

## A PHONOLOGICAL ANALYSIS OF LEXICAL EVIDENCE FOR CONTACT BETWEEN AUSTRONESIAN AND YOLNGU PEOPLES

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### Abstract

Many conflicting theories exist concerning the ethnolinguistic identity of the Austronesian ‘trepanger’ traders who visited the north coast of Australia from the 17<sup>th</sup> century onwards. These competing hypotheses, invariably based largely on anthropological guesswork, are supported to varying degrees by lexical evidence in many of the languages of the Arnhem Land coast, especially Yolngu Matha. The central conceit of this paper is thus: by examining the relationships between words in Yolngu Matha and cognates that appear in Austronesian languages, it should be possible to make inferences about what languages were being spoken by traders on the Arnhem Land coast. Using this method, this paper contends that Makassarese and Bugis were most likely the predominant languages spoken by the trepangers, and that there is little evidence to support the various theories to the contrary.

**Keywords:** Austronesian, Makassarese, Yolngu, phonology, sound change

### Abstrak

*Banyak teori yang saling bertentangan mengenai identitas etnolinguistik pedagang teripang Austronesia yang mengunjungi pesisir utara Australia dari abad ke-17. Hipotesis-hipotesis ini, sebagian besarnya didasari oleh tebakan antropologis, kurang lebih didukung oleh pembuktian leksikal dalam bahasa-bahasa yang dituturkan di pantai Arnhem Land, terutama Yolngu Matha. Konsep utama di balik penelitian ini adalah: melalui penelaahan hubungan antara kosa kata Yolngu Matha dan kata-kata serapan yang berada dalam bahasa-bahasa Austronesia, kita mampu mengenali bahasa-bahasa yang dituturkan oleh kaum pedagang teripang di Arnhem Land. Dengan menggunakan cara ini, penelitian ini memperlihatkan bahwa bahasa Makassar dan bahasa Bugis adalah yang paling mungkin dituturkan oleh para pedagang teripang tersebut, dan tidak ada cukup banyak pembuktian untuk teori-teori yang berlawanan.*

**Kata kunci:** Austronesia, Makassar, Yolngu, fonologi, perubahan bunyi

## INTRODUCTION

Much has been said, both within and outside of academic circles, about the history of contact between the Makassan maritime traders of Indonesia and the Yolngu people of Arnhem Land in northern Australia. The terminology used to refer to these traders varies widely: common terms include ‘trepanger’ (named for the *teripang*, or sea cucumber, that these merchants traded), ‘Malay’ (in earlier European literature), and, tellingly, ‘Makassan’. This paper generally uses the latter term, although all carry somewhat undesirable implications. On the Australian side, retellings of the history of these traders have been used to supplement broader ideological narratives about the interconnectedness of Aboriginal Australian and Austronesian peoples (see Macknight 1986; Brigg 2011) to establish a link between Aboriginal culture and Islam (see Ganter 2013; Stephenson 2011, *inter alia*), and various other political aims. On the Indonesian

side, the history of Makassan contact is less widely discussed, transcontinental commerce being much less of an anomaly for the peoples of pre-colonial Indonesia than pre-colonial Australia. When it is discussed, however, Indonesian academics have tended to portray trading missions in Australia, particularly in the Kimberly region (*kayu jawa*), as simply another example of their nascent nation's economic prowess and development, with little focus on the cultural exchange that took place as part of the contact process (see Sultani et al. 2019; Setyastuti 2015; see also Yatim 1991 as a notable exception to this trend). These scant discussions notwithstanding, the history of contact seems to fall on the periphery of the Indonesian historical consciousness, regarded more as a folk tale than as legitimate history. From a historical perspective, however, the fact of Makassan contact is incontrovertible, especially in light of the genetic evidence discussed by Macknight (1972). The subject of legitimate controversy is instead the precise ethnic identity of these 'Makassans'. It is this question that this paper endeavours to answer.

Although the idea of Makassan contact is almost universally accepted in academic circles on both sides of the Timor Sea, extant perspectives in the literature tend to be coloured by the cultural and political interests of their respective countries. For instance, Sultani et al. (2019) minimise the level of cultural exchange between the Makassans and Yolngu, emphasising the 'primitive' light in which the Yolngu were seen and speaking of Arnhem Land as merely one small part of an illustrious trade empire controlled by the Makassans. Macknight (1972) on the other hand, acknowledges the animosity between the two sides but focuses on the relative symbiosis of the two societies, supporting this view with reference to stories of Yolngu who travelled with the Makassans around the *Nusantara*. The implications of the nature and duration of contact for the present maritime politics of Indonesia and Australia do little to lessen the politicisation of this topic. One of the principal aims of this paper is therefore to present an analysis of the contact situation based purely on phonological data, rather than making historical (and therefore political) claims about the nature of contact (see Russell 2004). Of course, as an Australian writer, I too am biased by the stake my country has in how this history is told, but I have attempted to be as objective and apolitical as possible in my analysis.

Much of the strongest evidence for Makassan contact is to be found in lexical clues among the Yolngu languages (*matha*) spoken in northeast Arnhem Land, and to a lesser extent Iwaidja, Maung, and Anindilyakwa, spoken in nearby regions. It is well known, for instance, that the Yolngu word *Balanda*, meaning white person, is descended from a Makassarese term used to refer to the Dutch, and this term has even been re-borrowed into the broader vernacular English of the Northern Territory to some extent.

