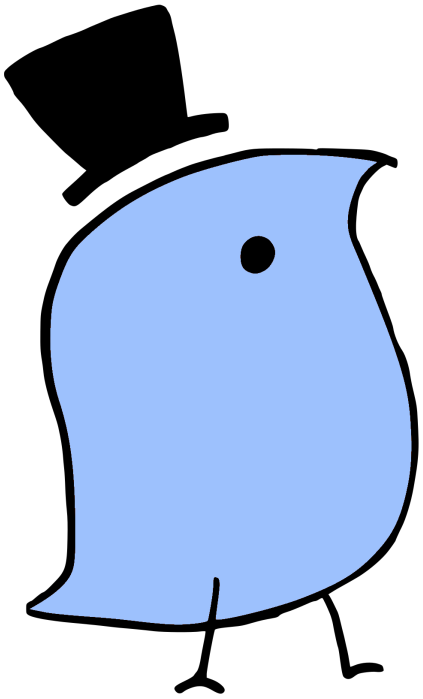
# NUANCED GARBLING



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# FOREWORD

It's a real pleasure to write the opening words of this exciting journal showcasing undergraduate work in Linguistics. The issue is comprised of a series of top essays, each of which achieved an H1, which the student contributors wrote for different Linguistics classes during their majors. It is truly impressive to see the breadth and originality of work being produced by our students and a special shout-out to the student Linguistics Society, who put this all together so professionally, especially considering what a challenge 2020 has been.

Reading through the topics for this year's issue, I am reminded just how broad a field Linguistics can be. The issue is grouped into three main themes: historical linguistics, sociolinguistics and typology, but also covers a range of languages, including Minoan, Cumbrian and Indonesian. There are also a number of papers dealing with Australian indigenous languages, which is a particular strength of our School. The issue will be of particular interest to students or scholars of Linguistics, but really anyone who is fascinated by language will enjoy the topics presented here.

As a sociolinguist, I was particularly interested in the paper dealing with ethnicity and identity in Australia, where an interview with a Malaysian-Chinese student reveals important insights into the inherent links between language, identity and heritage. We learn how a young student's inability to speak Chinese, Cantonese or Hokkien results in a feeling of inexplicable loss. While he finds new pathways for identity construction in an 'extralocal' mindset, his acquisition of an Australian accent results in him being constantly 're-raced', as part of what Foucault would term 'surveillance'. We gain further insight into the problematic outcomes of surveillance in another paper examining the effects of language discrimination towards indigenous Australians.

Extralocalisation, discrimination and 're-racing' are all the more pertinent in light of the tumultuous political events of 2020: from the COVID-19 pandemic to Black Lives Matter. Linguists have always taken their role as advocates very seriously: from helping to revive the sounds and grammars of endangered languages, to speaking up on behalf of speakers of minority languages in the courts, the classroom and indeed on our own campus. As we read in the second-last paper of the issue, on colloquial Indonesian, languages are constantly changing and evolving. I view it is as part of our duty as linguists to allow our minds to change and evolve as often as our languages do.

Enjoy!

Chloé Diskin-Holdaway
*School of Languages and Linguistics*

September 2020

# PREFACE

Probably every preface written in 2020 will start with a referenceto COVID, so I'll uphold that trend. This year has been personally tough for everyone – there's not a single person I know that hasn't been affected by the pandemic – as well as for LING as we did our best to transition to online engagement. It is a great sadness that we never figured out a way to get funding to pay for everyone's pizza and beer at online events.

One small upside of all this is that without regular spontaneous interactions everyday, I've realised how necessary social interaction is, and have gotten better at consciously constructing it. At the start of the year, we were lucky to have a wonderful linguistics trivia night at the Ida – with tonnes of free beer and pizza – just before we were all booted off campus. Since then, we've mostly kept up with fortnightly zoom catch-ups with all you amazing people. A few plans fell by the side, but in second sem we got it together with the *Beyond the BA* seminar which had three awesome speakers and a great turnout, with students from all over Australia (another bonus of online events!).

And now it is with great honour and excitement that we present to you *Nuanced Garbling 2020*, the second ever issue of our student journal! Written by you (and some of us…), compiled and edited by Evan Keith, formatted by Chuanshu Jiang, and with help from the rest of the committee, this issue continues our new tradition of showcasing some of the fascinating research that is already being done by undergraduate linguists at the University of Melbourne.

Enjoy!
Henry Leslie-O'Neill (President)

And the rest of the LING committee:
Chuanshu Jiang (Vice President)
Evan Keith (Education Officer)
Jasmine Kaur Sareen (Treasurer)
Lynne Bian (Secretary)
Tun Xiang Foo (Gen. Comm.)
Luciana Keen (Gen. Comm.)
Xiaoran Sun (Gen. Comm.)

# The Phonology of Minoan: Evidence from Linear A

Michael W Josefsson *

## 1 Introduction

Minoan is the undeciphered indigenous language of the island of Crete, spoken by the Minoan civilisation who dominated the island from their emergence c. 3000 BC until its occupation by Mycenaean Greeks c. 1480 BC (B. Davis, 2019).

The language is written in Linear A, the source of Linear B, deciphered in 1952 and revealed to contain an early form of Greek (Chadwick, 1959). Because of the close correspondences between Linear B and its older cousin, Linear A can effectively be read by substituting the known values of Linear B. This places Linear A in exactly the opposite position to Linear B prior to 1952: a script we can by and large read, documenting a language we cannot understand. The Minoan language appears unrelated to any other, and, despite repeated attempts (see for example S. Davis, 1967), has yet to be deciphered.

This article aims to present a new analysis of one part of the language, its sounds, in the belief that understanding the structure of Minoan is a useful precursor to future decipherment. With a known script and unknown language, the decipherment of Minoan is a linguistic question, not a historical one, and one which represents another of the benefits linguistics can bring to archaeology. Unlike Linear B, Linear A inscriptions occur in both administrative and religious contexts (Preziosi & Hitchcock, 1999). The prospect of what new linguistic and archaeological light might be shed from this trove of undeciphered texts, comparable in significance to Hittite or Egyptian, is tantalising in the extreme.

The analysis of Minoan has benefitted from linguistic evidence, and study of the typology of how languages operate around the world has been used to interpret data from Linear A. B. Davis (2019) has successfully applied typological techniques to Minoan grammar, while Stephens and Justeon (1978) have applied these methods to its phonology.

Building on thir work, this article sets out to examine the sound system of Minoan based on how it was recorded in Linear A. The key to this line of inquiry is that while we can read Linear A, we can only do so by assuming that the Linear A relatives of the signs of Linear B, writing Greek, represented the same sounds in Minoan. While this assumption is broadly justified, a more accurate analysis is able to produce a significantly more coherent picture of Minoan phonology. We will begin by discussing the value of an attempt to analyse Minoan phonology in the first place. The features of Linear A that make this possible will then be discussed in depth, before a preliminary analysis of Minoan phonology.

*This is an edited version of a paper originally submitted for the subject Ancient Greece: History and Archaeology (ANCW20022).

# 2 Linear A and B

## 2.1 Why Phonology?

Minoan is a language that has not been spoken for thousands of years, and which survives only in the form of semi-legible texts – what is to be gained by investigating the phonology of a language nobody speaks?

