

Wanyi Word Formation and Vowel Harmony*

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1. Introduction

This paper examines the interaction in Wanyi between vowel harmony in two case suffixes and the small number of consonant final roots. I will present evidence that the initial high front vowel of the allomorph of these suffixes attached to stems derived from consonant-final roots is not a phonologically motivated epenthetic vowel, but rather is part of the lexical specification of the relationship between the root and the suffix. A comparison with Garrwa cognate forms provides further evidence for this conclusion, as does a comparison with cognate suffixes in the neighbouring Tangkic languages.

1.2 Situation of Wanyi and sources of language data

Wanyi was traditionally spoken in an area straddling the Queensland-Northern Territory border south of the Gulf of Carpentaria. The most closely related Garrwa language is spoken to its north while the Tangkic language, Yukulta (also called Kangkarlida) was spoken to its east. The Warluwarric language, Yinjilanyji was spoken to the south of Wanyi, while western Barkly languages are spoken along its western border.

There now remains but a handful of fluent Wanyi speakers - all elderly people (in their 70s and 80s). Most of the data presented here comes from one of these, Mr Roy Seccin (RS), of the Kamarrangi subsection, with whom I have carried out about 60 days of fieldwork spread over 4 years starting in 2000. RS also speaks Garrwa which is more widely spoken in the Borroloola and Robinson River regions of the NT. This paper also draws on Gavan Breen's (GB) transcripts of Wanyi recorded by him from several elderly speakers in the 1970s.

2. Harmonising suffixes in Wanyi

Wanyi has a small number of suffixes with an unspecified vowel I represent as V, which harmonises with the preceding vowel. Of these, two mark case while the others are verbal suffixes. Only the LOC[ative] case *-nV* and ERG[ative] case *-V* suffixes are discussed in this

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paper, and while the LOC suffix appears on both nominal and verbal stems, only the nominal use is treated here.

2.1 Vowel final stems

Wanyi words typically end in one of the language's three vowels: /i/, /u/ or /a/. Suffixes such as the LOC *-nV* and ERG *-V* contain a vowel, represented as V, which lacks any underlying (or lexical) feature specification. The output form of this vowel is determined by a process of progressive vowel harmony whereby the specified features of the stem final vowel spread to the suffixal vowel. Relevant forms are shown in (1).

(1) Wanyi nouns with vowel final roots

| English | Citation form (=ABSolutive) | LOCative <i>-nV</i> | ERGative <i>-V</i> |
|--------------|-----------------------------|---------------------|--------------------|
| 'nullanulla' | <i>barrku</i> | <i>barrku-nu</i> | <i>barrku-u</i> |
| 'bird' | <i>jukuli</i> | <i>jukuli-ni</i> | <i>jukuli-i</i> |
| 'woman' | <i>kirriya</i> | <i>kirriya-na</i> | <i>kirriya-a</i> |

Wanyi also has a morphologically determined allomorph of the ERG case suffix, ending in invariant *-ni*, used only with demonstratives which is not relevant to the discussion here.

2.2 Consonant final stems

Wanyi has a very tiny percentage of nouns ending in a consonant in their citation form. These end with one of three coronal consonants: /l/, /rɭ/ or /rɻ/.¹ Words ending with the alveolar trill /rɻ/ are sometimes pronounced with an additional vowel - seemingly in free variation with its absence. This additional vowel is either /a/ or /u/ in my data (ML) and in that of Breen (GB) following the sequence *arr*, or /i/ following *irr* as in [yilwirri] ~ [yilwirr] 'finger/toe nail' in (2). There are some words whose citation form I have only recorded with a word final consonant, while others show up with or without an additional final vowel. Some of the words I have recorded with a final consonant, have been transcribed by GB without the root final consonant. Both GB and I have alternate transcriptions of some of these forms with a long vowel in place of the word-final VC sequence. Relevant data are shown in (2) along with cognate Garrwa forms (where available). The final consonant, except where followed by an additional vowel, is typically extremely faint. However, in all case-marked forms, the root final vowel is clearly audible before the vowel-initial case suffix, which is represented in GB's transcriptions as well as my own.

¹ The contrast between alveolar and post-alveolar (retroflex) apical consonants is very weak in Wanyi. Breen (in press) has suggested that the contrast might not be phonological. Further research is needed to confidently establish the status of this contrast in Wanyi.

