbial in senses like ‘and then’.<sup>13</sup>

<sup>11</sup> *Ayza* is probably a compound of *ay* ‘food’ (< \**mayi*) and *za* ‘thing’.

<sup>12</sup> Possibly cognate with Yir-Yoront *kolpkol+lh* ‘black’, although we know of no other cognate sets showing a correspondence of WT *b* with *lp* in another PN language.

<sup>13</sup> It is unknown as a verb-inflectional ending in mainland PN, but note that WT distinguishes other tenses, like ‘Remote Past’ and ‘Last Night’, that are not in the inventory of the typical mainland PN language.

- nu* Near Past (N Conj): cf. WT *baganu* 'speared, pierced' and Warlpiri *pakarnu* 'hit (Past)'; note that the *-u* might have been independently added in these two languages (Alpher 2004 fn). Western Desert also has *-rnu* as a past punctual marker in the L conjugation.
- ma* Near Past ( $\emptyset$  Conj): as in *mulima* 'talked'; with this compare Nonpast forms in *-m(V)* such as Warlpiri *nyinami* and Koko-Bera *nyiném ~ nyinvm*.
- n* Present (with N Conj and with  $\emptyset$  Conj Nonsingular; in KKY Present Perfective with Transitive Conj Singular and all Nonsingulars): as in *bagan* 'spears'.<sup>14</sup>
- k* Future (*-ayk* with N Conj non-Dual; *-ka* elsewhere; not in KKY): as in *mulika* 'will talk'; with this compare Purposive forms in *-ku* such as Watjarri *nyinaku (~ nyinawu)* 'will sit'.

#### 2.4 Voice marking of verbs

There is further evidence for the genetic affiliation of WT in voice marking. WT transitive verbs typically have an intransitive counterpart (belonging to the intransitive conjugation). An example is given in Table 4 below. The latter is used in an antipassive construction with an intensive sense, as in 'drank **all** the water' (B&K, Comrie (1981)). Uninflected verbs are typically (but not invariably) disyllabic, and in a great many cases the second vowel, which we term the THEMATIC VOWEL, is *-a-* for transitive verbs and *-i-* for intransitive verbs.<sup>15</sup> So for example in KKY there are pairs of verbs as displayed in Table 4.

Transitive	Intransitive (antipassive; intensive)
<i>patha-</i> 'chop'	<i>pathe/i-</i> 'to chop'
<i>paga-</i> 'spear, pierce [etc]'	<i>page-</i> 'spear, pierce [etc]'

Table 4: Examples KKY transitive/intransitive verb pairs

The correspondence of this distinction in form and function to distinctions made in a number of other PN languages is striking.<sup>16</sup> For example, the regular valency-decreasing (typically, reflexive) marking in Kuuk-Thaayorre (western Cape York Peninsula; Gaby 2006) is replacement of the thematic vowel with *-e*

<sup>14</sup> This tense-form can apparently have an Immediate Past sense: KKY *Nadh sanan koewsa pathan* 'she squashed a fruit with her foot' (Kennedy n.d.: 41). For the non-past sense of this form compare Nonpast tense forms in *-n+* in Warumungu (*pakkanta* 'spears'; Heath and Simpson 1982) and Western Desert (*patjarni* 'bites'; KKY *pathan* 'chops').

<sup>15</sup> Kennedy transcribes the latter as *-e-*, and not *-i-*.

<sup>16</sup> Note that the transitivity values for the *-a-* and *-i-* thematic vowels described below are the opposite from those discussed briefly in Alpher (2004: 99–100); both sets of values are probably ancient in PN. It is imaginable that both of these originate in a single suffix *\*-i* that was a transitivity-switching form. If the association of intransitivisation and of *-i-* (not necessarily intransitivising) with intensiveness proves to be other than a happenstance one, then perhaps Arabana-Wangkanguru (with a number of *a-* intransitives with transitive counterparts in *-i-*, such as *thika-* 'return', *thiki-* 'take back') can be taken as continuing a prototypical arrangement.