Firstly, only three words of Minoan have been interpreted from context alone thus far (B. Davis, 2019): the most productive path towards decipherment is a comprehensive understanding of its linguistic structure, phonology included. Secondly, sounds themselves may prove useful to archaeology: being able to properly interpret place and personal names in Linear A may help connect them with known archaeological evidence, making sections of the texts useful even without total decipherment.

Most importantly, however, the language's phonology is the only sure method to confirm or refute the prevailing view that Minoan – and, by extension, the Minoan civilisation – is unrelated to the other families of the region, a proposition of enormous archaeological and linguistic significance. Attempts have been made, for instance, to connect Minoan to Anatolia on the basis of a word supposedly shared between Minoan, Hittite and Luwian. Despite its warm initial reception (B. Davis, 2019), this claim has recently been reconsidered (Valério, 2015). (For a more extensive argument to this effect, see Marangozis, 2007, countered by B. Davis, 2018. The identification of the regular and natural sound correspondences on which the comparative method relies is impossible without an understanding of the subject language's phonology. Understanding Minoan phonology is not only useful for linguists and archaeologists wishing to interpret the Minoans on their own terms, but also insofar as it helps us understand the relationships of their language and civilisation to the other peoples of the Aegean.

## 2.2 Languages and Scripts

Despite the complexities of trying to separate them, the interrelationships of the various languages and scripts of Cretan history are central to this analysis. The first script to emerge on the island was Cretan hieroglyphs in the Middle Minoan IA, developing into Linear A soon afterwards in MM IB or MM II (Younger, 2019). The two scripts both recorded Minoan, and were in contemporary use until the abandonment of hieroglyphs in MM III. Linear A marginally survived destruction in the Late Minoan IB, but was abandoned soon after (Younger, 2019). Minoan was still spoken, and by classical times had developed into a language called Eteocretan, which is documented in inscriptions written in Greek. Meanwhile, by the Neopalatial period (Younger, 2019), a close cousin of Linear A had developed into Linear B, which was used to record Greek both within Crete and on the Greek mainland until the fall of the Mycenaeans; the classical Greek alphabet did not emerge until the Archaic period, c. 900 BC.

*Table 1: Languages and scripts of Crete*

| Language | Language family | Script family |
|---|---|---|
| Minoan | Cretan | Cretan (Cretan hieroglyphs, Linear A) |
| Eteocretan | Cretan | Greek (Greek alphabet) |
| Greek | Greek | Cretan (Linear B) |
| | | Greek (Greek alphabet) |

## 2.3 Linear A and Linear B

The question, then, is how we are to understand Minoan phonology – or, better put, what is wrong with the picture on the surface? Below is a list of Linear A signs substituting their values from Linear B (Packard, 1974). The completeness of this list is unclear.

*Table 2: Linear A signs with the same values as Linear B (Packard, 1974)*

| | -a | -e | -i | -o | -u |
|---|---|---|---|---|---|
| ø- | *a* | | *i* | | *u* |
| p- | *pa* | *pe* | *pi* | | *pu* |
| | *pa*$_3$ | *pte* | | | *pu*$_2$ |
| t- | *ta* | *te* | *ti* | *to* | *tu* |
| | | *twe* | | *two* | |
| | *ta*$_2$ | | | | |
| d- | *da* | *te* | *di* | *do* | *du* |
| | | *dwe* | | *dwo* | |
| k- | *ka* | *ke* | *ki* | *ko* | *ku* |
| | *kwa* | *kwe* | | | |
| | *zda* | | | | |
| m- | *ma* | *me* | *mi* | | |
| n- | *na* | | *ni* | | *nu* |
| | *nwa* | | | | |
| s- | *sa* | *se* | | | *su* |
| r- | *ra* | *re* | *ri* | *ro* | *ru* |
| | *ra*$_2$ | | | | |
| w- | *wa* | | *wi* | | |
| y- | *ya* | *ye* | | | |

*Note: Linear B readings are conventionally given in italics, and Linear A readings in capitals: pa and PA refer to different transcriptions of the same sign. Where phonemic transcription appears later this is in usual broad transcription.*

Linear A, like Linear B, is a syllabary: instead of representing a sound, each sign represents a syllable, almost always consonant-vowel. Both scripts also have logograms (symbols for whole words that replace or clarify phonetic signs). The majority of the script, however, is phonetic (Packard, 1974).

## 2.4 Problems in Linear B

The irregularities in this uniform grid require explanation. Central to this analysis is that Linear A, devised for the Minoan language, should be well-suited to Minoan phonology, just like the Roman alphabet is for Latin. When Linear B was co-opted for Greek, the script's sounds did not perfectly match those of the language, just as our current alphabet, designed for Latin, struggles to represent the sounds of English.

The problems that arise from this adaptation are our chief source for Minoan phonology. Crosslinguistic evidence makes it unlikely that these irregularities existed for the language the script was designed to write (Stephens & Justeon, 1978): they are consequences of being poorly fitted onto Greek.

The evidence is manifold. Firstly, Linear B ignores important distinctions in Greek and makes others which are comparatively unimportant. In Linear B, three separate sounds /p, b, $p^h$/ and /k, g, $k^h$/ are written identically: *pa* represents /pa/, /ba/, and /$p^h$a/. Separate sounds /l/ and /r/ likewise collapse into r, discussed below. Conversely, Linear B has multiple symbols for the same Greek sounds: /pa/ (or /ba/ or/$p^h$a/) can be written either *pa* or $pa_3$; likewise *pu* and $pu_2$, *ta* and $ta_2$, and *ra* and $ra_2$ (Packard, 1974). Linear B also has signs for combinations of consonants and /w/, of which Mycenaean Greek only needed /$k^w$/ (Chadwick, 1959). Based on the behaviour of other writing systems, Stephens and Justeson (1978) argue that this is because the opposite was true in Minoan. Linear A, designed for Minoan, distinguished two different sounds written *pa* and $pa_3$, but did not distinguish /pa/, /ba/, and /$p^h$a/. When Linear B was adapted for Greek, Mycenaean scribes ignored distinctions they found meaningless and adapted it to Greek as best they could.

Two other points are significant. Although Linear B does not distinguish between /p, b, $p^h$/ or /k, g, $k^h$/, it does make a highly unusual distinction between /t, $t^h$/ and /d/ (Stephens & Justeon, 1978). It is not unusual that Linear B distinguishes the sounds themselves – they were distinct in Greek – but rather that the type of distinction is unusual: it should be made for all voiced stops or none. This suggests that the signs used for Greek /d/ in Linear B did not make that sound in Minoan Linear A. Additionally, most of the signs above are consonant-vowel or consonant-*w*-vowel: why do some signs (*pte*, *zda*) seem to represent multiple consonants? Greek is full of consonant clusters, so their presence is not surprising, bar again their unusual distribution. Far commoner clusters /nt/ or /ps/ are not represented, so why is /pt/? The argument is that these signs did not represent consonant clusters in Linear A, but rather syllables of the form consonant-*y*-vowel, mirroring the signs consonant-*w*-vowel; see below.

# 3 Minoan Phonology

From this evidence, we can adapt the Linear B readings of Linear A signs given above into the following chart, representing their original Minoan values.

