Conjugation Class Stability:
Charting the History of Conjugation Classes in Yolŋu Languages

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1 Introduction

The Yolŋu languages of North East Arnhem Land are one of the subgroups of Pama-Nyungan which have retained verb conjugation class markers from the proto-language. However, there is considerable variety in the form and semantics of the classes in the individual languages. In this paper I present an overview of the classes in individual Yolŋu languages and reconstructions of the Proto-Yolŋu system. Special attention is paid to Djinang and Djinba, two languages in the subgroup which have been omitted from previous verb class typologies such as Zorc 1986.

The changes in Yolŋu verbs are relevant to several more general issues in language change. First is the question of what can happen to conjugation marking in language history. We know from the histories of subgroups such as Romance (Maiden 1992) that conjugations can be eroded and that marking can be reinforced with new material (references and examples). Conjugations can collapse and split, as in XXX. Furthermore, morphologically inflected words are also subject to regular sound changes, which can lead to further reshaping of paradigms (Koch 1996). Yolŋu languages exhibit both erosion and reinforcement. However, they also exhibit an additional change where forms are stable but functions (that is, the tense/aspect/mood combinations denoted by the verb form) shift considerably. This clouds reconstructions which compare only the morphemes with identical meaning.

I begin in Section 2 with an overview of the Yolŋu subgroup and the languages that comprise it. I then describe previous work on Yolŋu conjugation classes. XXX move to a description of the conjugation system of one language, Yan-nhaŋu,

2 Overview of the Yolŋu subgroup

The Yolŋu subgroup of Pama-Nyungan is linguistically discontiguous from the rest of the Pama-Nyungan family. It is surrounded by non-Pama-Nyungan languages from the Gunwinyguan and Maningrida families. While some (Zorc 1986, Dixon 2002) have treated Yolŋu as a single language, it is more accurate to speak of thirty clan varieties (Schebeck 1986, Stanford 2008) which cluster into about six languages (see family free in Figure 1 below). It is difficult to speak of mutual 'intelligibility' in the case of Yolŋu languages because so many of the speakers are multilingual in several clan varieties. There is, however, a well-developed Indigenous folk linguistics among Yolŋu which recognize both named dialectal (clan language) and language levels (Schebeck 1986).[1] The unit of analysis in this paper is a representative selection of clan varieties from all linguistic branches of the family. I take no particular position on the number of distinct languages or whether two particular clan varieties stand in a dialectal relation to one another. However, I am concerned to highlight the extent of variation across the Yolŋu family.

Verbs in all Yolŋu languages inflect for a combination of tense, aspect, mood, and

[1] There has been some confusion in the literature regarding the use of clan and language names for Yolŋu languages. Many speech varieties can be terms either by the name of the clan that speaks them, or by a name based on the word for 'this'. For example, one clan variety can be referred to either as *Djambarrpuyŋu*, or as *Dhuwal*.

polarity in conjugation classes. There is also causative marking, reflexive/reciprocal marking, and a few other derivational categories, but their form and the extent of marking varies across the subgroup. Each of these items is bound closely to the conjugation of the verb, and verbs may change their conjugation depending on derivational marking. Each verb has been three and six inflectional forms, depending on the language. There is also in some languages a class of uninflecting verbs; these are mostly loans from English (e.g. *riŋimab* 'ring up') and Makassar (*djaama* 'work') (reference). The number of conjugation classes also varies among Yolŋu languages but is between three and eight across the family.[2] Most languages also have a few irregular verbs. The classes are not equally sized, with one class usually accounting for between 30 and 50 percent of the verbs in the language.

Conjugation membership in most languages is in part arbitrary, and in part conditioned by derivational morphology. Derivational morphology can change conjugation class; this for some languages includes reflexive/reciprocal marking, while in others is limited to causatives. There is a correlation in all languages between transitivity, event type and conjugation, in part because denominal and deadjectival causatives and inchoative derivational morphology specifies conjugation class. For underived verbs, however, there is little correlation between valency or event type and conjugation; the classes otherwise appear arbitrary. [check that this is actually true.] This makes the Yolngu classes rather different from some of the more familiar Pama-Nyungan verb conjugation systems (such as Warrgamay; see Dixon 1983), where the conjugation classes also provide information about transitivity.

Morphologically, the conjugation markers are in some cases difficult to segment from the root. There is both additive and subtractive morphology, along with stem vowel changes. Examples and further discussion are provided below. Verbs do not inflect for the person or number of any argument in any Yolŋu language. Some languages have reduced clitic pronouns which appear with either the verb or another word in the clause; this is, however, optional. Verbs combine with particles which give further information about the tense, aspect, mood and polarity of the clause. Some particles are widespread across Yolŋu while others are particular to the individual language. I will call these TAM particles throughout. The particles themselves are incidental to the reconstruction of verb conjugation classes themselves, but I mention them here because they are crucial in construing the time and polarity reference of the clause. They are also a source of affixes in Djinang and Djinba, as we shall see.

The languages under consideration in this paper are drawn from all areas of the Yolŋu Bloc. I assume the tree given in XX below, which is based on Heath XX, Schebeck XX and work in progress by the author.

[family tree and map]

3 Previous work on Yolŋu languages and current approach

There has been some previous comparative work on Yolŋu conjugation classes. However, this is the first treatment which considers all languages in the group. Previous work has avoided the inclusion of Djinang and Djinba (perhaps because data were not available, or because the forms appear rather different from the other languages in the family. Zorc's (1986) classification, for example, includes only Central Yolngu languages and Ritharrngu (and Djangu??-CHECK). The

[2] Part of the difference is accounted for by whether authors have treated certain verb types as belonging to the same conjugation but different sub-conjugations.

conjugation marking in these languages differs from the other Northern languages, however.