(2) Variation in words with consonant final roots

| Wanyi Citation form: (ML notes) | Wanyi Citation form: (GB notes) | Garrwa (from Furby 1974) | English |
|--|---|-----------------------------|-----------------------------------|
| <i>barrawarr</i> ² | <i>barrawaa</i> | | 'white cockatoo' |
| <i>jangkurr</i> ³ | <i>jangkurr</i> | <i>jangkurr</i> | 'language, speech, word' |
| <i>jindal</i> | | | 'mosquito' |
| | <i>kinnga</i> ~ <i>kinngaa</i> ~ <i>kinngarra</i> | | 'smoke' (GB) |
| <i>kurnngarr</i> ⁴ ~ <i>kurnnga(a)</i> | <i>kunnga</i> ~ <i>kunngaa</i> | <i>kurnngarr</i> | 'smoke' (ML) 'ashes' (GB) |
| <i>mabibarr</i> ~ <i>mabibarra</i> | <i>mabubarr</i> ~ <i>mabibaa</i> | | 'flame' |
| <i>najarr</i> ~ <i>najarru</i> | <i>naja</i> ⁵ | | 'paperbark' |
| <i>ngajarr</i> | | | 'rifle' |
| <i>nguyarr</i> | <i>nguyarr(a)</i> ⁶ | | 'spinifex' |
| <i>wararr</i> ~ <i>wararru</i> ⁷ | <i>wara(a)l</i> ~ <i>warar</i> ~ <i>wararru</i> | | 'paperbark' |
| <i>winngil</i> | <i>winngii</i> ~ <i>winngi</i> | | 'rainy season' |
| <i>yamarr</i> ~ <i>yamarru</i> | | | 'flat stone' (for grinding on) |
| <i>yilwirr</i> ~ <i>yilwirri</i> | <i>yilwi</i> ~ <i>yilwiri</i> | <i>yilwirr</i> | finger/toe nail |
| <i>yubarr</i> ~ <i>yubarru</i> | <i>yubal</i> ⁸ | <i>yubarl</i> | 'path, road' |
| <i>yukal</i> ⁹ | | | 'smoke' |

2.2.1 Distinction between citation form and stem

The ABS case form of nouns is the same as their citation form. The form of the stem which hosts suffixes such as the ERG, LOC, DAT[ive] or ABL[ative] is the same as the citation or ABS word form, for all words derived from a vowel final root. For words derived from a consonant final root, the suffix is added to a stem which is identical to the root, *not* to a stem

² Cognate with Wambaya *barraala* 'sulphur-crested cockatoo' (Nordlinger 1998:270).

³ Borrowed from Garrwa; the Wanyi equivalent is *yanyi*.

⁴ Cognate with Ngarnka *gulnga* 'ashes' (Chadwick 1971:35).

⁵ Only recorded by GB as Garrwa.

⁶ Cited from Osborne's Wanyi fieldnotes (1965, 1966).

⁷ Cognate with Wambaya *wararru* (Nordlinger 1978:293)

⁸ Cited from Osborne's Wanyi fieldnotes (1965, 1966).

⁹ Cognates in Barkly languages.

which is equivalent to the citation form with an added vowel, some examples of which are given in column 1 in (2). These show that unspecified suffixal vowels do *not* surface with the features of this 'added' vowel.

The nouns based on consonant final roots, cause us to make – at a phonologically attestable level – the distinction between *root* and *word*, which we would need to do for independent theoretically driven reasons not discussed here. Thus an ABS form [yamarru] 'flat grinding stone' would consist of a root *yamarr* and an appended /u/. The status of this /u/ (and other vowels appended to consonant-final roots) is the major concern of this paper.

Before examining ERG and LOC case-marked words built on the consonant final roots seen in (2), we will consider the dative suffix, which consists of fully specified vowels, but which has an initial unspecified glide consonant 'G' in the allomorph combining with high vowel final stems, and a second allomorph lacking this consonant used elsewhere.

2.2.2 The Dative suffix with V- and C-final stems

Unlike the LOC and ERG suffixes, most Wanyi nominal suffixes have invariant fully specified vowels. The DAT[ive] suffix *-(G)anyi*, where *G* represents a non-apical glide, is one of these¹⁰. Following a vowel-final stem, the initial glide is retained if the stem-final vowel is high. The suffix surfaces as *-yanyi* following /i/, *-wanyi* following /u/, but as *-anyi* elsewhere. Invariant *-anyi* suffixes to a consonant-final stem irrespective of the stem-final vowel, or the shape of the 'ephemeral' additional final vowel in some ABS tokens. Relevant forms are given in (3).