*Table 3: Linear A signs with Minoan phonetic values*

| | -a | -e | -i | -o | -u |
|---|---|---|---|---|---|
| ø- | A | | I | | U |
| p- | PA | PE | PI | | PU |
| | PYA (=$pa_3$) | PYE (=pte) | | | ($pu_2$) |
| t- | TA | TE | TI | TO | TU |
| | | TWE | | TWO | |
| | TYA (=$ta_2$) | | | | |
| d- | DA | DE | DI | DO | DU |
| | | DWE | | DWO | |
| k- | KA | KE | KI | KO | KU |
| | KWA | KWE | | | |
| | KYA (=zda) | | | | |
| m- | MA | ME | MI | | |
| n- | NA | | NI | | NU |
| | NWA | | | | |
| s- | SA | SE | | | SU |
| r- | LA (=ra) | LE (=re) | LI (=ri) | LO (=ro) | LU (=ru) |
| | LYA (=$ra_2$) | | | | |
| w- | WA | | WI | | |
| y- | YA | YE | | | |

Most readings are identical to Linear B. The differences are the resolutions of the irregularities introduced above, addressed in turn below.

## 3.1 Labialised and Palatalised Consonants

The largest change is the unified classes of labialised, /$k^w$a/, and palatalised, /$k^j$a/, sounds for the stops /p/, /t/, and /k/. The labialised class remains in Linear B, though only kw was used properly for /$k^w$/; others, e.g. *twa*, were used for sequences like /tu.wa/. The palatalised sounds, however, have been lost in Linear B, but explain both the disparate multiconsonant signs and some syllables' odd alternate spellings (Packard, 1974). Linear B's *pte* and *zda* represent PYE and KYA, and doublets *pa/$pa_3$*, *ta/$ta_2$*, and *ra/$ra_2$* are explained as PA vs. PYA, TA vs. TYA, LA vs. LYA (see below on *r-* vs. L-). Palatalised consonants in Greek are known to have evolved into the consonant clusters seen in Linear B. *zd-* in Linear B was used to write Greek words

that had come from /kʲ/, /gʲ/ and /tʲ/, and *pt-* from /pʲ/ (Stephens and Justeson, 1978; Reekes, 2009). Further evidence is provided by later Greek double lambda, discussed below. They also pattern with the labialized class: /w/ and /j/ are both approximants, and a syllabary that permits syllables of the form consonant-vowel, consonant-*w*-vowel, and consonant-*y*-vowel is both internally consistent and comparatively plausible.

### 3.2 d, r, and L

As noted above, the typology of scripts worldwide makes it implausible that the signs for /t/ and /d/ in Linear B represented the same sounds in Linear A. To account for the sound written *d* in Linear B, Stephens and Justeson (1978) posit a whole new class of implosives for each series of stop. They suggested a class of nine new sounds to be unnecessary, since the problem in Linear B lies with only one. As others have suggested (see Stephens and Justeon, 1978; p. 279), I argue that the Linear B sign <*d*> was originally used for a Minoan tap, /ɾ/. Mycenaean scribes hearing the unfamiliar sound adopted it to its closest Greek counterpart, /d/. One gap in this theory is that Stephens and Justeson (1978) also use implosives to explain *pu* vs. *pu₂*, here unexplained.

Packard (1974) suggests that the same Minoan sounds adapted for Greek /d/ and /r, l/ were instead borrowed as /r/ and /l/ respectively in Cypriot. This suggests that Linear B *d* was a sound that could be interpreted as either /d/ or /r/, and that Linear B *r*, used for Greek /r/ and /l/, was originally simply Minoan /l/. This supports the Minoan value /l/ for Linear B *r* and a tap for *d*.

*Table 4: Liquids in Linear A, Linear B and Cypriot*

| Minoan (Linear A) | /ɾ/ | /l/ |
|---|---|---|
| Greek (Linear B) | /d/ | /l/, /r/ |
| Cypriot | /r/ | /l/ |

### 3.3 Evidence from Pre-Greek

It has been suggested that the Greek word *mallós* 'flock of wool' was borrowed from Minoan *ma-ru* 'wool', one of a series of Greek words derived from an external source termed Pre-Greek (Beekes, 2009). This origin provides further evidence for the Minoan phonology presented above. Greek /lj/ regularly developed into /ll/, which suggests *ma-ru* should be read MA-LYU: the original borrowing *malyós* developed into *mallós* later. This provides independent evidence for both palatalisation and the value /l/ in Minoan; detailed investigation of Pre-Greek is a promising direction for future research.

### 3.4 Vowels

While an analysis of Minoan vowels is beyond the scope of this paper, a brief word is surely warranted. Although Linear B distinguishes five vowels, *a e i o u*, signs for syllables ending in *-o* and to a lesser extent *-e* are conspicuously rare. It is likely Minoan distinguished four vowels,

/a e i u/. Notably, many signs with *-o* are syllables of the form consonant-*w*-vowel. Packard, 1974, p. 117 suggests a preceding /w/ opened original /u/ to [o]: *two* represents Minoan /twu/. Though /e/ after labialised consonants could be similarly explained from /i/, it is not clear what would explain its presence elsewhere, hence its tentative assignment to Minoan.

## 4 Conclusion

The following chart summarises Minoan phonology. Sounds in brackets are typologically likely to have existed, on the basis of the behaviour of similar sounds, but are not directly evidenced above.

*Table 5: Minoan phonology*

| | Labial | | | Dental | | | Palatal | Velar | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Stops | p | ($p^w$) | $p^j$ | t | $t^w$ | $t^j$ | | k | $k^w$ | $k^j$ |
| Nasals | m | | | n | $n^w$ | ($n^j$) | | | | |
| Fricatives | | | | s | | | | | | |
| Taps | | | | ɾ | $ɾ^w$ | ($ɾ^j$) | | | | |
| Liquids | | | | l | ($l^w$) | $l^j$ | | | | |
| Approximants | w | | | | | | j | | | |

| | Front | Back |
|---|---|---|
| Close | i | u |
| Mid | e | |
| Open | a | |

Drawing on previous efforts, this paper has attempted to present a brief original analysis of Minoan phonology, summarised above, by interpreting the irregularities of Linear B sounds as resulting from the mismatch between the sounds of Greek and the Minoan of Linear A. More rigorous analysis along these lines is sorely needed; investigations of the Minoan vowel system, sign frequencies, and the extent to which Minoan has contributed to Pre-Greek are particularly wanting.

For a language like Minoan, with no known relationship to any other, knowledge of its structure is a necessary precursor to its decipherment, and comparison with patterns of languages around the world is a fruitful guide to its interpretation. While phonology alone is valuable to archaeology in contextualising the Minoans, particularly given that a more accurate method of reading Linear A may allow the identification of proper nouns already known to archaeologists, it is principally important for the approach it represents. An understanding of the language's structure, be it morphological, syntactic or phonological, is essential to its future decipherment, and as this article and others have shown, linguistic techniques are the most effective path towards the interpretation of its structure.

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# Word-Final D Devoicing in Cumbrian

Simon Roper

## 1 Introduction

The Cumbrian dialect of English is spoken in north-western England, in the area once divided into the ceremonial counties of Cumberland and Westmorland. Its development is relatively well-documented, with specific effort having been made to identify and record Cumbrian vocabulary in the 17th century (Nicholson, 1677), as well as several more such efforts in the 19th and 20th centuries (Ferguson, 1873; Dickinson, 1878; Prevost and Brown, 1905; Brilioth, 1913). This article concerns a comment made by Brilioth regarding the devoicing of word-final /t/ in the variety of Cumbrian spoken in Lorton in 1913. He says:

> Final **d** *[as found in Old English]* appears as **d** or **t** *[in Lorton]*, but the occurrence of these two sounds does not follow any definite laws; final **d** in unaccented syllables and in consonant combinations, however, has become **t** in the majority of cases.