Some work (e.g. Waters 1982XX,1989) only considered the cognacy of suffixes; however one of the problems with Yolngu verbs is the difficulty in separating the stems/roots from the affixes; examining suffixes in isolation makes identification of cognate items very difficult. Indeed, Waters had difficulty in relating the Djinang/Djinba verbal markings to other conjugations in Yolngu languages for this reason. Furthermore, Waters did not consider conjugation class membership in his view of Yolngu suffix; suffixes are treated in isolation, without consideration of the fact that they occur in mutually exclusive sets and are therefore possibly subject to analogical changes.

A third vein of work has sought to determine the number of conjugation classes, and to number them. The comparative approach to this work then compares the numbers with conjugation class numbers from other Yolngu languages. This is useful but makes no reference to the forms; nor does it make reference to the roots that cluster in particular conjugations. Finally, most of this work has been done without relevance to the semantics of the conjugation categories. The Yolngu languages have distinct classes and "form 1" in one language won't necessarily mean the same thing as "form 1" in the next language. Finally, note that none of the previous work has seriously attempted historical reconstruction of the forms; it has been particularly concerned with the identification of cognate forms, but the additional step of proposing reconstructions has not been made thus far.

Therefore here I try to address the holes in the previous work on Yolngu conjugations by outlining the problems in Yolngu morphological analysis, reconstructing the conjugation class system of Proto-Yolngu and outlining the changes that occurred in the daughter languages. The method owes much to the 'etymological' method described in Koch 2007 and follows from the procedure in Alpher (1990) for Proto-Pama-Nyungan.

The following sections do three things. In Section 4, I present a summary of the data from representative contemporary Yolŋu varieties. This includes information about the number of conjugation classes, the number of inflectional forms in each paradigm, and the meanings of the TAM distinctions marked by each form. In Section 5, I provide reconstructions of the Proto-Yolŋu system. Section 6 moves specifically to Djinang and Djinba and shows how they too reflect the Proto-Yolŋu conjugation classes.

4 Language data

In the following sections I present brief sketches of individual Yolŋu varieties, representing all branches of the family. The sketches are laid out according to a common form. Discussion of Djinang and Djinba forms is postponed until Section 6.

I use representative verbs rather than morphological segmentation.

I here use information from six well-attested clan varieties. Yolŋu Matha linguistic nomenclature is complicated (Schebeck 1978, Keen 1991), as clan names are also used to refer to languages, and many languages go by more than one name. Here I use the names based on forms for the word for ‘this’ in preference to names based on clan varieties, with the exception of Ritharrngu, which is known solely in the literature by that name.

4.1 Central Yolŋu: Dhuwal and Dhuwala

Dhuwal and Dhuwala are the two best described Yolŋu languages; they are also the most widely

spoken (and are encroaching on other Yolŋu varieties). Dhuwala varieties include Gumatj, Gupapuyŋu and Wubulkarra (described by XXX); the most widely-known Dhuwal clan variety is Djambarrpuyŋu (Wilkinson 1991, Heath 1980; see also Djapu [Morphy 1983]). These are also the varieties with which Zorc was most familiar (see Zorc 1986, 1992).[3] These days, however, the most distinctive difference between the two lects is that Dhuwal varieties have lost many final vowels. My data here are mostly from Wilkinson (1991), with Dhuwal represented by the Djambarrpuyŋu variety she recorded, and from Lowe (1965), which is based on the Gupapuyŋu from Milingimbi.

Summarize from Wilkinson and Lowe.
Summary information:
Number of conjugation classes
Number of forms for each verb
Time divisions marked on the verb
Paradigm examples.
Characteristics of the individual conjugations
Causatives
Reflexives

4.2 Southern Yolŋu: Ritharrŋu

Data for Ritharrŋu are from Heath (1986).

Summary information:
Number of conjugation classes
Number of forms for each verb
Time divisions marked on the verb
Paradigm examples.
Characteristics of the individual conjugations
Causatives
Reflexives

4.3 Northern Yolŋu (1): Dhaŋu and Djaŋu [Gälpu and Wangurri]

Data for Dhangu are from Wood () (and Pepperill?) and for Djangu are from McLellan (), from Wangurri.

Summary information:
Number of conjugation classes
Number of forms for each verb

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[3] There is some indication that Gupapuyngu and Djambarrpuyngu may have converged in the last 30 years. In the 1950s and 1960s, Gupapuyngu (Dhuwala) was the language of Milingimbi school; however as political affiliations changed in the community, the language of the school increasingly came to be Djambarrpuyngu. There was a period, however, where the teachers were writing Gupapuyngu but speaking Djambarrpuyngu. Sue Harris (pers comm. 2005) noted that ona recent trip, speakers regarded the Gupapuyngu she spoke (from fluent learning in the 1960s and 1970s) as 'archaic'.

Time divisions marked on the verb
Paradigm examples.
Characteristics of the individual conjugations
Causatives
Reflexives

4.4 Northern Yolŋu (2): Yan-nhaŋu

Data for Yan-nhaŋu, representing the other branch of the Northern subgroup of Yolŋu, are from Bowern (2008), Bowern et al (forthcoming) and the author's fieldnotes. The language is now used by six clans in the Northwestern area of the Yolŋu bloc.