(3) Dative case-marked nominals

| Dative suffix <i>-(G)anyi</i> | | | |
|--------------------------------------|--------------------------------|---------------------|---------------------|
| Consonant-final stems | Vowel-final stems | | |
| | a] | i] | u] |
| <i>ngajarr-anyi</i> | <i>miya-anyi</i> [miya:nyi] | <i>jukali-yanyi</i> | <i>barrku-wanyi</i> |
| <i>jangkurr-anyi</i> | | | |
| <i>jindal-anyi</i> | | | |

2.3 'Ephemeral' appended vowel in ABS forms

In searching for an explanation for the ephemeral final vowel added to the consonant-final root of some words in their ABS or citation form, two types of solution present themselves. The first is that the added vowel form is the product of some phonological motivation such as a preference (or requirement) that phonological words end in a vowel. The second is that these words are listed in the speaker's lexicon as allowable variants, possibly reflecting non-Wanyi

¹⁰ This dative suffix form has a wide range of functions including the genitive. It is only used on nouns; it is not used with pronouns or determiners. It most likely derives from the same source as the verbal purposive suffix with the allomorphs *-kanyi* and *-anyi*, but would seem to have entered the language at an earlier stage which accounts for the change from initial *k* to *G* in the nominal suffix, not reflected in the verbal one.

origins. The consonant-final variant in which the word has the same phonological form as the root from which it is derived would be the default form (in line with the vowel-final root based words) while the form with an added vowel would be lexically marked – perhaps the left-over frozen relic of some historical process.

2.3.1 Added word-final vowel: phonological motivation or phonetic realisation

If the vowel added to root-final *rr* were simply the result of an alternative articulation of the final *rr* – maximising the release so that it produces the auditory effect of an added vowel – akin to the vowel-like release of final obstruents in English words spoken by people whose mother tongue is standard Italian – then we might expect to hear the same vocalic sound, not distinct vowel sounds, allowing for influence from the preceding vowel as is common for Australian languages as seen in many transcriptions of words ending in *rr* phonologically. However, the Wanyi data in (2) includes four words in which the final vowel is *u* following *a*, although the stem-final *arr* sequence in *mabibarr* ‘flame’ is followed by *a*. There are no words with a stem final *uC* sequence in our data set.

Given the extremely restricted nature of consonant final words in Wanyi, we might hypothesise that the default template for a phonological word in that language is one with an unfilled final coda (which would rule out word-final consonants). If the phonological **word** requires an unfilled coda, then there are *two* ways in which this requirement may be met when dealing with a consonant-final form. One would be to add a vowel, turning the coda consonant into an onset consonant, the other would be to simply delete the final coda consonant.¹¹ Both of these options appear to have been adopted if we compare some forms recorded by ML with ones recorded by GB. In (4) the words with consonant-final stems (identified through suffixation) in our corpus are listed in Column 2. Words in our corpus which are attested in a form phonologically equivalent to their root are listed in Column 3, while attestations with an added vowel are listed in Column 4. Words lacking the final consonant of the root, noted by Breen (GB) from his own recordings or from the transcriptions of Charles Osborne, are listed in Column 5.¹²

¹¹ It is also possible to treat the final consonant as extra-syllabic, retained as a word-final segment attached to a higher node than the rhyme like certain word-final coronal consonants in English.

¹² Breen recorded the forms shown in Column 5 in (4) from an old woman whose speech had been affected by a stroke, so that while his transcriptions of this data may be phonetically faithful, they are to be treated with some caution; words should be cross-checked with data from other speakers (personal communication, 21 October 2003).

(4)