He goes on to remark that word-final devoicing occurs a lot in preterites, the standard English equivalents of which end in /-d/. Without disregarding the possibility that this sound change in Cumbrian is fully or partially grammatically conditioned, which is a possibility (Hill, 2014)), this paper seeks to use textual evidence to determine whether this widespread devoicing is in fact rule-governed, or if it accords to a system of free variation.

This article will largely be written in terms of orthographic <d> and <t>, but the author assumes that these indicate the phonemes /d/ and /t/ respectively.

## 2 Methodology

Given the prevalence of orthographic word-final <-t> in 19th-century dialect literature, the author presumes that the relevant sound change was complete before any audio recordings of Cumbrian were made, and so none will be analysed here. If 19th-century literature were being analysed in isolation, this would be problematic: dialect authors, whether they are native speakers or not, may consciously or unconsciously take steps to make their orthography more divergent from standard English than it would normally be in everyday speech. A lot of the nuance of particular sound changes and correspondences can be lost through careless over-application.

This problem will hopefully be offset by the fact that both old and more recent texts will be consulted. The more recent texts will consist of the first two stories from Gibson (1869), entitled *Joe and the Geologist and T'reets on't.* These stories were chosen because they are

relatively recent, having been published only a few decades before Brilioth (1913), and may offer some insight into why he found no pattern in the distribution of /-t/ arising from devoiced /-d/. Gibson published several other stories and poems in this volume, but these were chosen as they are particularly long.

On the other end of the spectrum, three 15th-century indentures will be examined, all made in what was then Cumberland. They have been taken from the Middle English Grammar Corpus (MEG-C) compiled by researchers at the University of Stavanger (Stenroos et al., 2011), and are marked with the codes L0107, L0535 and L0117 in the corpus. Some Cumberland texts in the MEG-C contained no evidence of d-devoicing whatsoever. These were deliberately avoided.

The relevant texts will be searched both for words ending in orthographic <d>, and for words ending in orthographic <t> that would normally end in <d> in modern literary English. For instance, the word stopt is included because we find <t> in it, where we would find <d> in standard English *stopped*. However, a word like cat would not be included, because the standard English cognate ends in <t>. Modern literary English is used as a point of comparison here because it is more consistent in terms of its spelling than Middle or Old English. Where a word is given several times with the same spelling, it will only be included once in the data. Where it is included several times with varying spellings, all spelling variants will be included.

In this manner, two separate datasets will be made - one for each time period. They will both be analysed to determine whether there is any pattern in which words take final <t> and which take <d>.

## 3 19th Century Dataset

The 19th-century dataset, gathered from Gibson (1869), is analysed as follows:

| **Without apparent devoicing** | **With apparent devoicing** |
|---|---|
| Oald *(old)*; foald *(fold)*; said, sed; wid *(with)*; gud *(good)*; wad *(would)*; m'ead *(made)*; finnd *(find)*; hard; may'd *(might)*; hod *(hold)*; breid *(bread)*; rwoad *(road)*; hed *(had)*; feed; end; he'd; I'd; deid *(dead)*; hoond *(hound, verb)*; dud *(did)*; frind *(friend)*; thu'd *(thou'd)*; bed; stand; cud *(could)*; wurd *(word)*; mad; sud *(should)*; breed *(breed, noun)*; laid; winnd *(wind, noun)*; lead *(load)*; heid *(head)*; asteed *(instead)*; hand; we'd; reed *(red)*; jibed; end. | Wantit *(wanted)*; stopt, stopp't *(stopped)*; drist *(dressed)*; leuk't *(looked)*; turn't; ken't, kent *(knew; kenned)*; nwos't *(nosed)*; cap't *(capped)*; laugh't; promish't *(promised)*; pang't *(panged)*; heidit *(headed)*; toak't *(talked)*; pait *(paid)*; tel't *(told; telled)*; shak't *(shook; shaked)*; stept, snurtit *(snorted)*; woak't *(walked)*; oppen't *(opened)*; co't *(called)*; stacker't *(staggered)*; freeten't, freetn't *(frightened)*; seckint *(second)*; gurn't *(grinned)*; follow't; skipt; stept; doff't; donn't; glentit *(glinted)*; gruntit *(grunted)*; dar't *(dared)*; chow't *(chewed)*; cwoatit *(coated)*; belang't *(belonged)*; cum't *(come(d))*; creukt *(crooked)*; show't; meen't *(meant)*; glower't *(glowered)*; ax't *(asked)*; consaitit *(concieted)*; wantit *(wanted)*; nick't; remember't; squeak't; cockt; jumpt; handit *(handed)*; happen't; startit *(started)*; gedder't *(gathered)*; mindit *(minded)*; stump't; teem't; pick't; pleas't; wipet *(wiped)*; wettit *(wetted)*; pack't; leukt *(looked)*; shak't *(shook; shaked)*; partit *(parted)*; turn't. |

It is immediately obvious why Brilioth made a point about devoicing occurring in preterites. Of the 65 words with apparent devoicing, 64 are either preterites, adjectives derived from preterites, or past participles with the same form as their corresponding preterites. The remaining one is *seckint* (second). On the other hand, of the 40 words without devoicing, only 14 have historically been preterites, and many of those (such as *would*, *should* and *could*) are not actually used as preterites anymore, and don't seem to have been used as preterites in the sample texts. Bear in mind that because of the sampling method, none of these preterites are irregular, which is to say that none of them are formed by changing the vowel of the root; they all end in <d> which, if the author is to be trusted, has failed to devoice.

The idea that there is a grammatical component to the sound change, at least as it applied in the 19th century, requires an explanation for the outliers, which are (excluding those no longer used as preterites) *said, m'ead, hed, dud, laid and jibed.* It might be noteworthy that Brilioth gives *said*, *hed* and *dud* as having short vowels and only one syllable, which does not apply to any of the sample words with devoicing. This might also apply to *m'ead*; the vowel in that lexical set is given by Brilioth as *ia* in his system of transcription, but there is a small amount of evidence from rhymes in contemporary dialect poems (for instance *Bobby Banks' Bodderment*, in which brass 'money' is rhymed with *feàce* 'face') that this was /jɐ/ for some speakers, in which case *m'ead* could be analysed as having a semivowel and then a short vowel.

This leaves *laid* and *jibed.* The former is reflected by *pait* 'payed', a word in which etymological /d/, in almost the same environment, is given as <t>. This can easily be accounted for; the native north-western word for 'lie' was *lig* (Brilioth 1913, 93) and had been since at least the 15th century (MEG-C, L0354). It might be that *lay* and *laid* were later loans from the literary language into Cumbrian, accounting for the exception to what must have been an earlier sound change. If this pattern were seen in substantially more words, it might be enough to bring into question whether *-t* was productive as the preterite suffix in Cumbrian at this time, but that seems too much of an extrapolation under the circumstances.