The language has six conjugation classes. One class, marked by *-th-* or *-yu-*, accounts for almost half the verbs in the language. I recognize several sub-conjugations within the conjugation classes, depending on the forms of the imperatives, which differ for some verbs. There are also two irregular verbs in the language, which will be discussed further below. One of the conjugations is uninflecting, and includes loans from Makassar (as is the case with other Yolŋu varieities) such as *djäma* 'work'. For the inflecting conjugations, each verb has four forms; these are summarized in Table 1 below.

Cl.	English	Present	Command	Past	Habitual
1	sing	*ḏarṯar'yun*	*ḏarṯar'yu*	*ḏarṯar'yana*	*ḏarṯar'yala*
	run	*gabatthun*	*gabatthu*	*gabatthana*	*gabatthala*
2a	hit	*buma*	*buŋu*	*bunha*	*buwa*
2b	go	*garama*	*garama, guruku*	*garanha*	*garawa*
2c	crawl	*wakalama*	*wakala*	*wakalanha*	*wakalawa*
3a	get big	*yindiyirri*	*yindiyi*	*yindiyina*	*yindiyala*
3b	cry	*ŋätji*	*ŋätji*	*ŋätjina*	*ŋätjiyala*
4a	sleep	*ŋorra*	*ŋorritji*	*ŋorrinha/ŋorrunha*	*ŋorriyala*
4b	stand	*bamparra*	*bamparrayi*	*bamparranha*	*bampirriyala*
	talk	*waŋa*	*waŋayi*	*waŋanha*	*waŋayala*
5a	chase	*ŋupaṉ*	*ŋupa*	*ŋupaṉa*	*ŋupala*
5b	cook	*bathan*	*batha*	*bathana*	*bathala*
6	work	*djäma*	*djäma*	*djäma*	*djäma*
irreg	eat	*ben*	*biya*	*binha*	*birra*
	do this	*bin(a)=*[4]	*biya=*	*binha*	*biya=*

Table 1: Yan-nhaŋu verb conjugations

~~Summary information:~~
~~Number of conjugation classes~~
~~Number of forms for each verb~~
Time divisions marked on the verb
~~Paradigm examples.~~
Characteristics of the individual conjugations
Causatives
Reflexives

As in other varieties, the inflected forms combine with particles to jointly determine the

[4] The verb *bina* 'do this, do thusly' always appears with the quasi-directional clitic *=munu* in my corpus.

tense, aspect, mood, and polarity of the clause. The forms in Table 1 are labeled according to their 'core' meanings; that is, their most commonly given reading without a particle. The 'imperative' forms, for example, have an imperative meaning when not combined with any other particle (see example XX), but take the meaning XX when combined with the particle XX.

(1) *ḏar'ṯaryu!* 'sing!'

The 'present' form is also used for future time, when used with the particle *gurrku*. The third form is used for 'past' tense,[5] while the fourth is an irrealis. Example XX gives some representative sentences:

(2) XX

Like other Yolŋu languages, in Yan-nhaŋu, the causative and inchoative derivational morphology coerce word class. Inchoatives are of conjugation class 3; cf example () below. Causatives are of class 2a.

(3)

As mentioned above, the subconjugation classes involve forms where the imperatives of verbs vary, though other forms of the paradigm are constant within the conjugation class. Within class 2, for example, all verbs in this conjugation class have a form which ends in *–ma* in the present, *-nha* in the past, and *–wa* in the irrealis. However, some verbs have a single form for the present and imperative; *garama* 'go' is the most common example.[6] Others have a null imperative, while the remainder (the most common cases in this conjugation) have imperatives in *–ŋu*. In other cases, there was some variation.

5 Reconstruction

From the available data it is possible to reconstruct six forms and four conjugation classes (with some irregularities which I have called 'subclasses' here). Table XX gives the forms and supporting data are described in the appendix.

For most classes, there is a close relationship between the potential and the imperative. We need to reconstruct both; where they fall together it is because of sound change. In Dhuwal, for example, the potential and imperative fall together when final vowels are lost through sound change.

There are two reconstructible past tenses; these also have relations to other forms, with the Past2 built on the potential (not the imperative; another reason to keep them separate) and the Past1 also used as a base for the nominal (or gerund) form.

Class	'Present' 'Yest. Pst'	'Potential'	'Imperative'	'Past$_1$'	'Past$_2$' potential+Past$_1$	Nominal

[5] Note that several Yolŋu varieties, with Yan-nhaŋu among them, has a system of relative tense marking, whereby tense is marked not with the moment of speech as reference point, but rather with a shifting reference point. See XX and Bowern (2006, in prep) for more details. – might want to bring some of this in this paper, since tense is relevant.

[6] The verb *garama* also has an irregular future *guruku*, which was only used by the very oldest speakers of the language.

do we have examples of this to get at the semantics of tense in yannhaŋu? Is it relative tense? Is Comrie 1985 the relevant ref?