Numerous attempts have been made to identify Austronesian loanwords in Australian languages systematically. However, this discussion has hitherto lacked an extensive linguistic examination of the situation squarely from the Austronesian side of the exchange. To this day, the most authoritative work on the Austronesian loanwords present in the Yolngu languages, or any Australian languages for that matter, is a wordlist published by Walker and Zorc (1981), which, although insightful and invaluable to the creation of this paper, was written without consultation with speakers of Austronesian languages. A particular table in Macknight (1972), expanding on a list of words given by Yolngu informants in Mountford (1956), was made through consultation Makassarese and Buginese informants, through which it successfully managed to identify a number of nautical terms borrowed into Yolngu Matha. However, this wordlist was narrow in scope and made no attempt to critically evaluate the provenance of these loans. Yatim (1991) made a greater attempt to identify the provenance of Yolngu loans, but was

similarly burdened by a small dataset. The aim of this paper is to remedy this gap in the literature, as well as to present a critical analysis of the varying theories on the history of contact as presented in Walker and Zorc (1981), Macknight (1972), Yatim (1991) and others. While this paper defers to historical evidence insofar as it examines only theories of contact that have been put forward by historians and historical linguists, its goal is to analyse the linguistic evidence on its own terms.

## METHOD

### *Identifying cognates*

Walker and Zorc (1981, p. 117) give a wordlist of ninety-nine terms that they state are the “most probable” out of all the words in the paper to be Austronesian in origin. Removing seven entries that were either the result of unproductive reduplication in the source language, variations on forms already present in the wordlist, or denonyms, a list of ninety-two lexemes was used as the core wordlist, which can be found in the appendix. Starting with these forms as they appear in Yolngu Matha, Makassarese, and Bugis, potential cognates were examined in a number of other Austronesian languages (the selection criteria for these languages is explained further in the discussion section). This was process was based on the author’s own knowledge of Indonesian and Javanese and aided by informants and etymologies from various sources. With the identification of cognates complete, the entries were organised into the following schema.

**Table 1. Entries from Walker and Zorc’s (1981) first wordlist, organised by distribution of cognate forms and suspected provenance**

Found in all languages surveyed; probable Austronesian origin	12 (13%)
Found in some languages surveyed; probable Austronesian origin	36 (40%)
Found in some or all languages surveyed; traced back to European or Arabic origin (see crosses in appendix)	6 (7%)
Found only in Makassarese and/or Bugis	38 (42%)

From this same chart of cognates from the original ninety-two Yolngu Matha entries, a series of hypothetical sound changes was constructed between these languages. Naturally, in constructing these theories, the first step was to examine what, if any, rules could be formulated on the basis of entries in the former category. Once the rules governing sound changes had been formalised on the basis of the most probable loans, and the most likely language(s) of origin for each word identified, the other wordlists in Walker and Zorc were examined to see if these same patterns were observed. Words identified through this method are given in Table 7.

### *Comparing cognates*

For each form recorded across each language, a transcription was made in narrow IPA. These were made on the basis of systems outlined in Wood (1978), Ngewa (1972), Sidauruk (2017), Lapoliwa (1981), Thurgood (2004), Bollas (2013), and Llamzon (1966), as well as spoken data from informants. Each form was attested in either Arief (1995), Cense (1979), Said (1978), Stuart and Wibisono (2002), Wolff (1972), and Nigg (1904), or by informants.

The aim of this systematic comparison of cognates was to determine whether, of the cognates attested in all languages surveyed, it required fewer modifications for a word in

Yolngu Matha to have come from Makassarese or another language, particularly Javanese or Cebuano.

**RESULTS**

*Comparing widespread cognates*

As discussed earlier, the first step taken in the process of comparison was to compare of the twelve words listed in Walker and Zorc as confirmed loans that appeared in all six Austronesian languages surveyed in some form. These words are as follows:

**Table 2. Cognate forms present across Austronesian languages**

Yolngu Matha	Makassarese	Bugis	Indonesian	Javanese	Cebuano	Tagalog
[ˈbɛlʌ]	[ˈbaːlaʔ]	[ˈboːla]	[ˈbalai]	[ˈb̥alɛ]*	[baˈlaj]	[ˈbaːhaj]
[ˈbɛːrʌ]	[ˈbaraʔ]*	[ˈbareʔ]	[ˈbarat]	[ˈbarat]	[ˌhaˈbagat]*	[ˌhaˈbagat]*
[ˈbɛːwɪ]	[ˈbawi]	[ˈbaːwi]	[ˈbabɪ]	[ˈb̥abɪ]	[ˈbabɔj]	[ˈbabɔj]
[ˈbɛːjæɾʌ]	[baˈjaraʔ]	[baˈjaraʔ]	[ˈbajar]	[ˈbajar]	[ˈbajad]	[ˈbajad]
[ˈbɪrɛʔʌ]	[beˈrasaʔ]	[beˈrasaʔ]	[bəˈras]	[ˈb̥əras]	[buˈgas]	[biˈgas]
[ˈboʌ]	[ˈbulan]	[ˈulæŋ]	[ˈbulan]	[ˈwɔʌn]	[ˈbowan]	[ˈbowan̄]
[ˈd̥ɪmɪrʌ]	[tiˈmoroʔ]*	[ˈtimo]	[ˈtimor]	[ˈt̥imur]	[tiˈmɔg]	[t̥iˈmɔg]*
[ˈd̥ɪwʌŋ]	[ˈdoaŋ]	[ˈdoaŋ]	[ˈudaŋ]	[ˈoɾəŋ]	[ˈɔʌŋ]	[ˈɔʌŋ̄]
[ˈgɪlɪ kɛjɻ]	[ˈkuliʔ]; [ˈkaju]	[ˈuli]; [aju]	[ˈkulɪʔ]; [ˈkaju]	[ˈkɔlɪʔ]; [ˈkajɔ]	[ø]; [ˈkahɔj]	[ø]; [ˈkaːhɔj]
[ˈjɛrɛmɪ]	[dʒaˈraʔmɛŋ]	[caˈraʔmɛŋ]	[ˈcermin]	[ˈcɛrmin]	[ˌsalaˈmɪn]	[ˌsalaˈmɪn̄]
[ˈjɪnɛrʌ]	[siˈŋaraʔ]	[siˈŋaraʔ]	[ˈsinar]	[ˈsɪnar]	[ˈsɪnaw]	[ˈsɪːnag]