## 4 15th Century Dataset

The 15th-century dataset gathered from the MEG-C has a wider range of authors, and a wider range of dates (1435, 1441, 1459). No individual text has a large enough quantity of words to be worth analysing in isolation, but the author has identified no significant difference in pattern between these texts, so they will be analysed together.

| **Without apparent devoicing** | **With apparent devoicing** |
|---|---|
| Lourd *(lord)*; god; awand *(owing?)*; ded *(deed)*; mynd *(mind, noun)*; hald *(hold)*; descend; eglesfeld *(place name)*; acord; concord; Cumbreland; said; herd *(heard)*; understand. | Payitt *(paid)*; grantitt *(granted)*; chargitt *(charged)*; a-cordyt *(accorded)*; agret *(agreed)*; apoyntyt *(appointed)*; departyt *(departed)*; callet *(called?)*; delyueret, delivert *(delivered)*; claymet *(claimed)*; conceyuet *(concieved).* |

The pattern of the 19th century is amplified here, which may partly be on account of the

smaller sample size; all of the words with devoicing are preterites or derived from preterites, and only one of the words without devoicing falls into either of those categories (*said*). However, another conditioning influence may also be at play here; etymological /-d/ is far more likely to be given as <-t> if it is in an unstressed syllable, assuming that vowels are pronounced wherever they are written. This unveils a factor invisible in the 19th century. Compare later *pait* 'paid' with earlier *payitt*; the earlier form appears to have an unstressed syllable that has disappeared by the 19th century, but with the devoicing process complete, the word still ends in <t>.

This does not immediately account for the forms *awand*, *Cumbreland* or (assuming its modern stress pattern, which is not necessarily a given) *eglesfeld*. Each of these words has <d> preceded by a consonant, whereas all but one of the words with devoicing has it preceded by a vowel. The one exception is *delivert*, but the alternative form *delyueret* tells us that this may be an instance of syncope in the language of a particular speaker, and that the underlying historical form may still contain the unstressed vowel. This could be stretched to accommodate *agret* as well, although that may be an over-extrapolation.

## 5 Conclusions

Given the 15th-century dataset, it seems likely that the sound change started as a devoicing of word-final /d/ where it was preceded by an unstressed vowel, explaining the strong pattern of devoicing in preterite endings of the form /-Vd/. Forms such as *made* and *forsayde* 'forsaid' (not included in the data here because neither ends with <d> in spelling) adhere to this pattern; they retain <d> because it is not preceded by an unstressed vowel (and, taking the spelling at face value, may actually have been followed by an unstressed vowel).

That the original sound change was largely phonologically conditioned does not preclude grammatical factors coming into play later on. A larger dataset might have allowed for further analysis of the development of this preterite ending, and might have provided a more robust answer to the question of whether it was productive in 19th-century Cumbrian. Brilioth's inconclusive assessment was not unjustified, given that he focused largely on Old English phonemes and their Cumbrian reflexes, without delving far into the intermediate processes of change.

Further research on this topic in other northern English and southern Scottish localities might offer some insight as to where it originated. The earliest text from Cumberland in the MEG-C (L1188) contains evidence of d-devoicing as early as 1422. As a point of contrast, 15th and even very early 16th-century Yorkshire texts have either intermittent <d> and <t> spellings, or only <d> spellings (MEG-C L0119, L0381). An origin in early Scots, and a steady diffusion down into northern England, cannot be ruled out.

As these unique features of rurally-spoken dialects of English are gradually levelled, replaced and eroded away, this author suspects that interest in them will become more widespread and their development will become far better-understood.

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# How can Evidence from Current Day Languages be used to Illuminate our Understanding of Early Human Evolution and Dispersal?

Jahan 'Harry' Rezakhanlou-Taubman *

## 1 Introduction

This question deals with the interplay between the analysis of the development of language on the one hand, and two distinct areas of analysis on the other: the evolution of our species, and the migration patterns of communities. It presents the challenge of integrating linguistic evidence with genetic and archeological data to support findings that go well beyond the scope of linguistics as such, and using linguistic evidence to illuminate our understanding of the wider phenomena of human evolution and the historical dispersal of humanity across the globe. Each of these questions in isolation raise fundamental challenges in their separate disciplines of evolutionary biology and human geography, so it is difficult to overestimate the challenge of attempting convergence between these three areas. At the same time, if the direct evidence presented by genetics and archeological sites may support analysis of the historical development of language, particularly concerning early language use for which there is inevitably no written evidence, it strengthens the respective claims made by linguists.

Nevertheless, the question of how language itself emerged remains inherently difficult, given the lack of direct evidence available and the difficulty of using the little available evidence to trace the nature of the remote origins of language. This is especially the case if one is using 'current day' language, since it means first developing a theory of how language evolves, and then in effect reversing time and using that theory to follow linguistic evolution from today's usage patterns all the way back to the source of language. The complexity increases when this line of research is to be coordinated with research on evolution and human dispersal.

Some have in fact explained the development of human language in terms of evolution, for instance Pagel (in Wade, 2011, commenting on Atkinson, 2011) pointed out that "language was our secret weapon, as soon as we got language we became a really dangerous species,". As an enormous factor driving the direction of our evolution as a species, it is logical to assume that language and the human species evolved together through everyday social interaction and necessity (Schoenemann, 2009). Considering the link between evolution and language development, Taglialatela et al., 2008, p. 343 conclude that "the neurological substrates underlying language production in the human brain may have been present in the common ancestor of

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humans and chimpanzees", and that these sections of the brain in chimpanzees are used in communication functions. Language as such is not unique to *homo sapiens* – or even to the genus *homo* – and this makes it difficult to fix a definite period for the 'origin of language' – the question of determining an 'origin' even raises questions about the boundaries of what we consider to be 'language.' Recent genetic research (Penisi 2013) has disclosed interbreeding between species, so that the genetic lineage of some *homo sapiens* today includes Neanderthal and Denisovan genes. The fact that there is archeological evidence that proves these species cohabited some locations gives rise to speculation that at least some forms of language may have been shared between species. A notable example was the Neanderthal hyoid bone – a horseshoe-shaped bone in the neck above the larynx supporting the base of the tongue, essential for the production of the sounds used in human speech (as the jaw, tongue and larynx muscles are anchored to it) – found in Mugharat al-Kabara, Occupied Palestine, showing that the physical ability for language amongst protohumans dates back at least 60,000 years (Valladas et al., 1987).

## 2 Using Contemporary Language Patterns to Trace the Past Development of Language

Thus, while conceptually distinct from the study of human evolution, linguistic analysis is intertwined with the strictly biological aspects of the study and tracing dispersal as a matter of human geography. The essential question then is how, and whether, we can learn about historic development of language ('diachronic' in the term introduced by Saussure) through an investigation of aspects of contemporary language use, such as phonetics or syntax ('synchronic' analysis) in accordance to fossil-based evidence.

According to Donald (1991) and Deacon (1997), the establishment of syntax, with the "emergence of words as carriers of symbolic reference" (Knight et al., 2000, p. 8) as a foundation, relied on a prior high-speed phonetic machinery. Thus, the first step proto-humans made towards the establishment of language was through phonetics. When outlining the theory of evolution, Darwin himself attributed the origin of language "to the imitation and modification, aided by signs and gestures of various natural sounds, the voices of other animals, and man's own instinctive cries (such as reaction to pain or surprise)" (1871, p. 56). Thus it was from a phonetic origin that language evolved. Some linguists agree with the theory that phonemes are the barebones of language. Hockett for example described phonemes as "the minimum meaningless but differentiating ingredients in a language; the smallest meaningful elements are what we call morphemes" (1959, p. 33). Further investigation deduced that increasing reliance on vocalisation was a focal point of human evolution, as it "freed the hands, allowing simultaneous foraging and enabled multiple partners to be 'groomed at once' whilst still communicating" (Dunbar, 1998, p. 101).