1	*mukthun 'be quiet'	*mukthun	*mukthurru	*mukthurra	*mukthana	*mukthurruna	*mukthanara-
2a	*bathan 'cook'	*bathan	*bathu[rru]	*batha[rra]	*bathara	*bathuna	*bathanara-
2b	*ŋupan 'follow'	*ŋupan	*ŋupulu	*ŋupala	*ŋupara	*ŋupana	*ŋupanara-
3a	*nhäma 'see'	*nhäma	*nhäŋu	*nhäwa	*nhänha	*nhäŋala	*nhänara-
3b	*ŋäma 'hear'	*ŋäma	*ŋäku	*ŋäka	*ŋänha	*ŋäkula	*ŋänhara-
4a	*ŋäthi 'cry'	*ŋäthi	*ŋäthi[yi]	*ŋäthiya	*ŋäthinya	*ŋäthina	*ŋäthinyara-
4b	*ŋorra 'sleep'	*ŋorra	*ŋorri	*ŋorriya	*ŋorrana	*ŋorrina	*ŋorranhara

I have no firm data on the reconstructibility of different semantics for past+1 and past+2. There are Yolngu languages with more than one past tense, but the semantic contrast varies in the languages. For some, the main distinction is remote vs recent, while in others the primary difference appears to be aspectual. [give examples here.] Past1 and Past2 are not specifically designated as aspectual here, but Past1 was probably perfective and Past2 was perhaps aoristic, but the evidence is difficult and Past1 has both perfective/resultative and imperfective meanings in the modern languages. These conclusions are reached primarily on the evidence of Dhuwala and XXX.

There are further difficulties in the reconstruction of classes 1 and 2. There are analogical reformations in many of the daughter languages, which makes reconstruction uncertain. These are discussed below.

We can reconstruct an interaction between causative inflection and conjugation class. It is present in most of the languages in the subgroup, and well integrated into the verbal system.[7] .. in some of the other languages, the forms are less transparent, hence the conclusion of reinforcement rather than univerbation.

In all Yolngu languages, verbs can be nominalized, and this form is most commonly built on a past marker with a 'linker' -ra.

The conjugation classes here provide several examples of forms being built on other forms; that is, the form of one conjugation provides the stem for another form; this is regular across many of the conjugation classes. [check that this is true].

Many of the languages have variable forms in parts of the paradigm; this variation occurs in more conjugation classes than others.

[Something on the reconstruction of individual verbs to individual paradigms]. This is more difficult, because in part of the reformation that verbs in Djinang/Djinba have undergone. Some work along these lines is in progress, however. Stems of XX [number of] verbs have been reconstructed to proto-Yolngu. These are given in Appendix 2.\footnote{There are problems here in the variability of the copiousness of sources, and in the detail of glossing. Furthermore, since all the speakers of non-DHuwal languages are also fluent in Dhuwal, and there is a tendency to code-switch, more forms may have spread through

[7] Heath (1998) discusses hermit crab processes whereby morphology is reinforced by free forms. It is possible that something similar has occured in the Central Yolngu languages, since the causative verbs there are much more productive than causative inflection in some of the other varieties, and the inflection bears a strong resemblance to the main verb *ma-* 'put'.

recent borrowing than we could normally expect, given the general tendency for verbs not to be borrowed.}

- $Past_1$ is often the basis for nominalizations, but in some conjugations the nominal form is laminal where the Past is apical.
- Classes 1 and 2 are subject to some analogical reformations in various languages (hence bracketing of [rra] and [rru]).
- Causatives inflect as 3a in all languages but Djinang and Dhaŋu, where they fall together with 1a.
- 'potential' descends as future in Central Yolŋu, imperative in Yan-nhaŋu, and both in Ritharrŋu.
- Potential and imperative forms based on vowel changes $u \sim a$ are only found in Central and Southern Yolŋu, but I reconstruct them to Proto-Yolŋu on the basis of differences between *nhäŋu see-FUTURE and *nhäwa see-IMPERATIVE. However, it's possible that the distinction was not present for all conjugations.
- The nominal form is sometimes based on the Past (always in Yan-nhaŋu), but not in all cases, hence its separate reconstruction.
- The POTENTIAL form for *ŋäthi 'cry' may be reconstructible with an extra syllable, or there may be a difference in sub-conjugation between verbs like *ŋäthi and those like *waŋa 'talk', which has an form *waŋayi* in some languages (*waŋiyi* in Yan-nhaŋu), and *nyena 'sit', which has imperative *nyiniyi* in Yan-nhaŋu.
- $Past_1$ and $Past_2$ are not specifically designated as aspectual here, but $Past_1$ was probably perfective and $Past_2$ was perhaps aoristic, but the evidence is difficult and $Past_1$ has both perfective/resultative and imperfective meanings in the modern languages.
- I would also reconstruct the existence of uninflecting verbs, some of which alternate with inflected forms. These form the basis of a new conjugation of Macassan loans (and English loans like *bäyim* 'buy' and *riŋimab* 'ring, phone') in all languages but Djinang.

***-THUN class:** Example: *mukthun "be quiet", arranged by cognate form (**not** identical function)[8]

	***mukthun**	***mukthurru**	***mukthurra**	***mukthana**	[9]	***mukthanara**	
Djinang	*mukji.mi*	*mukji.gi*[10]	*mukjuwi*	*muknyi*[11]		*mukjinyiri*	*mukjili*
Djinba	*wukirriyu.m*	*wukirriyu.mitj* *wukirriyu.mak*	*wukirriyuw*	*wukirriyunya*			*wukirriyuwal*
Yan-nhaŋu	*mukthun*	*mukthu*		*mukthana*		*mukthanara-*	*mukthala*
Nhaŋu	*mukthun*	*mukthu/a*[12]		*mukthana*		*mukthanara*	*mukthala*
Wangurri	*mukthun*	*mukthu*	*mukthuwa(rra)*	*mukthunda*	*mukthuwan(a)*		
Gälpu	*mukthun*	*mukthu*	*mukthuwa(rra)*	*mukthunda*	*mukthuwan*		
Dhuwal	*mukthun*	*mukthurr*	*mukthurr*		*mukthunan*		
Dhuwala	*mukthun*	*mukthurru*	*mukthurra*	*mukthuna*	*mukthurruna*	*mukthunara*	
Ritharrŋu	*mukun*[13]	*mukurru*	*mukurra*	*mukuna*		*mukunrawu*	