(Table 5) to form a verb of the second (typically intransitive) conjugation.<sup>17</sup> (Verbs are cited as Nonpast, Past.)

Active	Reflexive
<i>katpr, katparr</i> ‘grasp something’	<i>katpe, katpe(y)r</i> ‘grasp oneself’
<i>pathr, patharr</i> ‘bite something’	<i>pathe, pathe(y)r</i> ‘bite oneself’

Table 5: *Kuuk-Thaayorre reflexive marking*

The Thura-Yura (South Australia) languages Adnyamathanha and Wirangu show a similar process, apparently moderately productive. For Adnyamathanha, Schebeck (1974: 16–7) describes an intransitivising suffix *-i-*, as in *annga-* ‘to lift up’, *annga-i-* ‘to get up, arise’.<sup>18</sup> McEntee and McKenzie (1992: 6), who represent this root as *arnnga-*, cite alternative pronunciations for the intransitivised form: *arnnga-i-* and *arnngi*.<sup>19</sup> In Wirangu (Hercus 1999: 97–8, 101–2, 109–111) a change of thematic vowel from *-a-* to *-i-* occurs with both transitive and intransitive verbs and indicates continuous or repeated action: *warna-* ‘drop something [vt], fall [vi]’, *warni-* ‘throw to ground [vt], come down (rain) [vi]’; *barlda-* ‘stab, spear, split’, *barldi-* ‘punch repeatedly, chop up’.<sup>20</sup> Like this in sense is the Adnyamathanha pair (McEntee and McKenzie 1992: 1) *aka+rrhi-* ‘to burp’, *aka+rrhi-i-* ‘to repeat (meal), to suffer indigestion’. In the neighbouring language Arabana-Wangkangurru (Hercus 1989 and 1994:146–147), a few transitive *a-* stems have (transitive) counterparts in *-i* indicating an action that is more

<sup>17</sup> Since this *-e* can replace the thematic *-i* of verbs that have it in their active forms, since the historical origin of the *i/e/a* distinction in Kuuk-Thaayorre is not yet clear, and since the past tense-form of the reflexive is often recorded as *-eyr* (as well as *-er*), it is not clear how *-e* is to be accounted for etymologically.

<sup>18</sup> This *-i-* is held to be in an allomorphic relationship (under conditioning as yet undetermined) with *-rri-*; a suffix possibly identical to this latter is represented as *-r(i)-* (Schebeck 1974: 17, 23). One example in McEntee and McKenzie suggests that *-i-* and *-ri-* are not quite synonymous: *nharla-* ‘to pour (liquid), uproot, push over’, *nharla-i-* ‘to flow (as running water)’, *nharla-ri-* ‘to pour down, stream down (as flood)’. Note that for Adnyamathanha and other languages in which a tap contrasts with a trill, we write (standardising, following Austin 1990: 179) *r* for a glide, *rr* for a tap, and *rrh* for a trill.

<sup>19</sup> However, they cite no such truncated alternants for other intransitivised examples in their dictionary, such as *βuna-βuna-i-* ‘to come undone’ (*βuna-* ‘to pull down, dismantle, take apart’), *irnba-* ‘to get together, join up (meet up), mob up (people)’ (*irnba-* ‘to add, join’). McEntee (pers. comm.) says that sequences written “*a-i*” and “*i-i*” are pronounced with a weak high front glide between the vowels, respectively [a<sup>y</sup>i] and [i<sup>y</sup>i]; Schebeck does not comment on this point. In Adnyamathanha, *i-i* and *u-i* are also written. In synchronic studies, a number of scholars have postulated underlying sequences like *a-i* in which the second vowel replaces the first in pronunciation. An example is Heath’s (1980) account of Ritharrngu, in which he analyses the paradigm of a verb like *wanga-* ‘speak’ as follows: Pres *wanga* <*wanga-∅*>, P *wanganha*, F *wangi* <*wanga-i*>. (Whether a tense-marking process in some languages has a common origin with a voice-marking process in others is a question that remains for future work.)