Note: Asterisks in the table indicate significant semantic shift from their meaning in Yolngu Matha, as identified by informants.

**Table 3. Adaptations required to make an Austronesian loan compatible with Yolngu phonology**

Rule	Details
Remove secondary articulatory features of consonants (such as pre-glottalisation, as occurs in Makassarese/Bugis)	/w/ is exempt from this rule. The presence or absence of pre-glottalisation in roots does not appear to have any affect on how these consonants are realised in Yolngu Matha.
Replace any fricatives or affricates with a stop at a similar place of articulation	[+alveolar]->[+dental]/[+stress] [+alveolar]->[+palatal]/elsewhere [+postalveolar]->[+palatal] [+glottal]->ø
Change stress pattern according to number of syllables	The acceptable stress patterns in Yolngu Matha are: (Wood 1978) - 'S - 'SS - 'SSS

	<ul style="list-style-type: none"> <li>- 'SS,SS</li> <li>- 'SS,SSS</li> <li>- 'SSS,SSS</li> </ul> <p>Stress in Yolngu Matha is therefore entirely predictable from the number of syllables in a word.</p>
Make each stop either fortis if occurring in stressed syllable or lenis if in unstressed syllable	The voicing of stops is not contrastive in Yolngu Matha; stops are transcribed as voiced or unvoiced in table 2 and the appendix according to their fortition.
Replace any vowels with the closest of the three contrastive vowels in Yolngu Matha	The three contrastive vowels in Yolngu Matha are /a/, /ɪ/, and /u/. To fit words that use the typical Austronesian five-vowel system, /o/ and /u/ typically coalesce, as do /e/ and /ɪ/. The actual realisation of Yolngu vowels is rarely the same as their idealised form, as table 2 demonstrates. However, this is the result of wide allophonic variation within Yolngu Matha (as is common in languages with 3-vowel systems), rather than being the result of phonological conditioning. (Wood 1978).
If vowel occurs in initial position, append consonant or semivowel to beginning of word	<p>ŋ/_[+open]</p> <p>j/[-open][+front]</p> <p>w/[-open][+back]</p>
If diphthong is present, break up diphthong with semivowel	<p>j/{  [-close][+front]  [+close][+front]  }</p> <p>w/elsewhere</p>
Remove any stops from syllable codas	
Remove or add suffix -(a)ŋ	This is morphologically rather than phonologically conditioned, cf. Walker and Zorc (1981, p. 114).

For all of the entries in Table 2, the Makassarese form seems to most closely resemble that which appears in Yolngu Matha. This is demonstrated by the fact that by running each Makassarese word through the processes required to make it suitable with the Yolngu phonological system, as shown in Table 3, we arrive at the correct Yolngu form as shown (disregarding any features that are not contrastive in Yolngu Matha). These rules are generalisable to the whole of Walker and Zorc's wordlist. Table 4 shows how many Yolngu words can be derived directly from cognates in each language using the rules in Table 3, compared with the total number of cognates found.

**Table 4. Number of cognates and cognates of plausible origin for each language**

Language	Number of cognates	Number of Yolngu forms that could have been directly derived from words in this language
Makassarese	94	86
Bugis	80	65
Indonesian/Malay	45	11
Javanese	44	5
Cebuano	19	1
Tagalog	18	1

Note: The figure for Makassarese is higher than the total number of entries in the Yolngu Matha wordlist because two of the Yolngu forms were the result of compounding.

Where a language has a high number of cognates but these cognates cannot be directly linked to their Yolngu forms through the application of the rules in Table 3, this is indicative that these forms in Yolngu Matha were not inherited directly from said language. All of the forms that could not be derived from Makassarese still bare remarkable similarities, and it is not impossible that they would have undergone further change throughout the last several hundred years since the beginning of Makassan contact. The fact that they could not be matched using the typological rules in Table 3 simply means that, if these forms are indeed Makassarese, they went through more than the bare minimum of changes to make them compatible with Yolngu phonology.

***Identifying the primary donor language: Bugis versus Makassarese***

As shown in Table 4, a significant number of the Yolngu forms could be derived just as easily from the Bugis forms as from the Makassarese. At first this seems to be remarkably solid evidence of at least some Buginese influence. However, the data in Table 4 presents a counterargument. There are several attested Yolngu forms that appear in Makassarese and not Bugis, and none the other way around. There are, however, a few forms in Yolngu Matha which bear a closer resemblance to their counterparts in Bugis than Makassarese, as listed below.