Zorc (1986) separates this inflectional class from verbs such as *ŋupan* 'chase' and *bathan* 'cook'. Presumably this is on the grounds that –thun verbs are very frequent (and productively derived), whereas the others are a closed class. However, it is not clear to me why Classes 1 and 5 (particularly 5a; 5 itself has different future inflection) should not be treated as subclasses. There is evidence from cross-inference (e.g. the –*ala* forms in Djinang/Djinba and (Yan-)Nhaŋu) that the two are close. Note that this paradigm is comparatively all over the place, cf the –MA forms, which are much more consistent.

Djinang and Gälpu (and Djinba) inflect causatives in the same paradigm as this. This is an innovation. I would class it as a major shared innovation in Northern Karnic. (Djinang/Djinba are thus conflictingly subgrouped.)

I think what happened with the future/imperative forms: Central (and Southern) Yolŋu have a number of morphological forms with a trill, where Northern Yolŋu is missing the trill. Compare the comitative –mirri ~ -mirr ~ -mi; Wangurri *ŋaya* '1sg' vs *ŋarra* in the rest of Yolŋu; and a few others. Therefore, I strongly suspect that the Northern Yolŋu forms *mukthu-* are an innovation, and that *mukthurru > **mukthuwu > mukthu, and *mukthurra > mukthuwa.

I assume that the forms in the final column are independent innovations, that is, a –n suffix built on a counterfactual form.

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[8] I give both the causative and inchoative forms for Djinang. They are inflected in the same way, but in all the other languages, the inchoatives do not have the same paradigm as the causatives.

[9] Some form of counterfactual plus another suffix.

[10] The voicing in the Djinang form is mysterious, assuming it's not just an orthographic convention.

[11] Inferred from Waters' (1982:144, nt 11) rules, but this looks really wrong to me.

[12] I have no record of a form like this in my Yan-nhaŋu data, but it appears in Schebeck (2001).

[13] Inferred from grammar. The loss of –th- here is regular and a sound change (I believe).

-AN/-A<u>N</u> Class

Example: *bathan ‘cook’

			*bathan	*bathana	*bathurru		*bathara			
Djinang[14]	*bachi.gi*		*bachin.mi*	*bachini*	*bachirri*		*bachirnir*	*bachijini*		
Djinba			*batjan.mitj* *batjan.mak*					*batjiyin*	*batjal*	
Yan-nhaŋu	*batha*		*bathan*	*bathana*					*bathala*	
Nhaŋu										
Wangurri	*[ŋayatha]*	*[ŋayathu]*	*[ŋayathan]*	*[ŋayathana]*		*[ŋayatharra]*		*[ŋayathan]*		*[ŋayathanda]*
Gälpu	*biyarrtha*	*biyarrthu*	*biyarrthan*	*biyarrthan(a)*						
Dhuwal			*bathan*	*bathana*	*bathurr*	*bathurr*	*bathar*			*bathanara*
Dhuwala			*bathan*	*bathana*	*bathurru* *bathulu*	*bathurra*	*bathara*			*bathanara-*
Ritharrŋu			*bathan*		*bathurru*	*batharra*	*batharra*			*bathanara*

I assume that Proto-Yolŋu had two subclasses, one ending in –*n* and the other in –*<u>n</u>*. The distinction is lost in Dhuwal but maintained in Yan-nhaŋu and Ritharrŋu.

Some irregular verbs also pattern in similar ways to this class. This include the pro-verbs *nhaltjan* and *bitjan*.

I would reconstruct two subclass I think, with mergers in different ways in different Yolŋu varieties. This is the area of least consistency in conjugation class.

[14] These verbs are Class II in Waters’ system.

*-MA$_1$ class: Example: *nhäma "see"

	*nhäŋu	*nhäma	*nhänha	*nhäwa	*nhänara-		*nhäŋala	*nhäŋa	
Djinang[15]	*nyangi*	*nyami*	*nyanyi*	*nyawi*	*nyanyiri*	*nyangirni*			
Djinba	*nyaŋi*	*nyamitj* *nyamak*	*nyanya*	*nyawi*		*nyaŋaɲ*			
Yan-nhaŋu	*nhäŋu*	*nhäma*	*nhänha*	*nhäwa*	*nhänhara*				
Nhaŋu									
Wangurri	*nhäŋu*	*nhäma*			*nhänharawu*		*nhäŋal(a)*	*nhäŋa*	*nhäŋarra*[16]
Gälpu	*nhäŋu*	*nhäma*	*nhänha*		*nhänhara-*		*nhäŋal*	*nhäŋa*	
Dhuwal	*nhäŋu*	*nhäma*			*nhänhara*		*nhäŋal*	*nhäŋ.u*[17]	
Dhuwala	*nhäŋu*	*nhäma*			*nhänhara*		*nhäŋala*	*nhäŋa*	
Ritharrŋu	*nhäŋu*	*nhäma*	*nhänha*	*nhäwa*	*nhänhara-*		*nhäwala [?]*		

Causative-derived verbs also belong to this class in all languages except Djinang and Gälpu, where they have merged with the THUN class.