<sup>20</sup> This *-i-*, in Hercus’s analysis (109–11), occurs also preceding the reciprocal suffix *-rri-*, since “the reciprocal implies that an action is double at the least”(109); *-rri-* also marks the reflexive and (101–2) derives stative and inceptive verbs from adjectives. Simpson and Hercus (2004: 205) reconstruct a proto-Thura-Yura reflexive-reciprocal *\*-rrhi-*.

intensive or “bigger”. Examples include *kalpa-* ‘gather’, *kalpi-* ‘bring about an increase by performing a ceremony’; *karra-* ‘tie’, *karri-* ‘get someone else tangled up’; *karrpa-* ‘sew’, *karrpi-* ‘tie’; among others.

In Ngawun (a Mayi language of Queensland; Breen 1981a: 55), the suffix *-ila* (which we suggest is *-la* added to an *-i-* stem) makes a verb reflexive (*puñca* ‘to kill’, *puñčila* ‘hit oneself’; *thaya* ‘chop’, *thayila* ‘chop onself’). There are also verb/noun pairs in *a/i* (*kaca* ‘tell a lie’, *kaci* ‘a lie’; *maya* ‘to speak’, *mayi* ‘speech’).<sup>21</sup> Our suggestion that this verb stem alternation in Ngawun attests the same phenomenon as the examples discussed above is corroborated by a cognate verb in Yidiny (*bunja* and *bunji*, which see below; with this compare Ngawun *puñca* and *puñci*).

Furthermore, several languages attest apparently one-off transitive-intransitive pairs derived by thematic-vowel replacement. In Kugu-Uwanh (spoken just to the north of Kuuk-Thaayorre; Smith and Johnson 1999), there is *wañja* ‘to hang something up’, *wañji* ‘to be hanging’ (no conjugational difference); likewise in Yidiny (Dixon 1991: 255–6): *bunja-* ‘hit to inflict injury; kill’ (transitive, but in the predominantly intransitive Conj N; all dialects), *bunji-* ‘bump into, collide with; burst, explode’ (intransitive, but in the predominantly transitive Conj L; Tablelands and Coastal dialects).<sup>22</sup> Finally, in at least one language, Diyari, an intransitive verb unmatched by a transitive one, *paki-* ‘to burst’, corresponds in this way to the widely attested *\*paka-* (‘to dig, pierce’).

We find these examples sufficient to justify a conclusion that the transitive vs. intransitive conjugation thematic vowel alternation in WT is archaic, and from a pPN source.<sup>23</sup> This alternation in WT is yet another strong argument for its inclusion in PN, since morphological alternation of this type is rarely borrowed. Note especially the parallel reflexes of pPN *\*paka-* ‘dig, pierce’ and *\*punca* ‘hit (to kill)’ listed above.

It is tempting to account for the replacement of thematic *a* by *i* as the product of a conflation of *a* with *\*-yi*, attested as a reflexivising (or otherwise valency-decreasing) suffix in various Australian languages including a few PN ones. Note in this connection however that actual synchronic or comparative evidence for such a conflation in the relevant languages is almost nonexistent, and that efforts like those of Dixon (2002:321–2; esp. Table 7.6) to relate forms like *-yi* and *-ci* to a prototypical *\*dharri* are apparently posited as one-off changes. And note especially the fact from Yidiny (see fn 22 above) that changes to thematic *-i* and suffixial *-yi* (here clearly from *\*-ci*) have contrastive value.

<sup>21</sup> We thank Mary Laughren for pointing out these examples to us.