| 1 | 2 | 3 | 4 | 5 |
|-------------|---|--|--|--|
| English | root | word = root | word = root plus V | word = root minus final C |
| mosquito | <i>jindal-</i> | <i>jindal</i> (ML) | | |
| smoke | <i>kinngarr-</i> | | <i>kinngarr+a</i> (GB) | <i>kinnga(a)</i> (GB) |
| smoke; ash | <i>kurnngarr-</i> | <i>kurnngarr</i> (ML) | | <i>kurnnga</i> (ML); <i>kunnga</i> (GB) |
| flame | <i>mabibarr-</i> | <i>mabibarr</i> (ML) | <i>mabibarr+a</i> (ML) | <i>mabiba</i> (GB) |
| paperbark | <i>najarr-</i> | <i>najarr</i> (ML) | <i>najarr+u</i> (ML) | |
| spinifex | <i>nguyarr-</i> | <i>nguyarr</i> (ML) | <i>nguyarr+a</i> (GB) | |
| paperbark | <i>wararr-</i> | <i>wararr</i> (ML) | <i>wararr+u</i> (ML, GB) | |
| wet season | <i>winngil-</i> (ML) <i>winngirr-</i> (GB) | <i>winngil</i> (ML) | | <i>winngi(i)</i> (GB) |
| flat stone | <i>yamarr-</i> | <i>yamarr</i> (ML) | <i>yamarr+u</i> (ML) | |
| finger nail | <i>yilwirr-</i> | <i>yilwirr</i> (ML) | <i>yilwirr+i</i> (ML) | <i>yilwi</i> (GB) |
| path, road | <i>yubarl-</i> (ML) <i>yubal-</i> (GB) | <i>yubarl</i> (ML); <i>yubal</i> (CO) ¹³ | <i>yubarl+u</i> (ML); <i>yubal+i</i> (GB) | |

Again, the problem with the phonological explanation is the unpredictable nature of the ephemeral added vowel. The fact that the citation form of the word *yilwirr* 'finger/toe nail' has been recorded with an epenthetic *+i* following stem final */i/* would be compatible with the assumption that the added vowel is basically unspecified V which assimilates to the preceding vowel. However, Breen records *yubali* 'path' with a final high front vowel following stem final */a/*. The random variation between epenthetic *+a* and *+u* on consonant final stems with */a/* as their last vowel indicates that vowel harmony or spreading of the features of the stem-final vowel to an unspecified added word-final vowel cannot be assumed. What the data suggest, then, is that the search for a **phonological** explanation be abandoned, at least until we have a larger data set, and that a different type of explanation be considered.

2.4 Locative and Ergative on consonant final stems

2.4.1 Garrwa Locative

In Garrwa where the cognate LOC suffix *-na* is *not* subject to vowel harmony, the LOC allomorph on consonant-final stems is *-ina* as shown in (5).

¹³ CO is Charles Osborne who recorded Wanyi at Doomadgee Queensland (Osborne 1965, 1966).

(5) Garrwa locative nouns (from Leeding 1976)

| Consonant final roots | | Vowel final roots | |
|-------------------------|---------------------|--------------------|-----------------|
| <i>yarangul-ina</i> | 'carrying dish-LOC' | <i>nala-na</i> | 'thigh-LOC' |
| <i>bundal-ina</i> | 'river-LOC' | <i>julaki-na</i> | 'bird-LOC' |
| <i>gurul-ina</i> | 'line-LOC' | <i>ngubungu-na</i> | 'boomerang-LOC' |
| <i>bunyulbunyul-ina</i> | 'soft-LOC' | | |

While the two locative allomorphs, *-ina* and *-na*, correlate with consonant-final versus vowel-final root form, there is no synchronic phonologically-driven motivation for the *-ina* form since the sequence of lateral consonant followed by nasal consonant is permitted, especially at morpheme boundaries. For example the ABL[ative] suffix *-nanyi* is directly suffixed to consonant final stems, e.g., *puntal-nanyi* 'river-ABL' or *yuparl-rnanyi* 'smoke-ABL' (Furby 1974:9), thus showing that *i* epenthesis is not motivated by a need to 'fix' illegitimate consonant sequences.

2.4.2 Wanyi Locative

On some consonant final stems I have recorded alternate Wanyi LOC forms from RS. One variant follows the Garrwa pattern with an invariant LOC suffix *-ina* (all recorded on consonant final roots whose last vowel is /a/), while the other variant involves both a specified high front vowel *i* followed by *ni* which is consistent with the form created by the vowel harmony process which operates when *-nV* is suffixed to vowel final stems. Irrespective of the last vowel in the nominal stem, the LOC suffix surfaces as *-ini*, presumably since the final vowel 'harmonizes' with the preceding *i*. Words recorded with variant locative forms are shown in (6).