There is something funny going on with the verbs that have –ku as the future vs those with –ŋu.

nhäwa vs nhäŋa?

*-MA$_2$ class

Djinang									
Djinba									
Yan-nhaŋu	*ŋayathama*	*ŋayatha*			*ŋayathanha*		*ŋayathawa*		
Nhaŋu									
Wangurri									
Gälpu									
Dhuwal									
Dhuwala	*ŋayathama*	*ŋayathulu*	*ŋayathulu*	*ŋayathaŋala*	*ŋayathanha*	*ŋayathanhara*			
Ritharrŋu									

Yan-nhaŋu – if they have –ma, they have –wa as the habitual form.

[15] Djinang inflection is the same as the –THUN class.

[16] Imported from another paradigm I assume

[17] The difference between -u and -a in Dhuwal (Djambarrpuyŋu) is erased due to sound change in non-monosyllabic roots, and leveled by analogy in the monosyllabic roots.

Ŋayathama in Wangurri is a 1C verb; ŋayathan, ŋayatharra etc.

Example: ŋäma ‘hear’

Djinang	*girimi*		*[giri]*	*giriwi*	*girinyi*	*girinyiri*
Djinba						
Yan-nhaŋu	*garama*	*guruku*		*garawa*	*garanha*	*garanhara*
Nhaŋu						
Wangurri						
Gälpu	*ŋäma*	*ŋäku*	*ŋäka*	*ŋäkul*	*ŋänha*	*ŋänhara*
Dhuwal	*ŋäma*	*ŋäku*	*ŋäku*	*ŋäkul*	*ŋänha*	*ŋänhara*
Dhuwala	*ŋäma*	*ŋäku*	*ŋäka*	*ŋäkula*	*ŋänha*	*ŋänhara*
Ritharrŋu	*ŋäma*	*ŋäku*	*ŋäwa*	*ŋäwala*	*ŋänha*	*ŋänhara*
			pp			

Wangurri doesn’t seem to have a reflex of this type of verb. FIND OUT WHICH VERBS SHOULD BE RECONSTRUCTED TO THIS CLASS.

Example: *l̲ap-* “open”, arranged by cognate form (**not** identical function)

		***l̲apmarama**				***l̲apmaranha**	***l̲apmaranhara**	***l̲apmaraŋala**
Djinang	*lapmirigi*	*lapmirimi*			*lapmiruwi*	*lapmirinyi*	*lapmirinyiri*	*lapmiringili*
Djinba								
Yan-nhaŋu		*l̲apmiyama*	*l̲apmiyaŋu*		*l̲apmiyawa*	*l̲apmiyanha*	*l̲apmiyanhara*	
Dhuwal		*l̲apmaram*	*l̲apmaraŋ*	*l̲apmaraŋ*		*l̲apmaram*		*l̲apmaraŋal*
Dhuwala		*l̲apmarama*	*l̲apmaraŋu*	*l̲apmaraŋa*		*l̲apmaranha*	*l̲apmaranhara*	*l̲apmaraŋala*
Gälpu								
Ritharrŋu	l̲ap(-un)-mara-n̲ (pr)	lapmarawu (fut)			l̲apmarawa (pp)	l̲apmaranha (pst)		lapmarawala (pst)

-mara- causative in Wangurri (p113) goes on the end of the ‘neutral’ (primary) form. E.g. dhawat̲thun ‘come out’ has two causatives: dhawat̲thu-ma-n or dhawat̲thun-mara-m [where, note, it’s changed conjugation class]

-THIRRI class [inchoatives]

	*-thirri	*-thi	*-thina		*-thiya [?]	*-thinyara-	
Djinang	*dalpamdjirri*	*dalpamdjidji*	*dalpamdjini*		*dalpamdjiyi*	*dalpamdjinyiri*	*dalpamdjinyi*
Djinba							
Yan-nhaŋu	*yindiyirri*	*yindiyi*	*yindiyina*	*yindiyala*		*marŋgithinara*[18]	
Nhaŋu							
Wangurri							
Gälpu	*marŋgiyi*[19]	*marŋgiyi*	*marŋgiyin*		*marŋgiya*	*marŋginya(ra)*	
Dhuwal	*marŋgithirr*	*marŋgithirr*	*marŋgithin(a)*		*[marŋgithirr]*	*marrŋgithinyara-*	
Dhuwala	*marŋgithirri*	*marŋgithi*	*marŋgithina*		*marŋgithiya*	*marŋgithinyara*	
Ritharrŋu	*marŋgithirri*[20]	*marŋgithi*	*marŋgithina* *marŋgithinya*		*marŋgithiya*	*marŋgithina-* *marŋgithinya-*	

Class 3 in Djinang is really the amalgamation of the inchoatives on the one hand (with a slightly different 'yesterday past' inflection) and the *nyena,* etc class on the other. Waters treats them as one class; I'd split them into subclasses.

[18] By analogy with the past; innovation
[19] with lenition [unexpected] and loss of rr [expected]. The lenition parallels that found in Yan-nhaŋu.
[20] Inflection inferred from grammar and presence of this root in language in the dictionary.