However, the early use of phonemes by proto-humans must be intertwined with the evolution of morphemes in language development – a distinct meaning cannot be communicated without a distinct phoneme or combination of phonemes.

# 3 Language Patterns Giving Evidence of the Dispersal of Human Communities

Recent research has made use of current phonetic diversity as a measure of linguistic development, based on assumptions about how phoneme use in a language evolves over time.

A controversial study by Atkinson (2011) takes tools used by biologists to trace genetic diversity and applies them to linguistic development, mixing the "serial founder effect" which was already observed in human biology with 'phonetic diversity' (Ramachandran et al., 2005). As populations migrate to remote locations, each episode of migration cuts down genetic diversity, and the community then settles for a time, the 'serial founder' then reproducing from a reduced genetic pool. It was therefore known that "human genetic and phenotypic diversity declines with distance from Africa" (Atkinson, 2011, p. 346), as dispersed communities had passed through "population bottlenecks"(Atkinson, 2011, p. 347). Applying this to phonemic diversity, Atkinson works on the assumption that "if phoneme distinctions are most likely lost in small founder population, then a succession of founder events during range expansion (dispersal) should progressively reduce phonemic diversity with increasing distance from the point of origin" (2011, p. 347). From a global sample of 504 languages, Atkinson demonstrates that African languages today have large phonemic inventories, while geographically distant languages "toward the far end of the human migration route out of Africa" (2011, p. 347), such as South American and Oceanian languages, have few: Hawaiian has only 13.

Statistical analysis linking phonemic diversity to dispersal patterns leads Atkinson to two conclusions. First, that the serial founder effect has parallel consequences on genetic and linguistic diversity as human communities spread beyond Africa, and secondly that the origin of language could be traced to Southwest Africa where phonemic diversity was greatest (since this is the community least affected by the serial founder effect).

Taking similar assumptions regarding the reasons for phoneme loss and even using Atkinson's work as a source, Perreault and Mathew (2012) examined the potential that modern phonetics can reveal about modern human evolution and disparity. They observe that phonemic diversity evolves slowly, and can be used 'as a clock' to set a date for the origin of language, specifically in the presumed location of linguistic development in Southern Africa. Their analysis aims to establish how long it would take the oldest African languages would take to "accumulate the number of phonemes they possess today." In the absence of anatomical or genetic data confirming when the physical capacity to speak evolved into actual language use, they claim this method can "circumvent problems that prevent current historical linguistics approaches from tackling the problem of dating the origin of language.". Like Atkinson, they observe that since human populations go through 'bottlenecks' when spreading out around the planet, phonemic diversity is lost. This founder effect means that Rotokas and Pirahã, in New Guinea and South America "both have 11 phonemes, while !Xun, a language spoken in Southern Africa has 141" (Perreault & Mathew, 2012). In turn, they argue that since phoneme loss takes a long time to recover, by comparing phonemic diversity against range of dispersal, it is possible to measure the age of languages. They create a timeline by comparing phonemic diversity in two environments settled at the same approximate time, one very isolated with almost no phonemic development, the Andaman Islands, and much more diverse envi-

ronment with a higher rate of phonemic evolution, Southeast Asia. They use this to calculate a rate of phonemic development, and then apply this measure to a stable linguistic group, in Africa, to produce an estimate that language originated there "in the Middle Stone Age (MSA) in Africa, sometime between 350–150 kya." They argue that this method, comparing contemporary language phoneme diversity and tracking the relationship between human dispersal and phonemic change, corresponds with archeological evidence.

By their analysis, they conclude that language and phoneme diversity became "increasingly complex during the Middle Stone Age, between 350 kya-150 kya" rather than being a 'spark' that led to human colonization 50 kya, as the Southern African examples correspond to the described rate that settled languages maintain phonemes over time.

These two recent studies therefore suggest firstly that the origin of language was in Southern, not Eastern, Africa, and that it took place much earlier than other models suggested. The consequences for theories of human evolution and dispersal are great. It would confirm that language did co-evolve with the genetic evolution of *homo sapiens*, matching some of the evidence mentioned above about language in other species of the genus *homo*, and our pre-human ancestors. Additionally, it would mean that language originated only once, with its origins traced to Southern Africa. Apparently, this is confirmed by archeological evidence and the fossil record, which provide a physical link to support these mathematical conclusions.

A real strength of these investigations is how they correspond to prior genetic research and evidence on various levels. As well as relying on the overwhelmingly accepted consensus of an African origin for humanity, more local instances of genetic variety fit into the proposed theory. For instance, Oceanic populations native to Australia, the Trobirand Islands, and Papua New Guinea show enough genetic independence from their Asian forebears to demonstrate that they were the last 'bottleneck' migrants, in the same way the phonetic data does. On top of this, it explains later instances of genetic diversity, as "highest levels of phonemic diversity outside of Africa, are found in language families thought to be autochthonous to Southest Asia" – another theory that Atkinson (2011, p. 347) claims fits into genetic evidence proposed by Palanichamy et al. (2004).

This analysis even harks back to the earlier work in language by early figures for establishing the modern theory of evolution, such as Darwin, in adapting the question of modern language to it (Knight et al., 2000). Most evidence in the references that Atkinson uses from genetic based research come to the same conclusion about our understanding of human dispersal and evolution. The method of working in parallel to genetic evidence to come up to linguistic conclusion (and indeed the nature of them) harks back to Chomksy: where language was one of the genetic 'mutations' that prompted the relentless spread of humans out of Africa, across the entire planet in a few thousand years.

## 4 Critical Review

The nature of the research into the origins of language is unavoidably based on theory and supposition, given the lack of directly available pieces of evidence for language going back any later than 10,000 years. Both studies acknowledge the uncertainty in this approach, and talk about the limitations in their methodologies. Perreault and Mathew (2012) say their research

is "built upon various assumptions that require further testing." They mention assumptions that languages evolved at similar rates in different locations, and the bias that could be caused by the absence of tonal distinctions in the data they used. However, they claim their analysis "constitutes the first appraisal of when language evolved to be based directly on linguistic data" (2012).

Essentially, Atkinson's conclusion is based on the mere observation that "human populations have lost phonemes through a drift-loss process during their expansion across the world" (Perreault & Mathew, 2012), as other rival hypotheses are yet to be rejected. The claim that phoneme development is more or less consistent with human development may seem to make sense in relation to fossil based evidence when examined in isolation with the above equations, yet it seems bold to suggest that elements such as later colonisation and conquest where certain languages would be held in higher social regard than others – even in Southern Africa. Bickerton goes on far enough to exclaim that "the biological evolution of humans has for all intents and purposes stopped", compared to the rapidity of cultural change" (Bickerton, 2007, p. 511).

Another issue among Atkinson's assumptions is that within the general rule that "the number of phonemes in a language is positively correlated with the size of its speaker population in such a way that small populations have fewer phonemes (2011, p. 346)" may correspond to the initial 'spark' of the bottleneck migration out of Africa. Yet, this rule fails to correspond to today's languages and populations, even though Atkinson is using a set of data used only from modern languages. Applying such a population related rule extrapolated from modern language that cannot be applied to the current language-population accurately. However, the argument could be made that most modern population trends over the last 6,000 years are extremely rapid when compared to the timescale of early human migration and complex language was present from ancient times till now. Yet this brings up another problem of the distinction between 'historical linguistics' and 'evolutionary linguistics'. This underestimation is best brought out by his confusion of the terms "phonemic diversity" and "phoneme inventory size", wherein "diversity refers to variation within populations of individuals", whereas Atkinson's linguistic diversity refers to differences between languages (Atkinson, 2011, p. 657).