(6) Wanyi locative nouns with consonant roots

| Locative <i>-ina</i> (Garrwa pattern) | Locative <i>-inV</i> [ini] | English gloss |
|--|---|--------------------|
| <i>yubarl-ina</i> | <i>yubarl-ini</i> (ML) | 'path-LOC' |
| <i>nguyarr-ina</i> | | 'spinfex-LOC' |
| <i>yamarr-ina</i> | | 'flat rock-LOC' |
| <i>yukal-ina</i> (ML) | <i>kinngarr-ini</i> (GB) | 'smoke-LOC' |
| | <i>jangkurr-ini</i> (ML) | 'speech-LOC' |
| | <i>winngil-ini</i> (ML) <i>winngirr-ini</i> (GB) | 'rainy season-LOC' |

Given that all the stems which host the LOC form *-ina* have /a/ as the last vowel, one might consider the possibility that the presence of suffix-final /a/ results from the spread of the feature [+low] from the final vowel of the stem to the unspecified vowel of the suffix *-nV*. However, such an explanation is untenable since it fails to explain the *-ini* form (except on *winngil-ini*) and it would require the rather odd moves set out in (7). Starting with the lexical representation in (7a), affixation would be followed by feature spreading from final stem vowel to suffix vowel as in (7b) resulting in an unattested derived form. The attested form *yubarlina* could only be obtained by the operation of vowel epenthesis shown in (7d) which

violates the constraint on crossing association lines. If the order of (7c) and (7d) is reversed, the attested form is not obtainable, since the presence of the epenthetic *i* would block feature spreading from stem vowel to suffix vowel.

- (7) a. Lexical forms: *yubarl] nV*
- b. Affixation: *yubarlnV*
- c. Vowel Harmony: **yubarlna* (but should be phonologically legitimate)
- d. Vowel epenthesis: *yubarlina* (unmotivated, crossed feature association lines)

While the ordered suite of processes in (7) will lead to the attested forms in Column 1 of (6), there is no phonological motivation for the epenthesis rule in (7c), since the sequence of lateral followed by nasal consonant is permitted in Wanyi, as it is in Garrwa. Furthermore, epenthetic vowels are typically underspecified for articulatory features, so that if (7d) preceded (7c) the resultant form would be **yubarl-VnV*, which would surface as unattested **yubarl-ana* following the application of vowel harmony. (Similarly **jangkurr-VnV* would surface as unattested **jangkurrunu*.)

Clearly the simplest synchronic analysis of the attested allomorphy between the Garrwa allomorphs *-na* (after vowels) and *-ina* (after a consonant) and the corresponding Wanyi *-nV* and *-ini* is that these are lexically specified allomorphs determined by the stem type – whether vowel or consonant final. In the speech of RS, the *-ini* allomorph may be optionally replaced by a third allomorph equivalent to the cognate Garrwa suffix, *-ina* (at least on stems ending in the sequence *aC*).

These considerations lead to the conclusion that the initial vowel /i/ in the *-ina* and *-ini* forms is not epenthetic but rather it is lexically specified and consequently never the target of vowel harmony. Rather this vowel determines the features of the Wanyi suffix-final vowel, thus accounting for the invariant *-ini* form on stems regardless of the final vowel of the root, as evidenced by the forms in Column 2 of (6). The presence of this lexically specified vowel blocks the spreading of root-final vowel features to the suffix final vowel, at the same time assuring that the final V of the Wanyi LOC suffix *-inV* is always *i*.

The simplest synchronic analysis of the locative suffixes for both Garrwa and Wanyi is that they have two locative allomorphs, the CV form on vowel-final stems and the iCV form on consonant-final stems. Garrwa differs from Wanyi in specifying the suffixal V as *a*, while it remains unspecified in Wanyi and subject to progressive vowel harmony. The Wanyi invariant *-ini* suffix also results from vowel harmony – at least historically. In both languages the initial /i/ in the *-inV* allomorph derives from a lexically specified vowel added to consonant-final roots, thus forming a stem ending in /i/ to which the LOC suffix was affixed as shown in (8).

- (8) Garrwa and Wanyi locative suffixes

| | Vowel-final stems | Consonant-final stems |
|---------------|-------------------|---|
| Garrwa | <i>-na</i> | <i>-ina</i> (< <i>*i</i>]- <i>na</i>) |
| Wanyi | <i>-nV</i> | <i>-ini</i> (< <i>*i</i>]- <i>nV</i>) |

2.4.3 Ergative suffix with consonant final stems

Recall that on stems with V-final roots ERG is marked in Wanyi by lengthening of the stem-final vowel as shown in (1). On consonant-final roots the ERG word is [[root]ii] as in (9).