- XX Class
Example: *ŋäthi- ‘cry’

Djinang	*ngajiji*	*ngaji*	*ngajinyi*	*ngajiyi*	*ngajiyiri*	*ngajini*	
Djinba							
Yan-nhaŋu	*ŋätji*	*ŋätji*				*ŋätjina*	*ŋätjiyala*
Nhaŋu							
Wangurri							
Gälpu	*ŋätji*	*ŋätji*	*ŋätjinya*	*ŋätjiya*		*ŋätjin*	
Dhuwal	*ŋäthi*	*ŋäthi*		*ŋäthi*	*ŋäthinya(ra)*	*ŋäthin(a)*	
Dhuwala	*ŋäthi*	*ŋäthi*		*ŋäthiya*	*ŋäthinya(ra)*	*ŋäthina*	
Ritharrŋu	*ŋäthi*	*ŋäthi*		*ŋäthiya*	*ŋäthinya(ra)*	*ŋäthina*	

Subclasses in Central Yolŋu only?

*ŋorri- ‘sleep’

	***ŋorri**	***ŋorra**	***ŋorrVna**		***ŋorranhara**		
Djinang	*ngurriji*	*ngurri*	*ngurrinyi*	*ngurriyi*	*ngurrinyiri*	*ngurrinyini*	
Djinba							
Yan-nhaŋu	*ŋorritji*	*ŋorra*	*ŋorrunha* *ŋorrinha*				*ŋorriyala*
Nhaŋu							
Wangurri							
Dhaŋu	*ŋoyay*	*ŋoya*[21]	*ŋoyanha*	*ŋoyiya*	*ŋoyanhara*	*ŋoyan*	
Dhuwal	*ŋorri*	*ŋorra*	*ŋorrana*	*ŋorri*	*ŋorranhara*		
Dhuwala	*ŋorri*	*ŋorra*	*ŋorran*	*ŋorriya*	*ŋorranhara*		
Ritharrŋu							

[21] nice confirmation of the rr > y sound change. Inflection is inferred from combination of dictionary and paradigm list. McLellan doesn’t seem to include paradigms for these verbs.

6 Djinang and Djinba: tense suffixation

- Only three classes
- Hard to line up cognates at first glance [therefore left out of work like Schebeck 2001].
- Waters gives categorial meanings to forms; other Yolŋu languages have forms labeled 'primary, secondary, etc' or generic labels.
- There's a continuous/noncontinuous split in forms.
- Waters argues for a phonological basis to the conjugations.[22]

6.1 Djinang Verb Forms

	non-past	yest. pst	tod. pst. cont	imper	tod. pst. irr	today past
Class 1	*-gi / -ngi*	*-mi*	*-nyi*	*-wi*	*-nyiri*	*-ngili / -li / -pirni*[23] */ -ngirni*
Class 2	*-gi*	*-nmi*	*-ni*[24]	*-rri*	*-rnir*	*-jini*
Class 3	*-ji*	*-ø / -rri*	*-nyi*	*-yi*	*-nyiri*	*-ni*

Djinba Verb Forms:

	Fut	Pot	Imp	YPI, PRI	YPA, PRES	TPA, RPA	TPI, RPI, NML
Class 1	*-mak*	*-mitj* *-Guy*	*-(V)ng*	*-(u)w* *-(a)w*	*-a* *-am* *-im*	*-NGal*	*-nya* *-inya*
Class 2	*-nmak*	*-nmitj*	*-ng,* *-lk,* *-rrk*	*-l* *-rr*	*-n*	*-n* *-yin* *+rr-yin*	*-na*
Class 3	*-k, -rrak*	*-tj, -rritj*	*-y*	*-y*	*-ø* *-rr*	*-n* *-n*	*-nya*

Part of the problem is sound change: both Djinang and Djinba underwent a sound change that changed many final vowels to *i* (the conditioning environment is a bit mysterious; it's partly morphological). In conjunction with this, there were a couple of sets of palatalization changes, and

[22] Waters (1979) analyzes Djinang conjugation classes as phonologically motivated; I find this analysis implausible, however. The phonological classes are essentially arbitrary, and there is a great deal of fossilized derivational morphology which allows us to make sense of the classes in morphological terms.

[23] Plus lenition of the verb stem *-bu* > *-wu*.

[24] In this form and the imperative and irrealis, the final trill *rr-* of the stem is deleted. In some verbs, "stem-final /rr/ of each stem … is deleted before all suffixes except today past". These are verbs like *nyumirr-gi* "smell" < *nhuman that would never have had a trill in the root etymologically, but would had had it in the future form. I assume reanalysis or misanalysis.

the collapse of a distinction in vowel length and between lamino-dental and lamino-palatal stops.

Another problem is presentation - since stems and inflection are fused for a few of the conjugation classes and do not readily lend themselves to segmentation, and since there are subtractive forms (where part of the stem deletes), Waters' and others' presentations of these forms with different morphological analyses actually makes it harder to see the commonalities.

The third problem is that the semantics of the verb categories differ across the Yolŋu bloc. There has been a tendency to assume similarity (that is, that Yolŋu is a dialect chain, not a set of languages) and this has had both a normative influence on descriptions and led to problems in recognizing the real differences between the varieties.

Two sets of changes have obscured the cognacy of Djinang/Djinba verb conjugations. First is the univerbation of tense/aspect particles with the verb. For example, Djinba's future suffix *-(n)mak* is partially cognate with the widespread adverb/dubitative particle *mak* ('maybe'). The *-n-* component of the suffix is the only part which continues old verb morphology. Separating etymological particles from old verb morphology, along with undoing the sound changes, allows us to recover a considerable amount of Proto-Yolŋu morphology.

A full stop . is used to separate non-cognate material in the Djinang forms.
Classes are named after the reconstructed base (primary) suffixal form, rather than being numbered.