Any attempt to trace back linguistic development not only to pre-history but to the very emergence of *homo sapiens* as a species is going to be speculative if it is based only on current linguistic patterns. Each of the assumptions that form a basis for statistical analysis can be questioned, as the authors recognise. However, there is an undoubted link between these three sets of data – language, genetics, and dispersal patterns. Physical evidence concerning genetics and human dispersal – which is easier to date and easier to assign to geographical locations – does seem to corroborate the seemingly theoretical or statistical findings that these researchers derive from current language patterns.

Finally there are issues raised with the very linguistic data that both Atkinson's study, and therefore Perreault and Matthew's response, use. This data has been described as false and showing bias toward the heavy linkage between human and linguistic evolution that is described. Cysouw et al. (2012) argue that the unjustified weight in his data biases toward Africa's "large phoneme inventories" (p. 11) as instead when the UPSID data are appropriately corrected for speaker community size and linguistic genera through a mixed-effects model (by

giving equal balance between vowel, tone and consonants), North America, as the area with the largest phoneme inventories, would be considered the 'cradle of language'.

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# The Effect of Language on Ethnicity in a Multicultural Setting

Catherine Wen *

## 1 Introduction

This essay analyses the importance and significance of language in shaping ethnicity within multicultural Melbourne. An in-depth 35-minute interview was conducted with a University of Melbourne third-year Science student to explore the roles of language and discourses of ethnicity in shaping subjectivity. Despite being multicultural and priding itself as being accepting of diversity, Australia is still predominantly white, and minority groups can sometimes be subjected to racism or feel a need to assimilate so completely that they lose ties with their ethnicity. This report will examine how Henry, a Malaysian citizen and now Australian permanent resident, navigated and continues to navigate through this discourse of ethnicity in the context of Melbourne, shaping his subjectivity in the process. Calling himself a Malaysian-Chinese, his ethnic identity is strongly connected with language, but, as will be detailed later, his loss of his ethnic languages has caused a loosening of ties with his ethnicity. Increasingly, he sees himself as simply Australian, or as an Australian Born Chinese (ABC). I will also reflect on my own experiences as a 2nd generation migrant and as an ABC, exploring how language has shaped my subjectivity.

Drawing on Michel Foucault's definition of discourse, this report looks at the 'big D discourse' (Gee, 2015) – 'a group of statements which provide a language for talking about [...] a particular topic' (Hall, 1992, p. 291). Certain rules and conventions within every societal discourse dictate how one is expected to speak, think, and conduct oneself. Consequently, it is these 'socially-based group conventions' that allow the formation of identities (Gee, 2015, p. 420). Indeed, vital to language and the creation of identity is the notion of subject and subjectivity. Foucault explains that the 'subject is produced within discourse' (Hall, 1997, p. 55). The subject chooses a position within the discourse created by the discourse itself to form their own meaning and identity. Without a subject position within the discourse, however, the subject is meaningless (Hall, 1997, p. 56). This essay however, approaches subjectivity in a manner similar to Judith Butler, whereby more agency is expressed than by Foucault's passive subjects. By this analysis, identity is performed, with subjects choosing to actively prove and reaffirm their identity through habitual conformity to the norms of the discourse. As Pennycook (2004, p. 1) puts it, 'identities are formed in the linguistic performance rather than pregiven'.

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# 2 Analysis

## 2.1 Defining Ethnicity

To properly examine the relationship between language and ethnicity, "ethnicity" itself must first be defined. It is a vague and broad term that can be difficult to define succinctly, but Padilla encapsulates it well:

> An individual's membership in a social group that shares a common ancestral heritage [including] the biological, cultural, social, and psychological domains of life' (Padilla, 1999, p. 115).

Henry's views of ethnicity mirror Padilla's. He calls himself specifically Malaysian-Chinese rather than Malaysian, as he shares a common ancestry in many areas of life with other Malaysian-Chinese whose families migrated from China to Malaysia:

> [1:03] ... ethnicity is ... to identity myself amongst other people. Because if you say you are Malaysian, you could be Malaysian-Malay, Malaysian-Indian, or Malaysian-Chinese. So, back in Malaysia, how we identified ourselves was to say we are Malaysian-Chinese.

By identifying as Malaysian-Chinese, he separates himself from Malaysians of other ethnicities, such as Indians and the Indigenous population, forming a binary of "us": Malaysian-Chinese and "them": other Malaysians. For myself, identifying as Chinese or Australian-Chinese is also a way to distinguish myself from the "them" group in my own context – the white Western subject position. Where Henry and I differ is that being Asian in Malaysia is not seen as "the other". In a still predominantly white Australia, I feel that Western discourse has constructed a "Caucasian norm", classifying "Asian" as abnormal and deviant, and thus 'privileg[ing] one half of the binary over the other' (Hawthorne, 2016, p. 79). As Milestone and Meyer put it:

> ...discourses produce knowledge [which]...classifies certain...characteristics as abnormal and deviant and thereby produces the norm (2012, p. 24).

By labelling ourselves as Malaysian-Chinese or ABC, we are reiterating our identities as Butler describes, constructing our identity by defining ourselves as what others are not. One way of defining oneself is showing proficiency in a language; after all, language often defines ethnicity (Bucholtz, 1995, p. 357).

## 2.2 Language and Ethnicity

When addressing ethnicity, language cannot be neglected, as the two are intertwined. Language in some ways defines ethnicity, for it carries forward the history and culture of an ethnic group (Igoudin, 2013, p. 51). Language and ethnicity have a 'mutual bond', whereby language can demarcate ethnic identity (Granhemat & Abdullah, 2017, p. 27). For Henry, the Malaysian-Chinese ethnicity is very closely connected to certain (heritage) languages; inability to speak these ethnic languages disqualifies full membership to the Malaysian-Chinese ethnic group:

> [4:30] If I were to truly be a Malaysian-Chinese, I should be able to converse in Chinese, Cantonese or Hokkien, and most importantly English.

As Henry's proficiency in Mandarin and Cantonese slowly slipped from intermediate to a beginner level, he feels his ties with his Malaysian-Chinese ethnicity weakened. As Fought elucidates, those who do not speak their heritage or ethnic language may find their ethnicity called into question (2006, p. 31) and experience disconnection:

> [11:58] I lost my Malaysian-Chinese self…when I lost my languages.
>
> [13:33] I lost my Chinese-Malaysian identity, which also meant losing my languages.

Undoubtedly, language and ethnicity are securely bound together. In Bucholtz's interviews, one of her participants claims that 'language is the glue that binds her to her ethnic identity' (1995, p. 357), and that loss of heritage languages results in loss of ethnic identity. Oftentimes, it is the ability to speak certain languages that provides membership into an ethnic group (Bailey, 2000).

> [13:48] When you're Australian, you're not known to have these languages associated to you, compared to Chinese-Malaysian where for sure you're meant to have these languages.