(9) Ergative suffix on consonant final stems

| Citation form (=ABS) (ML) | Ergative (<*-i -V) | English gloss |
|---------------------------|--------------------|------------------|
| <i>ngajarr</i> | <i>ngajarr-ii</i> | 'rifle' |
| <i>najarr ~ najarru</i> | <i>najarr-ii</i> | 'paperbark tree' |
| <i>yukal</i> | <i>yukal-ii</i> | 'smoke' |
| <i>jindal</i> | <i>jindal-ii</i> | 'mosquito' |

I propose that the *-ii* ERG suffix is the reflex of the same vowel *i* seen operating with the LOC suffix, which augments the consonant-final root to form a stem which then hosts the ERG suffix *-V* (same as on basic vowel-final stems) or the LOC suffix *-nV*. Could there be any phonological motivation for the insertion of this historical stem augmenting (or suffix augmenting, in synchronic terms) vowel *i* between the nominal root and the regular ERG or LOC suffixes? We have already seen that such motivation is very weak in the case of the LOC suffix. It is even weaker with the ERG.

The affixation of the ERG suffix *-V* to a consonant final stem would produce a word of optimal or default vowel-final form. The features associated with the stem final vowel could then spread to the suffixal vowel, e.g. **ngajarr]-V > *ngajarra*. But this does not occur. Instead, the consonant final root is first augmented by *-i* to create a vowel final stem to which the suffix *-V* is then added. This behaviour of the ERG suffix contrasts with that of the DAT suffix *-anyi* seen on consonant-final stems in (3), where no additional stem-augmenting vowel is found.

These observations lead to the conclusion that the stem-augmenting *i* found on consonant-final roots in both ERG and LOC Wanyi words is not phonologically motivated synchronically, but is part of the lexical representation of the relevant allomorphs. I have also recorded *i* between at least one consonant-final root and the invariant COMitative suffix *-yudu* on *yukal-i-yudu* 'smoke-COM'.

I now want to consider some possible antecedents for the insertion of /i/ between consonant-final roots and consonant-initial suffixes in Wanyi and Garrwa. In §3 these Wanyi and Garrwa suffixes are compared with similar forms in the neighbouring Tangkic languages.

3. Comparison with Tangkic languages

The insertion of the vowel /i/ between consonant-final roots and certain suffixes in Tangkic languages – such as Yukulta spoken to the immediate east and north of Wanyi – looks to be very similar to the Wanyi ERG and Garrwa and Wanyi LOC suffixes. Yukulta, like Wanyi

and Garrwa, has both vowel final and consonant final nominal roots, although Yukulta allows a far larger range of nominal root final consonants than either Garrwa or Wanyi. However, Yukulta does **not** permit consonant final words.

The citation form of Yukulta nouns (equivalent to the ABS form) built on consonant final roots/stems includes a suffix of the form (C)a where the presence and/or form of the occlusive C is determined by the final segment of the stem:

- stem with final nasal or lateral is augmented by homorganic stop followed by /a/, e.g. *miyarl-rta* 'spear', *karnkarn-rta* 'mad', *kalarrang-ka* 'mosquito', *thungal-ta* 'stick'
- stem with final /rr/ is augmented by /a/, e.g. *tamurr-a* 'short', *ngampirr-a* 'humpy'

In some varieties of Yukulta, all consonant-final roots hosted an ABS suffix *-a*, not just those ending in *rr*, e.g. *Yukul-a* (rather than *Yukul-ta*) was recorded by many as the language and tribal name. This is like those Wanyi citation form variants with final /a/ on words with stem-final *rr* e.g., *mabibarra* 'flame', *nguyarra* 'spinifex' in (4). However, there is no Tangkic equivalent of Wanyi final /u/ on ABS nouns, nor have I found Yukulta lexical equivalents of the Wanyi words with consonant final roots.

Vowel-final stems in Yukulta, especially disyllabic ones, may be augmented by the ABS suffix *-Ga* which surfaces as *-ra* ~ *-wa* ~ *-ya* depending on the preceding vowel, but both suffixed and non-suffixed forms of the same word are used as shown in (10). Other suffixes, including the ERG/LOC, which is a single form in Yukulta, are formed by the addition of the /i/ to the consonant-final root to which the suffix corresponding to that found on vowel-final roots is added. In the case of the ERG/LOC, there is seemingly free variation between the ERG which just consists of a bivocalic stem +*i* and the more elaborate form of STEM+*i* + SFX *-ya* as shown in (10). ABL[ative] forms are also listed in (10) as they too include *i* added to a consonant-final root.¹⁴