-THUN class:
Djinang has conflated this and the –MA class

7 The problem: How do Proto-Yolŋu verbs descend in Djinang?

- Three areas that have changed:
  - Marking of the **forms**
  - Which verbs belong to which conjugation **classes**
  - What the forms **mean**

The second change involves the collapse of conjugation classes. Five classes can be reconstructed to the proto-language, plus an uninflecting class, mostly for loans. Djinang and Djinba have collapsed the two largest classes into a single conjugation; they have eliminated the uninflecting class and have distributed stems from the third-largest class amongst the first and second classes. Moreover, some common productively inflected stems in other Yolngu languages have moved conjugation class and now receive minor class inflection.

7.1 Forms

- Sound change
  - Laminals > palatals
  - Loss of vowel length
  - Loss of glottal
  - Final vowels > i
  - Voicing changes
- Grammaticalization of particles
  - *-gi* is not cognate with verb forms in other Yolŋu languages; it's cognate with the non-punctual aspect marker *ga*.

- *(–mi* might have a similar particle source)

7.2 Conjugation Classes

- Inferred through studying class membership of cognate stems.
  - E.g. in most Yolŋu languages, *mukthun* 'be quiet' and its causative *mukmiyama / mukmaram(a)* inflect in different conjugation classes (Class 1a vs Class 3a above)
  - In Djinang, however, *mukjigi* and *mukmiygi* belong to the same class.
  - The same is true for all reconstructible pairs of this type.
  - Reconstructible Class 3 verbs like *buma 'hit', *nhäma 'see' and the like also inflect like class 1.
  - Djinang's class 1 has endings that reflect this merger (e.g. *–wi* and *–ngi* for imperative forms). [see table]
  - Other subclasses are collapsed:
    - 2a and 2b as 2
    - 4a and 4b as 3

7.3 Meanings of the Categories

- The **yesterday past** continues the old "present"
  - this is called 'Form 1' in most of the grammars of Yolŋu languages
  - in other Northern Yolŋu languages, yesterday past and present are the same (see Yan-nhaŋu forms above)
- the **today past continuous** continues the old "past$_1$"
  - this is called form 3 in the grammars
  - in other Northern Yolŋu languages, today past and remote past are the same (see Yan-nhaŋu above)
- the **non-past** is the old 'potential' plus a particle.
  - The potential is a future in some languages, an indefinite future in others, a combined future/imperative in others and an imperative alone in Yan-nhaŋu
- the **imperative** continues the Proto-Northern Yolŋu counterfactual/today negative (etc) form, and the Proto-Yolŋu imperative.
- the **today past irrealis** is the old nominal form.
- the **today past** [general] form has a variety of origins and is cognate with other past tense forms from various conjugations.

8 Conclusions

Are Djinang verbs cognate with the rest of Yolŋu? Yes, but it's hard to see because of 1) sound change and 2) meaning change.

While the Djinang/Djinba conjugations are homologous to one another systemically, and stand apart from other Yolngu languages, they recruit different verb morphology and different particles. This thus represents an interesting case of systemic isomorphism without formal similarity.

Methodological point: reconstructing morphology in isolation is dangerous; describing languages like this with extremely abstract morphological representations is also a bit sketchy

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10 Summary/Conclusions: Djinang paradigm descent

	Class	**~~'Present'~~ Yest. Pst**	**~~'Potential'~~ non-past**	**'Imperative'**	**~~'Past1'~~ today past**	**~~'Past2'~~ today past cont.**	**~~Nominal~~ tod. past irr.**
	*mukthun 'be quiet'	*mukthun	*mukthurru	*mukthurra	*mukthana	*mukthurruna	*mukthanara-
1	*mukjigi* 'be quiet'	*mukji.mi*	*mukji.gi*	*mukjuwi*	*muknyi*[25]	*[mukjili]*	*mukinyiri*
	*bathan 'cook'	*bathan	*bathu[rru]	*batha[rra]	*bathara	*bathuna	*bathanara-
2	*bachigi* 'cook'	*bachin.mi*	*bachi.gi*	*bachirri*	*[bachijini]*	*bachini*	*bachirnir*
	*ŋupan 'follow'	*ŋupan	*ŋupulu	*ŋupala	*ŋupara	*ŋupana	*ŋupanara-
	[this verb is not found in Djinang]						
	*nhäma 'see'	*nhäma	*nhäŋu	*nhäwa	*nhänha	*nhäŋala	*nhänara-
1	*nyangi* 'see'	*nyami*	*nyangi*	*nyawi*	*nyanyi*	*nyangirni*	*nyanyiri*
	*ŋäma 'hear'	*ŋäma	*ŋäku	*ŋäka	*ŋänha	*ŋäkula	*ŋänhara-
	[this verb and class is not found in Djinang]						

[25] Inferred from the rules in Waters (1982); Waters doesn't give full paradigms. But if true the loss of-ji- is explicable but unexpected.

	*ŋäthi ‘cry’	*ŋäthi	*ŋäthi[yi]	*ŋäthiya	*ŋäthinya	*ŋäthina	*ŋäthinyara-
3	*ngajiji* ‘cry’	*ngaji*	*ngaji.ji*	*ngajiyi*	*ngajinyi*	*ngajini*	*ngajinyiri*
	*ŋorra ‘sleep’	*ŋorra	*ŋorri	*ŋorriya	*ŋorrana	*ŋorrina	*ŋorranhara
3	*ngurriji* ‘sleep’	*ngurri*	*ngurri.ji*	*ngurriyi*	*ngurrinyi*	*ngurrinyini*	*ngurrinyiri*