<sup>22</sup> Note that Yidiny regularly intransitivises verbs with *-ji-* (antipassive, reflexive, etc.; Dixon 1977: 217–9), as in *baga:l* ‘speared’, *baga:jiñu* ‘speared self’ (etc.), in a suffixation process that seems to be distinct from the thematic-vowel alternation illustrated above. Cognate with Yidiny *-ji-* is (via lenition) Djabugay *-yi-* (Hale 1976: 238 & b: 324–6; Patz 1991); the protoform *\*-ci-* is not a probable source of the WT antipassive thematic *-i-*.

<sup>23</sup> No mainland language that attests this alternation is geographically close to WT.

### 2.5 Number marking in verbs<sup>24</sup>

WT exhibits an agreement system in which stems inflect for the number of the absolutive argument. The marking is an increment to the stem of the form *-ma-* in the dual and *-mæy-* in the plural in KKW. KLY has *-ma-* and *-uma-* respectively. An example of the dual is given below:

- (2) *Ngath puy patha-ma-n.* (cf. singular *pathan*)  
 I-ERG tree chop.down-DL-PF.  
 “I chopped down two trees.” (Comrie 1981:17)

There are parallels for this too in other PN languages. For example, in Marrgany (Breen 1981b: 319-320) the verb stem increment *-ma-* marks plurality of objects (and causative on intransitive verbs), and in Parnkala (South Australia; Keith 1998:31 citing Schürmann 1844:17-20) *-ma-* marks dual subjects. It is unlikely that the same function would be independently innovated with the same morphology.

## 3. Phonological history

In this section we discuss the basis for phonological reconstructions given above, give lexical cognate data to support reconstructions, and conclude with discussion of problematic (multiple) correspondences.

### 3.1 Preliminaries: inventories of phonemes

Table 6 gives the WT phoneme inventory. It is somewhat unusual for a Pama-Nyungan language in the absence of retroflexion, in the presence of a voicing contrast in stops, and in the fricatives /s/ and /z/.

p	th	t	s	k		i	u
b	dh	d	z	g		e	œ
m		n		ng		a	o
		l					
w		r	y				

Table 6: WT Phonemes

In KLY there is a vowel-length distinction (B&K 1972; long vowels are written double); in KKY there is apparently no such distinction, although Kennedy’s description (nd: 14) is equivocal in this regard. Kennedy (n.d.:109) claims that length is not contrastive, while in another place (p14) presenting pairs of forms in which vowels apparently contrast as tense and lax.

<sup>24</sup> We thank Mary Laughren for suggesting we look into this as a possibly archaic feature of WT. Keith (1999) surveyed verbal number marking; here we focus specifically on putative cognates to WT forms only.

### 3.2 Phonological developments in WT

While it is clear that there are many lexical stems in WT which are 'cognate' in some way with forms in other PN languages, much of the phonological development of WT remains unknown. There has been considerable language contact in the region, and it is not always possible to decide whether multiple correspondences are retentions, innovations, or the result of multiple loans. Here we use the term 'descent' with caution, since we recognise that many forms which are reconstructible to pPN may not descend directly into WT, and the forms may therefore not be strictly cognate. Because of this, the lexical evidence for genetic relationship is less convincing than the morphological data.

3.2.1 *Initial dropping.* One prominent sound change in many languages of the Cape York Peninsula (south of WT) is the loss of initial consonants (see e.g. Alpher 1972). We have some evidence for this change in WT too. Initial *k* is regularly lost if the initial vowel of the word was long; cf. *aga-*, *age-* 'carry' < \**ka(:)ngka-*, *aba-* 'cover' < \**ka:mpa-*, and *ima-* 'see', perhaps < \**ki:mV-* (for the distribution of these pPN terms and evidence for their reconstruction, see Alpher 2004). Initial \**yi* also exhibits initial dropping (although variation between *yi* and *i* in closely related languages is common in Australia). Examples include *ika* 'laughter' < \**yika* and *ipika*, *ipkazil* (KLY), *ipkaz*, *ipkæzil* (KKY) 'woman, female' < \**yipi*. Another potential example is *ay* 'food' < \**mayi*, however note that initial nasals do not usually drop; cf. \**ñ*, which descends as *n*, and \**m* in *muma-* 'squeeze, hug' (KKY) < \**muma-* and *mu:gu* 'anthill' (KLY, KKY) < \**mungku*).