(10) Yukulta inflected nouns

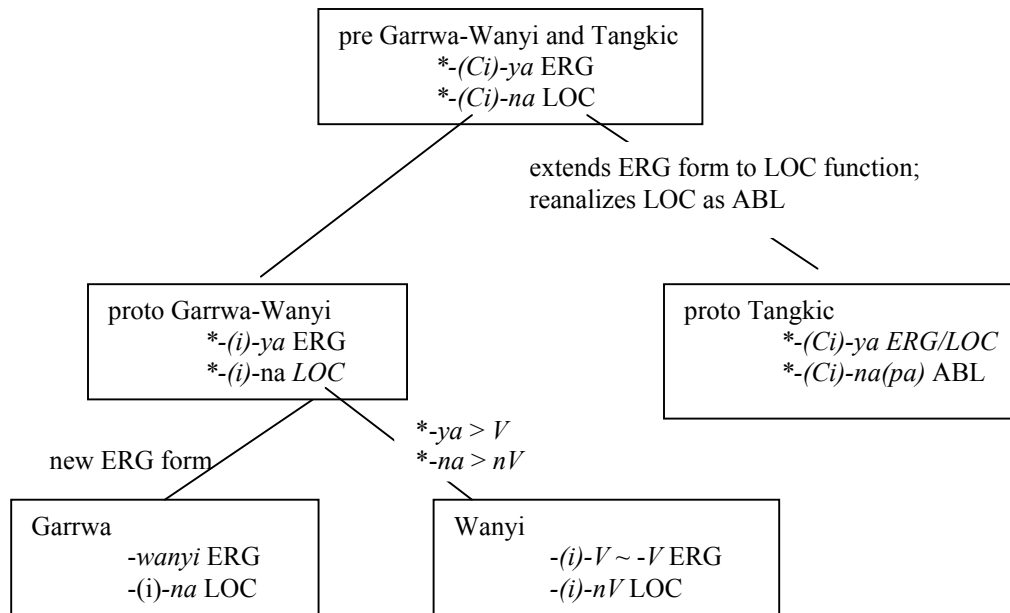
| | stem | ABS | ERG | ABL |
|---------|-------------------------|----------------------------------|--|------------------------|
| V-final | <i>tangka</i> 'man' | <i>tangka</i> ~ <i>tangka-ra</i> | <i>tangka-ya</i> | <i>tangka-napa</i> |
| | <i>karnti</i> 'wife' | <i>karnti</i> ~ <i>karnti-ya</i> | <i>karnti-ya</i> | <i>karnti-napa</i> |
| | <i>ngawu</i> 'dog' | <i>ngawu</i> ~ <i>ngawu-wa</i> | <i>ngawu-ya</i> | <i>ngawu-napa</i> |
| C-final | <i>ngampirr</i> 'humpy' | <i>ngampirr-a</i> | <i>ngampirr-i</i> ~ <i>ngampirr-i-ya</i> | <i>ngampirr-i-napa</i> |
| | <i>thungul</i> 'stick' | <i>thungul-ta</i> | <i>thungul-i</i> ~ <i>thungul-i-ya</i> | <i>thungul-i-napa</i> |

It is possible then that the Wanyi ERG and LOC suffixes derive from a common source with Yukulta ERG/LOC and ABL suffixes respectively, either through descent or via borrowing

¹⁴ Not all Yukulta suffixes require the insertion of *i* between the C-final root and a C-initial suffix, e.g. the COM suffix which has a range of allomorphs *-kurlu*, *-wurlu*, *-urlu*, *-ngkurlu* is suffixed directly to the lexical stem, with the vowel-initial allomorph being affixed to C-final stems. This suggests that this suffix may not be of the same ancestral stock as the other suffixes, which is further supported by its distribution; it occurs in western Pama-Nyungan languages including those in the Ngumpin-Yapa group.

from a Tangkic language into the common ancestor of Wanyi and Garrwa. Given that reflexes of Yukulta ERG/LOC *-ya* are found in the other Tangkic languages, while the first syllable of the Yukulta ABL suffix, i.e. *-na* figures in the ABL suffix in other Tangkic languages, proto-Tangkic **(C)i-ya* ERG/LOC, and **(C)i-na* ABL can be reconstructed. If these forms descended into Garrwa-Wanyi from a shared ancestral source, then a possible scenario is shown in (11). The additional /i/ placed between a consonant final stem and the ERG or LOC suffix is also shared by both Tangkic and Garrwa-Wanyi and may have descended from a common source. In Tangkic, however, /i/ is sometimes preceded by a consonant such as *j* or *k* depending on the word type, which is symbolised in (11) as *(C)i*¹⁵. This fact provides further evidence that this 'appended' /i/, did not develop in response to some phonological requirement, but rather was part of some lexically specified morpheme. There is nothing in Garrwa or Wanyi nouns which corresponds to this Tangkic C preceding 'appended' /i/, but this might be due to the fact that those Tangkic word classes in which the C appears, namely determiners and pronouns, are the precise word classes where other allomorphs of these case suffixes are used in both Wanyi and Garrwa.