**Table 5. Some Yolngu words of plausibly Bugis origin**

Makassarese	Bugis	Yolngu Matha	English
Tamboro	Tamburuk	Dhamburru	Drum
Pekang	Bekang	Bekaŋ	Fishhook
Rappi	Rapi	Räpi	Adequate
Jakkak	Jakka	Djaka	Size

However, the differences between these forms are largely trivial. It would be not inconceivable, and furthermore perfectly compatible with the derivational system outlined in Table 3, for each of the Yolngu forms to have come from Makassarese in all of these instances. An additional 68 forms are identical or nearly identical in both languages (identified by \* in appendix). The sheer number of cognates between Yolngu Matha and Bugis gives credence to Macknight's (1972, p. 294) idea that Buginese was the "next most widely used language" after

Makassarese, although, as Macknight also points out, the difficulty inherent in distinguishing Makassan and Buginese forms muddies the water somewhat. Another complicating factor is the high rates of bilingualism among modern speakers of both languages – the Buginese and Makassarese informants interviewed for this paper both spoke at least some of the other language, in addition to Indonesian. The lexical levelling of Indonesian languages in recent years is a subject in need of further research, but the fact that both informants, each of whom were under 30 years of age, identified forms that seemed to come from the other language indicates that a *sprachbund* affect may have occurred.

In short, the question of Bugis being spoken among the trepangers is not meaningfully contradicted by the phonological evidence in Yolngu Matha, although no single lexemes in the present wordlist provide particularly strong evidence for it. In this instance, it seems, linguistic analysis must defer to the opinion of historians, which unfortunately remains unclear. Furthermore, the possibility of Makassarese and Bugis lexicons having merged significantly over the past century cannot be ignored, although a full examination of the subject is beyond the scope of this paper.

### *The Visayan slave hypothesis*

One of the more compelling fringe theories regarding the identity of the trepangers holds that a significant number of those who set foot in Australia as a part of the trepanging voyages were in fact of Filipino (more specifically, Visayan) heritage. Walker and Zorc (1981) seem to be the foremost proponents of this idea, which they support with reference to the fact that the Tausug are thought to have sold Visayans as slaves to the Buginese for use in other seafaring missions. However, the presence of Filipino slaves on trepanging voyages is not directly attested by any primary sources, to the author's knowledge.

Yatim (1991, p. 28) proposes a similar, albeit less sinister theory – that loanwords from Philippine languages may have entered Yolngu Matha via Makassarese, which acted as a “pan-Austronesian lingua franca” (*lingua franka nusantara*). If this was indeed the case, given the relative phonological compatibility of Makassarese and most Philippine languages, it seems quite plausible that borrowings would have been preserved in this lingua franca without change, and passed onto Yolngu Matha in their original Philippine forms.

Table 4 seems to work against this idea – only one Yolngu Matha word is directly derivable from its cognate in either Tagalog or Cebuano, which in both cases is *djarri-djarri* (from *sari-sari*). In short, there is no evidence here for the presence of speakers of Cebuano or other Visayan languages on the trepanging voyages, nor is there much evidence for Yatim's hypothesis (although the latter would likely have a much more subtle impact and therefore be harder to verify). Broadly speaking, when a Yolngu word appears in both Indonesian and Philippine languages and can be traced back to Proto-Malayo-Polynesian, it appears to be in line with the sound changes that have affected Indonesian languages as opposed to the Philippine branch, as demonstrated below:

**Table 6. Yolngu Matha's deference to sound changes affecting Indonesian words from Proto-Malayo-Polynesian roots, shown though the realisation of Proto-MP /R/ in final and medial positions**

Sound change	Proto-MP	Indonesian/Malay	Tagalog	Yolngu Matha
/r/ -> /r/ (Indonesian);	/sinar/	['sinar]	['sɪnag]	['jɪnɛrɻ]
/g/ (Philippine)	/bɔRAS/	[bɔ'ras]	[bi'gas]	['bɪrɛtɻ]
	/habarat/	['barat]	[.ha'baɾat]	['bɛ:rɻ]

### *The Javanese substratum hypothesis*

One of the most striking features of Table 4 is the sheer disparity between the number of cognates present in Javanese and the number of cognates that could potentially be the direct origin of their Yolngu forms. As discussed, this is indicative that Javanese is not likely to have been the language from which these words were borrowed into Yolngu Matha. Compared to this, many of the cognate Indonesian words seem to fit the Yolngu forms remarkably well. It is also worth noting that the majority of Javanese words that do line up with Yolngu forms seem to be recent borrowings from Indonesian into the *ngoko* register of speech.

Therefore, it seems that if any language were to have been spoken as a lingua franca or patois (Walker and Zorc's terms), it would be Malay rather than Javanese, or one of the many creole forms of Malay spoken in the eastern regions of Indonesia. This does not discredit Macknight's (1972) that many of the trepangers were ethnically Javanese, only the idea that Javanese was being spoken as a primary language among the traders.