Initial dropping is also found in many (although not all) WT kinship terms. Examples with initial dropping include *athe* 'grandfather' < \**ngaci*, *aka* 'grandmother' <? \**paka*, *ama* 'mother' [syn. *apu*] < \**ngama*, *alay* 'husband' <? \**ka:la*<sup>25</sup>, *ipi* 'wife' \**yipi* (covered by the change mentioned above), *imi*, *imil* 'brother/sister in law'. All of the WT kinship terms that are clearly pPN in age have lost their initial consonant; compare Blevins' (2001:485–6) argument that the propensity to be used utterance-initially is often a conditioning factor for initial-dropping. She mentions kinship terms as having this propensity and cites (486) the Arabana pair *ama* 'mother', *ngama* 'milk', both continuing pPN \**ngama*.<sup>26</sup>

3.2.2 *The voicing contrast.* Since pPN is not reconstructed with a voicing contrast, we must account for the presence of such a contrast in WT as an innovation (or

<sup>25</sup> For the final -y of this word, cf. McConvell (this volume) and Yolngu *gali/galay*.

<sup>26</sup> Initial-dropping does not appear in *thathi* 'Fa', *bab(a)* 'dad', *babath*, *babthal* 'opposite sex sibling', *bæbeth* 'grandfather', *thawi* & *thawian* 'brother in law'. It is possible that some of these terms are loans from a neighbouring initial-dropping Pama-Nyungan language; for example, Uradhi has *athi* 'mother's father' (cf. WT *athe*) and *ami* 'mother' (cf. *ama*).

seriously revise reconstructions). There is no evidence from elsewhere in PN that voicing is old; in Yolngu languages, for example, a phonemic voicing can be shown to have entered the language primarily through extensive borrowing of lexical items; Yolngu reflexes of Pama-Nyungan age have reflexes in the voiceless series, while the voiced consonants are primarily in loans from Burarran languages and in reduplication (Alpher and Bovern 2005). No such solution is available at this stage for WT, however. There are reconstructible etyma where the reflexes of the initial consonant are voiced, while in others, the initial is voiceless:

- (3) a. Voiced: *badh* ‘sore’ < \*paci  
 Voiceless: *patha-/e-* ‘chop (etc)’ (KKY) < \*paca-; *pirupiru* ‘rainbow bird’ (KLY, KKY) < \*pirrupirru; *palay* ‘they Du’ < \*pula or \*pala
- b. Voiced: *dhang* ‘tooth’ < \*ca:nga, *dhugu* ‘driftwood; raft’ ?? < \*cuku  
 Voiceless: *thala-/e-* (vt/vi) ‘eat’ \*cala-; *thæra*, *thæral* ‘ridge; reef; shin; back [usu. of fish]’ (< \*carra ?); *thæray* ~ *thara-* ~ *thare-* ‘appear; place, be placed; stand; ...’ (< \*carra-); *thanur-* ‘stand’ < \*cana-; *thana* ‘they’ (< \*cana).
- c. Voiced: *gam*, *gamul* ‘colour, hue’ (& *gamu*, *gamul* ‘body’) < \*kamu; *guyar* ‘stingray’ (<? \*kuya); *garka* ‘man’ < \*karrka; *gæyga* ‘sun’ <? \*kayka; *gururu* ‘peaceful dove’ < \*kurlu+  
 Voiceless: *kun*, *kunal* ‘hind, stern, back’ < \*kuna; *kosar* ‘two’ < \*kuc<sup>y</sup>arra; *kuma* ‘shit’ < \*kuma; *klak*, *kælakal* ‘spear’ < \*kalaka; *kisay*, *kisayil* ‘moon, month’ (KLY, KKY) < (loan?) \*kica (contrast *sib* ‘liver’ < \*cipa)