(11) Hypothetical history of Garrwa-Wanyi and Tangkic case-marking suffixes



¹⁵ Work by Haervey *et al.* (2003) on the reconstruction of noun class marking suffixes in Barkly languages suggests that the proto-Tangkic *Ci* stem augment (or augmented suffix) may derive from an earlier system of active noun-class marking inactive in the eastern branch of a larger language family which included Tangkic and possibly also Garrwa-Wanyi. The details of this complex prehistory is beyond the scope of this paper.

A plausible alternative to the inheritance scenario depicted in (11) is that the initial forms were pre-Tangkic (not also pre-Garrwa-Wanyi) and that these were borrowed into proto-Garrwa-Wanyi.¹⁶

The evidence for the alternating *a* and *u* final Wanyi nouns with consonant-final roots being remnants of some earlier shared inheritance with Tangkic ABS case suffix is rather more tenuous.¹⁷ When more data is gathered, it may be possible to say more about the origin of these word-final *a* and *u* vowels on ABS forms which contrast with *i* in the ERG and LOC forms in parallel fashion to the contrast between word final *a* and *i* on words with consonant-final roots in Tangkic languages.

4. Conclusions

- Wanyi ABS nouns based on consonant-final (*l*, *rl* and *rr*) roots are pronounced as either identical to their roots or with an appended vowel or elided root-final consonant.¹⁸ The appended vowel may be related to the Tangkic ABS suffix *-(C)a*, and/or the Barkly languages gender-marking vowel suffixes.
- Wanyi and Garrwa LOC suffix and Wanyi ERG must suffix to a vowel-final stem. Such stems are derived by the addition of /i/ to all consonant-final roots.
- Wanyi differs from Garrwa in having unspecified V in place of fully specified /a/ in the locative suffix (Garrwa *-na* vs Wanyi *-nV*); Wanyi also has an unspecified V as its ERG suffix while Garrwa has innovated a non-cognate ERG suffix *-wanyi*.
- The features specified on the stem-final vowel spread to the lexically unspecified V in the Wanyi ERG and LOC suffixes determining their surface form.
- Wanyi ERG (*-V*) and Garrwa and Wanyi LOC (*-na/-nV*) suffixes are possibly cognate with Tangkic ERG/LOC (**-ya*) and ABL (**-na(pa)*).
- The stem augmenting vowel /i/ added to consonant-final roots to host the Wanyi ERG and LOC suffixes (and proposed cognate forms in Garrwa and Tangkic languages) may also have a common ancestry, possibly the remnant of a suffixal CV morpheme which marked noun class distinctions as found in Barkly languages (Harvey *et al* 2003).

¹⁶ To date there has been no work published which purports to show what (if any) genetic link there is between the Tangkic languages and the neighbouring Wanyi-Garrwa, so any suggestion of shared inheritance as presented in (11) must be seen as highly speculative at this stage. However, similarities in complex morpho-phonological paradigms deserve investigation as they are indicative of some sort of shared history.

¹⁷ Suffixal vowel alternations mark gender distinctions in Barkly languages. Cognates may differ in the final vowel, e.g., Ngarnka *ugala*, Jingulu (*w*)*ugalu* (Chadwick 1971), Gudanji and Wambaya *yugala* (Aguas 1968, Nordlinger 1998) 'smoke'. In fact there is a considerable number of Jingili nouns ending in *u* with cognates ending in *a* in more westerly Barkly languages.

¹⁸ As pointed out by an anonymous reviewer, speakers have alternate lexical entries for these C-final words. One would involve a lexically specified ABS form (with a specified ABS suffix V in forms such as *wararru* 'paperbark' or lacking the final C of the root as in *kurnnga* 'smoke/ash') in addition to the root form. The speaker may choose to use the special ABS form, or to apply the default process of creating an ABS word which is phonologically equivalent to the root.

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