### *Additional cognates*

In the course of this research, additional likely cognate forms were identified in several Austronesian languages. While these were of little consequence to the conclusions of this paper, it seems worthwhile to include them here as a contribution to the literature:

**Table 7. Likely Austronesian loans in Yolngu Matha identified in the course of writing this paper**

Yolngu Form	Austronesian Root	Source Language	English Meaning
Bākala	bakbalak	Makassarese	bludgeon -> harpoon*
bāki	pakai	Malay	to use
bāmbu	bamboo	Malay OR Javanese	bamboo -> shrub*
barra	para	Malay	PL
barupu	barut	Cebuano	Tobacco
biŋal	bingkung	Cebuano	Axe
gadhara	karang	Makassarese OR Malay	coral
gutha	kutang	Makassarese	pliable metal -> brassiere*
gutjikaŋ	koccikang	Makassarese	pocket
lulu	lolo	Makassarese	young, ripe (used to describe coconut) -> coconut (N)*
mundurr	mundur	Malay	go backwards -> stay still*
yiki	iki	Javanese	this (proximal)

Note: Asterisks in the table identify significant semantic shift (and therefore are more likely to be coincidental resemblances). The standard orthographies for each language are used, as exemplified by entries in Zorc (1986) and Arief (1995).

These words are the author's own conjecture based on resemblances and patterns of sound change observed in other cognate forms. They should therefore be treated with caution. The two words of Cebuano origin, in particular, are to be taken with a grain of salt in light of the conclusions drawn in this very paper. Since these forms were not included in the original wordlist on which this paper was based, they are not included in the appendix.

## DISCUSSION

### *Phonetic transcriptions*

The phonetic transcription of Yolngu Matha was based on the phonology of the Galpu dialect, simply because this is the dialect on which the most extensive phonological literature has been written (chiefly Wood 1978). Whether or not Galpu was the primary dialect used by the Yolngu during the contact period is unknown, and furthermore unlikely given the rapid functional shift of the Yolngu dialects as discussed by Devlin (1985). This fact has been kept in mind throughout the analysis in this paper, as has the extensive phonological variation within dialects caused by high rates of multidialectism (Devlin 1985; Wood 1978). All of the Austronesian languages have a much better-defined 'standard' dialect, and the transcriptions presented here generally adhere to these. While the transcriptions are all 'narrow' and given in square brackets as such, they are intended more as a representation of the words which accounts for all features which may be contrastive across the languages surveyed rather than all features that may be contrastive in any language.

### *The selection of languages*

A great deal of consideration went into deciding which Austronesian languages would be examined in the creation of this paper. It should be emphasised that this paper is meant to examine broadstrokes trends among subfamilies of Austronesian by investigating a few modern languages, and should not be treated as an exercise in typology. The rationale for the selection of the six Austronesian languages is as follows:

The choice of Makassarese and Bugis should be fairly self-explanatory. These two languages were the primary languages discussed in Walker and Zorc (1981), the source of inspiration for much of this paper. Given that the trepangers are often referred to in both popular and academic discourse in English as 'Makassans', any examination of their linguistic identity that did not investigate the Makassarese language would be sorely lacking. Bugis would similarly represent a substantial oversight if omitted, given its status as a larger and better attested language that undoubtedly influenced Makassarese even during the trepanging period.

The choice of Malay/Indonesian also scarcely requires explanation. Malay and its creole forms remain among the most influential languages of the Nusantara region, and Indonesian exerts an enormous influence on the lexicon of modern Makassarese and Bugis. Macknight (1972) also discusses the possibility of Malay being used as a secondary lingua franca uniting the more ethnically diverse members of the trepanging missions. On top of this, the term

‘Malay’ has been used frivolously by scholars wishing to refer to the trepangers in the past – Macknight (1972) states that this is in most instances due to ignorance on the part of European colonial historians, but it nonetheless makes the case for including the Malay language among those surveyed.

Javanese was selected in part to offer a point of comparison, as one of the largest Austronesian languages in use today and one which has exerted considerable influence on the languages of the region. The presence of Javanese trepangers in Arnhem Land is also suggested by Spillett (1987, in Yatim 1991) and by Walker and Zorc (1981).

The selection of Philippine languages was made for more practical reasons. Cebuano was selected as an example from the Visayan languages, in order to evaluate Yatim’s (1991) and Walker and Zorc’s (1981) claims referred to earlier. It is unclear whether Yatim believes the Visayan trepangers to have been Cebuano speakers, but Walker and Zorc (p. 112; 116) specifically mention Cebuano in their section on “Bisayan slaves”. Additionally, Cebuano was the easiest Visayan language for which to find an informant. Tagalog was selected as a point of comparison, in order to differentiate specifically Visayan forms from those which may have appeared in Philippine languages more broadly. Additionally, Yatim (p. 28) speaks of a “Gowa-Manila” trade route, which if extant may have brought the trepangers directly into contact with speakers of Tagalog. However, it is unclear whether Yatim is speaking somewhat metaphorically.

Several other languages have been put forth by historians as likely having been spoken by trepangers on the Arnhem Land coast, such as the languages of the Aru archipelago and Timor (Berndt & Berndt 1954; Russell 2004), Maranao (Walker and Zorc 1981), Madurese and Buton (Adhuri 2013), and the Sama-Bajau languages (Macknight 1972; Sultani et al. 2019). In addition, Macknight (1986, p. 69) states that “there were, no doubt, other external contacts with northern Australia” – most likely also speakers of other Austronesian languages, although this is obviously difficult to verify. These were excluded from this paper largely due to the difficulty in finding informants, as well as the simple fact that obviously not every Austronesian language could be examined for cognates. There are hundreds of languages spoken in the regions of Indonesia where Australian-bound trepangers are thought to have originated, and it is obviously impractical to survey them all. Furthermore, since almost all of these languages belong to a subfamily shared by one or more of the languages surveyed in this paper, it is the author’s hope that the broad observations about the plausibility of Malayic, South Sulawesi, and Philippine influences are generalisable. Macknight (1972) also notes the extensive history of Makassan trade with the peoples of the Coburg peninsula, who predominantly spoke Iwaidja and Maung, both Non-Pama-Nyungan languages. These languages were excluded from the paper for similar reasons.