We see the same problems in correspondences for medial consonants that are found initially. (See below for consonant clusters.) Pama-Nyungan \*p continues as *p* in *ipi(ka)* ‘woman, wife’ (KLY, KKY) < \*yipi; however it appears as *b* in *sib* ‘liver’ < \*cipa and *ibay* ‘grate, scrape’ < \*kipa-. \*c descends as *th* in *patha-/e-* ‘chop (etc)’ (KKY) < \*paca- and *gath*, *gathal* ‘shallows, reef’ <? \*kaca+, but as *dh* in *badh* ‘sore’ < \*paci and *idhan* ‘bite’ < \*cica-. It has the further reflex *s* in *kisay*, *kisayil* ‘moon’ < \*kica and *kosar* (~ *ukasar*) ‘two’ < \*kuc<sup>(y)</sup>arra.

3.2.3 *Delaminisation*. Proto-Pama-Nyungan \*ñ is regularly reflected in WT as *n*: *naka* ‘situated here’ < \*ñaka, *nagi-ka* (KLY) ‘look at’ < \*ñaka, and *ngæna* < \*ngañi.

3.2.4 *Nasals*. The nasals have their expected reflexes: \*m descends as *m*, \*n and \*ñ as *n*,<sup>27</sup> and \*ng as *ng*. The two rhotics fall together; compare *thara-/e-* ‘stand’ (vt/vi) (KKY) < \*carra- with the near-minimal pair *dhærang(+alay)* ‘tooth’ (KKY; syn. *dhang*) < \*ca:ra.

<sup>27</sup> An exception is *miya* ‘who’, assuming it is a reflex of \*miña ‘what, meat’.

3.2.5 *Clusters*. Homorganic nasal-stop clusters simplify, and the resulting stop is voiced:

- (4) *aba-* 'cover' < \*ka:mpa-; *mugu* 'ant-bed' < \*mungku; *nag* 'how' < \*ñangkV; *naguy* 'down there' < \*ñangku; *wadhawadhagumiya* 'everywhere, all around' < \*wañca

Heterorganic clusters involving \*rr are retained; compare *ngursi* 'snot' < \*ngurrci and *dhærdhi-* 'tie' (KLY, KKY) < pNE \*currca-/i-, as well as *garrpath* < \*karrpa-. Evidence is too slight at this stage for other clusters, but consider *kunakana* 'strong', possibly from \*kunka 'alive'.

### 3.3 *Changes in vowels*

Although KLY has a vowel length distinction, it does not appear to continue a length distinction inherited from pPN. That is, the distinction has been reinnovated. The individual pPN vowels continue as follows.

- (5) \*a > a in *thana* 'they (Pl)' < \*cana; *thanur-* 'sit, live, stay' < \*cana-; *gath*, *gathal* 'shallows, reef' < \*kaca; *kakur*, *kakural* 'egg, testicle' < \*kaku; *gam*, *gamul* 'colour, hue, body' < \*kamu; *garrka(zi)*, *garkazil* 'man, male' < \*karrkay; *garrpath-* 'gather, collect' < \*karrpa-; *mari* 'spirit (of living person), ghost' < \*mari; *matha* 'one' < \*maca; *ay* 'food' < \*mayi; *ath* 'grandfather' < \*ngaci < \*ngaki; *ngath* 'I' < \*ngacu/a; *ama* 'breast' < \*ngama; *ngamal* 'cumulus cloud' < \*ngamal; *ngap* 'grandchild' < \*ngapa; *ngaru* 'must, have to' < \*ngarru; *ngay* 'I' < \*ngayu; *nag* 'how' < \*ña(+ngkV); *naka* 'situated here' < \*ñaka; *nagi-ka* (KLY) 'look at' < \*ñaki-; *naguy* 'down there (F)' < \*ñangku; *badh* 'sore' < \*paci; *palay* 'they (Du)' <? \*pala (<? \*pula); *thala-/e-* (vt/vi) 'eat' \*cala-; *wadhawadhagumiya* 'everywhere' < \*wañca; *wardh* 'different, questionable' < \*warrci; *wati* 'bad' < \*wati; *waw* (Q particle) < \*wawu