## CONCLUSION

The general conclusion of this paper is that the most conventional and uncontroversial hypothesis regarding Makassan contact is supported by lexical evidence in Yolngu Matha. More precisely, the phonological adaptations of Austronesian loanwords found in Yolngu Matha seem to make most sense to have come from Makassarese and to a lesser extent Bugis. While this aspect is not surprising, the fact that so few forms bear similarity to Philippine languages is noteworthy, considering the degree of lexical similarity between these languages and the

languages of South Sulawesi in other contexts. In light of this, the idea of Javanese or Visayan languages being widely spoken among the trepangers seems unlikely, although it remains possible that individual speakers of these languages may have visited Australia in trepanging voyagers.

In short, on the question of the identity of the Makassan traders in Arnhem Land, the evidence examined in this paper supports an intuitive yet not uncontested answer: they were most likely ethnically (and linguistically) Makassarese.

## NOTES

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Interviews with informants were carried out in both English and Indonesian, in accordance with the language proficiency of each informant. This means that the identification of some forms from Indonesian languages was contingent on my own ability to translate individual lexemes between Indonesian and English. While I do not think any of my translations could have been erroneous, I feel it is nonetheless necessary to acknowledge this extra step in the process.

Some notes on the terminology in this paper:

- “Makassan” is used here to refer to the maritime traders who visited Australia, regardless of their ethnic identity.
- “Makassarese” is used here to refer to persons of Makassarese ethnicity and their language.
- “Buginese” is used here to refer to persons of Buginese ethnicity. “Bugis” is the name used here to refer to their language.

## ABBREVIATIONS

PL = Plural; N = Noun; MP = Malayo-Polynesian

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## APPENDIX

## All cognates between Yolngu Matha and Austronesian languages identified from Walker and Zorc's (1981) "most probable" wordlist

Yolngu Matha	Makassarese	Bugis	Indonesian	Javanese	Cebuano	Tagalog
[ 'bɛlʌ ]	[ 'ba'laʔ ]	[ 'bo:la ]	[ 'balai ]	[ 'baɭɛ ]	[ ba'laɟ ]	[ 'bahaj ]
[ 'bɛlɛɛ ]	[ ba'lala ]*	[ ba'lala ]*				
[ 'bɛlɛŋɣ ]	[ ba'laŋo ]*	[ ba'laŋo ]*	[ bə'leŋgũ ]			
[ 'bɛlɣkʌ ]	[ pa'lu'kaʔ ]*	[ pa'lukkaʔ ]*				
[ 'bɛlɣŋʌ ]	[ paʔ'lujan ]*	[ paʔ'lujan ]*				
[ 'bɛmɣ, dɣkʌ ]	[ pa'mu'dukan ]		[ 'udut ]	[ 'udut ]		
[ 'bɛnɛŋ ]	[ 'ba'nan ]*	[ 'bannaŋ ]*	[ 'benāŋ ]	[ 'bənāŋ ]		
[ 'bɛ:pɛɭɪ ]	[ paʔ'ba'le ]*	[ paʔ'balle ]*				
[ 'bɛ:pɛŋ ]	[ 'papaŋ ]*	[ 'papæŋ ]*	[ 'papan ]	[ 'papan ]		
[ 'bɛ:ɾʌ ]	[ 'baraʔ ]*	[ 'bareʔ ]*	[ 'barat ]	[ 'baɾat ]	[ ,ha'bagat ]	[ ,ha'bagat̃ ]
[ 'bɛtɛɭʌ ]	[ ba'ʔtalaʔ ]*	[ bat'talaʔ ]*				
[ 'bɛtɛ, ɾɪpʌ ]	[ ta'ripaŋ ]*	[ ta'ripaŋ ]*	[ tɛri'paŋ ]			
[ 'bɛ:wɪ ]	[ 'bawi ]*	[ 'ba:wi ]*	[ 'babɪ ]	[ 'baɓɪ ]	[ 'babɔɟ ]	[ 'babɔɟ ]
[ 'bɛ:ɟɛɾʌ ]	[ ba'jaraʔ ]*	[ ba'jaraʔ ]*	[ 'bajar ]	[ 'baɟar ]	[ 'bajad ]	[ 'bajad ]
[ 'bɛ:ɟɪmɪ ]	[ ba'ine ]*	[ ba'ine: ]*			[ ba'baɟɪ; ]	[ ba'baʔɛ; ]
					[ 'ba:ɟɪ: ]	[ 'ba:ɟɪ: ]
[ 'bɪkɛŋ ]	[ pe'kaŋ ]*	[ pe'kaŋ ]*				
[ 'bɪmpɪ ]	[ 'bembe ]*	[ 'bembɜ: ]*		[ əmbeʔ ]		
[ 'bɪrɛɭɪ ]	[ bi'ra'le ]*	[ bi'rallɜ: ]*				
[ 'bɪrɛtʌ ]	[ be'rasaʔ ]*	[ be'rasaʔ ]*	[ bə'ras ]	[ 'bɔras ]	[ bɔ'gas ]	[ bi'gas ]
[ 'bɣkɣ ]	[ bu'kuʔ ]*	[ 'bukkuʔ ]*	[ 'buŋkuʔ ]			
[ 'bolʌ ]	[ 'bulaŋ ]	[ 'ulæŋ ]	[ 'bulan ]	[ 'wɔlan ]	[ 'bowan ]	[ bɔ'wañ ]
[ 'bɣlæɟɪ ]	[ bu'laɛŋ ]*	[ bu'lajɛŋ ]*			[ bɔ'lawan ]	[ bɔ'lawañ ]
[ 'bɪtɣ[x]† ]	[ bo'toloʔ ]*†	[ bo'to:loʔ ]*†	[ 'botɔl ]†	[ 'bɔtɔl ]†		
[ 'boʔɣɣ ]	[ bo'toroʔ ]*	[ bo'to:roʔ ]*		[ 'bɔtɔh ]		
[ 'boɟʌŋ ]	[ 'bujana ]*	[ 'bujana ]*				
[ 'dɪtɣŋ ]	[ 'tedoŋ ]*	[ 'tedoŋ ]*				
[ 'dopolo ]†	[ do'boloʔ ]*†	[ do'bo:loʔ ]*†				
[ 'doɟʔ ]	[ 'doɛʔ ]*	[ 'doɟʔ ]*	[ 'duɪt ]	[ 'duwɪt ]		
[ 'dɛmpɣɣ ]†	[ tam'boro ]*†	[ tam'buruʔ ]*†	[ 'tambur ]†	[ 'tambur ]†		
[ 'dɛwɣ, dɣwʌ ]	[ 'tau ]; [ 'toa ]*	[ 'tau ]; [ 'toa ]*	[ ∅ ]; [ 'tua ]	[ ∅ ]; [ 'tuwa ]	[ ∅ ]; [ 'tɔa ]	
[ 'dɪmɣɣ ]	[ ti'moroʔ ]	[ 'timo ]	[ 'timor ]	[ 'timur ]	[ ti'mog ]	[ tɪ'mog ]
[ 'dɔkʌ ]	[ 'tukaʔ ]*	[ 'tukaʔ ]*		[ 'tunda ]		
[ 'dɔmɛɭʌ ]	[ som'balaʔ ]*	[ som'balaʔ ]*				

[ˈdʒɪmpɪlɒŋ]	[sumeˈlaŋ]*	[sumeˈlaŋ]*	[səˈlam]	[ˈsiləm]		
[ˈdʒwɒŋ]	[ˈdoaŋ]*	[ˈdoaŋ]*	[ˈudaŋ]	[ˈoɾəŋ]	[ˈoɻaŋ]	[ˈoɻaŋ]
[ˈgətɛɾɪ]	[kaˈˈdaro]					
[ˈgɛɻkɪ]	[kaˈluku]*	[kaˈluku]*				
[ˈgɛɻmɒ]	[gaˈlumaʔ]			[gəˈlumãt̚]		
[ˈgɛɻɪ]	[kaˈluruʔ]*	[kaˈluruʔ]*				
[ˈgɛpɛɻɒ]	[kaˈpala]		[ˈkapal]	[ˈkapal]		
[ˈgɛɻɛɪ]	[kaˈraɛŋ]*	[kaˈraɛŋ]*				
[ˈgɛɻɪɪ]	[kaˈroroʔ]*	[kaˈro:roʔ]*				
[ˈgɛt̚ɒŋ]	[ˈkaˈtaŋ]*	[ˈkattaŋ]*	[kəˈtam]			
[ˈgɪɪɪ]	[ˈkesoʔ]	[ˈgossoʔ]	[ˈgosɔʔ]	[ˈgɔsɔʔ]		
[ˈgodɪ]	[ˈkodoʔ]					
[ˈgɪɻɛwɪ]	[kuˈlau̯]*	[kuˈlɔ̯]*				
[ˈgɪɻɪkɛɻɪ]	[ˈkuliʔ]; [ˈkaju]	[ˈuli]; [aju]	[ˈkulɪt̚]; [ˈkaju]	[ˈkɔɻɪt̚]; [ˈkajɔ]	[∅]; [ˈkahɔj]	[∅]; [ˈka:hoj]
[ˈjɛkɛ]	[ˈdʒaˈkaʔ]*	[ˈjakkaʔ]*				
[ˈjɛɻɛt̚ɒŋ]	[saˈˈlataŋ]*	[salˈlataŋ]*	[səˈlatan]	[səˈlatan]	[siˈlaŋan]	[ˈsalaˈtaŋ]
[ˈjɛ:mɛ]	[ˈdʒama]*	[ˈja:ma]*				
[ˈjɛrɛmɪ]	[dʒaˈrami]	[caˈraˈmeŋ]	[ˈtɛermɪn]	[ˈtɛɛrɪmɪn]	[ˈsalaˈmɪn]	[ˈsalaˈmɪn̄]
[ˈjɛ:ɻɒŋ]	[ˈdʒaraŋ]*	[ˈjaraŋ]*		[ˈjaraŋ]		
[ˈjɛ:ɻɪcɛ:ɻɪ]	[ˈʃare,ʃare]*	[ˈcarɜ:carɜ:]*			[ˈsa:ɻɪ,sa:ɻɪ]	[ˈsa:ɻɪ,sa:ɻɪ]
[ˈjɛrɪŋ]	[ˈdʒaruŋ]*	[ˈjaruŋ]*	[ˈdʒarom]	[ˈjaraɾom]		
[ˈjɛ:ɻ]	[ˈdʒaɻiʔ]*	[ˈjaɻiʔ]*	[ˈdzahɪt̚]	[ˈjɛɻɪt̚]		
[ˈjɪcɪ]	[ˈsisiʔ]*	[ˈsisiʔ]*	[ˈsisiʔ]	[ˈsisiʔ]		
[ˈjɪkɪjɪ]	[siˈkuju]*	[siˈkuju]*				
[ˈjɪɻɒ]	[ˈʃeˈla]					
[ˈjɪɻɪjɪɻɪkɒŋ]	[ˈseleʔ]					
[ˈjɪnɛɻɒŋ]	[siˈnapan]*	[siˈnapan]*	[seˈnãpan]	[siˈnapan]		
[ˈjɪnɛɻɒ]	[siˈɲaraʔ]*	[siˈɲaraʔ]*	[ˈsinãɾ]	[ˈsinar]	[ˈsinaw]	[ˈsɪŋag]
[ˈjɪɻɪ]	[ˈsiruŋ]	[ˈsinɾɛ]				
[ˈjɔɻɛɻɒ]	[soˈlaraʔ]*	[soˈlaraʔ]*				
[ˈjɔɻɒ]	[ˈsuraʔ]*†	[ˈsuraʔ]*†	[ˈsurat̚]†	[ˈsərat̚]†	[sɔˈlat̚]†	[sɔˈlat̚]†
[ˈjɔɻɪ]	[ˈsaruʔ]		[ˈtɛerutu]	[ˈsrutu]		
[ˈlɛpɪɻɒ]	[ˈlaˈbi]*	[ˈlaˈbi]*	[ˈlebɪh]	[ˈluwɪh]		
[ˈlɛɪɪ]	[ˈlaˈʃuʔ]*	[ˈlaccuʔ]*				
[ˈlɛmpɪɻɪ]	[lamˈbereʔ]	[lamˈpɜʔ]				
[ˈlɛmɪɻɪ]	[laˈˈmoroʔ]*	[laˈˈmoroʔ]*				
[ˈlɛɻɪŋ]	[laˈˈɲɪŋ]					
[ˈlɛpɛɻɒ]	[laˈˈparaʔ]	[lapˈpa]				
[ˈliŋɪ]	[ˈliŋa]		[ˈbiŋuŋ]	[ˈbiŋɔŋ]		
[ˈlipɒ]	[ˈlipaʔ]*	[ˈlipaʔ]*	[ˈlipat̚]	[ˈlipət̚]		