There are also reflexes of \*a in œ, in fewer items. WT œ has several sources, since it is apparently partly conditioned both by vowel harmony and also grammatically.<sup>28</sup> Finally, \*a appears to continue as *e* in *gethaw(a)* 'small digging stick' (if < \*kacin), as well as in \*ñipala > \*nipal > *nipel*.

- (6) \*a: > œ in *dhærang(+alay)* 'tooth' (KKY; syn. *dhang*) < \*ca:ra

<sup>28</sup> For example, verbs in KKY have participles in œ but tensed forms with *a*, which implies at least in part a grammatical distribution to the vowel in the modern language, whatever its historical source (see also the following footnote).

\*a > œ in *ngæna* ‘me’ < \**ngaña*; *thæra* ‘ridge, reef, shin’ <? \**carra* ‘thigh’;  
*gæyga* ‘sun’ (KLY, KKY) < \**kayka*; *wæydha-/e-* (vt/vi) ‘put’ (KKY) <(?)  
 \**wañca-* (although if so *y* in WT is unexplained)<sup>29</sup>

Long vowels are reflected as short (most examples involve \*a:), except in *dha:ng(a)* ‘tooth, edge’ (KLY, KKY) < \**ca:nga*; however the principles which govern the secondary length innovation are not well understood. Examples are given below.

- (7) \**u:* > *u* in *kuku*, *kukul* ‘bang, noise, thump’ < \**ku:ku*  
 \**a:* > *a* in *alay* ‘husband’ < \**ka:la+y*, *aba-* ‘cover, hide something’ < \**ka:mpa-*;  
*lawnga* ‘not’ < \**lawa*; *ma-y* ‘take, give, bring’ < \**ma:-*; *ngan(+)*, *nga+* ‘who(m)’  
 < \**nga:ni*; *wati* ‘bad’ < \**wati*

The vowels \**i* and \**u* descend unchanged as *i* and *u* (except *kærkak*, *kærkakal* ‘throat’ < \**kurrka*). Examples are given below.

- (8) \**i* > *i*: *idhan* ‘bite’ < \**cica-*; *sizi* ‘there’ < \**ciñcu*; *sib*, *sibal* ‘liver’ < \**cipa*;  
*kisay(il)* ‘moon’ < \**kica*; *ibay* ‘grate, scrape’ < \**kipa-*; *iwi* ‘mosquito’ < \**kiwi*;  
*mina* ‘good, true’ < \**mini*; *miyay* ‘what, which’ < \**miña*; *pirupiru* ‘rainbow  
 bird’ < \**pirrupirru*; *ipi(ka)* ‘woman, wife’ < \**yipi*  
 \**u* > *u* in *kuki(y)* ‘northwest wind’ < \**kukiya*; *kuma* ‘faeces’ < \**kuma*; *kun(a)*,  
*kunal* ‘rear end, in reverse direction’ < \**kuna*; *kunakana* ‘strong, hard,  
 powerful’ < \**kunka*; *kubi(kub)(+)* ‘charcoal, black, night’ <?? \**kulpi/u*;  
*gururu*, *gururul* ‘peaceful dove’ < \**kuru+*; *guyar*, *guy(a)ral* ‘stingray’ < \**kuya*;  
*muma-* ‘squeeze, hug’ < \**muma-*; *mu:gu* ‘anthill’ < \**mungku*; *ngu:ki* water’ <  
 \**nguku/i*; *ngul* ‘yesterday’ < \**ngula*; *ngursi* ‘snot’ < \**ngurrci*; *ngu:r*  
 ‘projection, point’ < \**ngurru*; *yu+* ‘lie down’ < \**yu+*