[ˈlɪpɐ, lɪpʌ]	[ˈlepalepa]*	[ˈlepalepa]*		
[ˈmɛlətɪ]	[ˈladiŋ]*	[ˈladiŋ]*		[ˈglati]
[ˈmɛ:rɛʔʌ]	[maˈʔrasaʔ]			
[ˈmɛ:riʝʌŋ]	[maˈriʝŋ]*	[maˈriʝŋ]*	[ˈmerjam]	[ˈmriʝəm]
[ˈmɛ:tʌ]†	[ˈmadaʔ]*†	[ˈmadaʔ]*†	[ˈmadat]†	[ˈmadat]†
[ˈmicɪʝʌŋ]	[biˈseʝŋ]*	[biˈseʝŋ]*		
[ˈmiŋɤ]	[ˈbeŋo]		[ˈbeŋõŋ]	[ˈbɛŋɔŋ]
[ˈmɤkʌ]	[ˈmuˈka]			
[ˈŋɛ:nɪɕɪ]	[aˈnisiʔ]			
[ˈrɛ:cʌŋ]	[ˈraʔʃuŋ]*	[ˈracuŋ]*	[ˈrateun]	[ˈracɔŋ]
[ˈrɛmpɛŋɪ]	[ramˈbaŋeŋ]*	[ramˈbaŋæŋ]*		
[ˈrɛpɪ]	[ˈraˈpi]*	[ˈrapi]*	[ˈrapɪ]	[ˈrapi]
[ˈriŋgɪ]	[ˈriŋgiʔ]*	[ˈriŋgiʔ]*	[ˈriŋgit]	
[ˈriɾɪ]	[ˈrere]*	[ˈrere]*		
[ˈromʌŋ]	[ˈroman]*	[ˈroman]*		
[ˈwɛɫɤ]	[ˈaˈlo]*	[ˈallo]*		[ˈʔad:ˈlaw] [ˈʔa:raw]
[ˈwɤkɪɪ]	[uˈkiriʔ]	[ˈuki]	[ˈukɪɾ]	
[ˈwɤŋtɪŋ]	[ˈunti]*	[ˈunti]*		
[ˈjɪmpɪɪ]†	[emˈbereʔ]*†	[emˈbereʔ]*†	[ˈember]†	[ˈɛmber]†

Note: Asterisks (\*) indicate words in Bugis and Makassarese which are identical or nearly identical. Crosses (†) indicate words identified to be of external (i.e. Portuguese, Dutch, or Arabic) origin.