Finally, two cognates where \**u* apparently descends as *o* are *thonar* ‘time, occasion’ < \**cunu*, and *kosar* (~ *ukasar*) ‘two’ < \**kuc<sup>(y)</sup>arra*.<sup>30</sup>

The above examples all involved initial correspondences. There is limited evidence for correspondences in  $V_2$ ; the evidence is partly limited because  $V_2$  is lost in many disyllabic WT words. In (9) we list the reconstructions which provide attestation of descent of  $V_2$ , while (10) lists those that suggest  $V_2$  loss.

<sup>29</sup> A number of forms have alternations between *a* and *œ*. Examples include *patha-/e-* ‘chop’ ~ *paetha-/e-* and *nagi/e-* ~ *nægay* ‘look at’ (KKY) < \**ñaka*. Ultimately, these will prove to be of importance in the solution of the problem of the origins of *œ*.

<sup>30</sup> We have been unable to determine whether the variation in this word is dialectal, speaker-based, or simply a data error. Obviously the source of this variation affects the certainty with which we claim this as an example of a possible instance of \**u* > *o*.

- (9) \*a > a in *thana* 'they' < \*cana, *alay* 'husband' < \*ka:la+y, *gæyga* < \*kayka 'sun', *kisay* 'moon' < \*kica, *kuma* 'excrement' < \*kuma, *kuna* (KLY) 'back' < \*kuna, *kærkak* 'throat' < \*kurrka, *guyar* 'stingray' \*kuya 'fish', *miyay* 'what' < \*miña, *ama* 'mother' < \*ngama, *naka* 'situated here' < \*ñaka  
 \*i > i in *iwi* 'mosquito' < \*kiwi, *mari* 'spirit' < \*mari, *ngu(:)ki* 'water' < \*nguki, *ngursi* 'snot' < \*ngurrci, *wati* 'bad' < \*wati, *ipika* 'woman' < \*yipi  
 \*u > u in *kuku* 'noise' < \*ku:ku 'speech', *gururu* 'peaceful dove' < \*kurlu+ 'dove', *mu(:)gu* 'anthill' < \*mungku, *ngaru* 'must' < \*ngarru, *pirupiru* < 'rainbow bird' < \*pirrupirru
- (10) *kun* (KKY) 'back' < \*kuna, *gath* 'reef' < \*kaca+ 'coral', *sib* 'liver' < \*cipa (< \*kipa), *ay* 'food' < \*mayi, *ngath* 'I.ERG' < \*ngacu, *ngay* 'I.NOM' < \*ngayu, *ngan* 'who' < \*nga:ni/a, +*ngul* 'yesterday past' < \*ngula 'then', *ngu(:)r* 'point' < \*ngurru 'nose', *badh* 'sore' < \*paci, *kam* 'colour' < \*kamu

#### 4. Conclusions

Over the last hundred years, the literature has suggested several classifications of the WT language: 'Papuan', 'Australian', 'Australo-Papuan' and 'Papuo-Australian'. Each of these classifications implies a different history for the language speakers, and each is in principle demonstrable or falsifiable through detailed linguistic comparison. To make claims of mixed language descent and substrate influence without the detailed work required, however, trivialises the notion of comparative linguistics.

WT clearly shows reflexes of pPN lexemes, pronouns, case marking and verb morphology. Reconstruction work is obviously at an early stage, but the number of correspondences (as well as shared irregularities) unambiguously point to a genetic relationship with other PN languages. Cognate lexical items, nominal inflection, verb morphology and pronouns all indicate that WT is PN, albeit at considerable time depth in a complex contact area. The alternative – that WT is a Papuan language with PN substrate elements – would require us to assume the borrowing of irregular morphology in multiple distinct areas of grammar. As regards the 'Papuan'-substrate hypothesis, we wish to put into consideration the possibility that the case for substrate influence has been overstated.

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