Consequently, Henry feels disappointed in himself for losing his heritage languages and not appreciating the linguistic advantage he had in a multicultural Malaysia. As one's ethnic identity changes over time, so too does the relationship with one's heritage or ethnic identity (Fought, 2006, p. 22). His slow loss of his Malaysian-Chinese ethnicity has evoked self-reflection and dismay at his younger self:

> [3:19] …disappointed in myself for not seeing the importance of language when I was young.
>
> [3:48] …can't effectively communicate'.

Fortunately, Henry is not subjected to much of the stigma that often comes from not speaking a heritage language. He does not feel shame, although he is disappointed that he cannot speak his ethnic languages ([3:13]). While his mother does pressure him somewhat to learn his ethnic language, it often does not amount to much action:

> [6:22] With my mum, she does pressure me to learn Hokkien, but then she drops it off, so I wouldn't say there is a lot of pressure.

In addition, his older cousins do not speak the ethnic language ([21:31]), thus there is no immediate precedent or pressure for Henry to learn Hokkien seriously. This is in contrast to my own experiences – my mother instilled in me the idea that not speaking my ethnic languages (Cantonese and Mandarin) would be shameful, and thus forced me to learn these languages from a young age. My mother's ideology is a clear demonstration of how 'inability to use a code associated with ethnicity is stigmatized' (Fought, 2006, p. 29). At home I was only allowed to speak

Cantonese, and on weekends, I attended Mandarin classes. However, as reluctant as I was to learn these languages as a child, I now actively choose to improve my language skills, demonstrating that attitudes towards maintaining an ethnic language is not fixed but can change over time (Schecter & Bayley, 2002).

## 2.3 Passing and Fluid Identity

Passing is an interesting phenomenon that enables an individual to "pass-off" as someone from a social group that is not their own (Bucholtz, 1995, p. 351). In terms of ethnicity and language, the interconnectedness of the two are so strong that an individual is sometimes able to pass as a certain ethnicity, purely from their use of 'linguistic practices associated with a given ethnic group' (Bucholtz, 1995, p. 355). Linguistic practices include accent and syntax of a language or language variety, thus while Henry still identifies as Malaysian-Chinese, he often passes as someone who is not Malaysian-Chinese based on his lack of Malaysian accent and lack of broken English:

> [7:43] I talk to a lot of people and when I say I'm Malaysian, they're like "wait, what, where's your accent?" ... I just don't have that broken English.

People's surprise at Henry's ethnicity can be explained with reference to Hewitt's research on African-Americans. He found that an individual could be classified as 'not black' if they failed to use Creole (1986, p. 107). For Henry, his lack of a Malaysian accent or broken English syntax has the power to disqualify him as a Malaysian, and his quasi-Australian accent is sufficient to pass as an Australian, or more specifically, an ABC.

> [10:17] ...eventually I developed an [Australian] accent...

> [8:28] I do consider people to see me as Australian.

Subsequently, having an Australian accent means Henry is constantly being 're-raced' (Sweetland, 2002) as Australian by other individuals, which may be further exacerbating the deterioration of his Malaysian-Chinese ethnic identity as mentioned above. No longer sharing the ethnic languages or defining linguistic features of the Malaysian-Chinese identity, he finds relating to his ethnic identity increasingly difficult:

> [5:47] Sometimes I don't feel like I belong in my own country, in Malaysia that is.

> [8:59] When I come across my own people here, it's a bit hard to relate.

Fought explains this phenomenon of fluid and changing identity resultant of a shifting local or extralocal orientation. That is, whether the individual has strong ties with the local community, or is focused on opportunities and interaction beyond the community (2006, p. 24). For Henry, it can be said that he is now more "extralocally" oriented, where his strong ties with his local Malaysian community have dissipated and he is now more engrossed in the extralocal Australian community. His subjectivity has transformed from being a local Malaysian to a local Australian.

> [5:54] I see Malaysia as a tourist destination for me these days...[Australia] is my home now.

In terms of my own Australian accent, my linguistic practices and features mark me as Australian, while my physical appearance often gives away my Asian ethnicity, thus creating an Australian Born Asian identity. As Asia is a big area consisting of many ethnicities that may look similar physically, I am sometimes able to pass as "not" Chinese. I have 'access to multiple linguistic codes' so 'language [is] a powerful tool in displaying [my] ethnic self' (Bucholtz, 1995, p. 357), allowing me to fluctuate on a spectrum between Chinese and Australian ethnicity. Aware that Chinese people are sometimes known to be loud and rude, pretending to not speak Chinese is often a way to disassociate myself from the Chinese ethnicity. On the other hand, I sometimes exclusively speak Mandarin or Cantonese to highlight my Chinese ethnicity to gain better service or bargains at Chinese restaurants or shops. Interestingly, Williams found similar occurrences with Amerasians where linguistic passing was based on language inability: 'sometimes Amerasians pretended they could not speak either language, to get special attention or for mere convenience' (1992, p. 295). As a multilingual individual, my language choice is definitely influenced by the context and situation of the conversation (Fishman, 1972). Inextricably linked to language choice is deciding what identity to show, as Barrett illuminates:

> Speakers may heighten or diminish linguistic displays that index various aspects of their identities according to the context of an utterance and the specific goals they are trying to achieve (1999, p. 318).

We have multiple identities that can be evoked at any particular moment, depending on who we are interacting with. When serving Caucasian customers at work, I notice my Australian accent is broader than when speaking with my ABC friends, emphasising my Australian ethnicity around white Australians. Henry also has similar experiences, becoming "more Australian" when around Caucasian colleagues:

> [29:32] If I were to talk to another ABC…I wouldn't say "mate". Wow, I never noticed that. With white Australians, I do become "more Australian"…
>
> [30:27] Take an example, say Harry, yeah I would use "mate".

Accentuating our Australian ethnicity while simultaneously diminishing our Asian identities when talking to Caucasians may be an act of self-consciousness in a Western country, or a way to form closer bonds with someone by being similar to them. Either way, it seems that both Henry and I attempt to assimilate to the dominant subject position. This is shown by us highlighting our Asian ethnicity amongst fellow Asians while heightening our Australian ethnicity amongst Caucasians.

## 3 Conclusion

Language and ethnicity are very much interconnected; a language can mark an ethnicity, while ethnicity often denotes linguistic proficiency in the associated ethnic language. For Henry, his diminishing Malaysian-Chinese identity can be attributed to his loss of proficiency in Mandarin and Cantonese, while his acquiring of the Australian accent has established a new ethnic identity for him to the extent others consider him Australian or ABC. My Chinese ethnicity is

also heavily tied to my languages, since it has been ingrained in me that I would be less Chinese and it would be shameful if I did not speak my ethnic languages. In conclusion, language has shaped the ethnic identity of ourselves and others.

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# Indigenous and Australian Speech: Oppressed and Developed Through the Ages

Hala Khartabil *

## 1 Introduction

Language has been used as a tool to control and empower cultural groups throughout the course of history. This essay will determine the uses of spoken and written forms of language to oppress subordinate groups. Language can also empower individuals, especially when used to determine personal identity and reality. To define these terms, 'personal identity' in this context relates to an identity belonging to those part of a particular group. 'Reality' will refer to exposing things as they are, rather than using idealistic notions to refer to them. Finally, 'empowerment' in this context refers to the liberation, unchaining, or freeing of individuals in a community from Western uniformity and its standards.

In the first section, the focus will be on how English has developed in the age of colonial expansion. Specifically, the discussion will cover its uses to control Indigenous and Australian speech, forcefully assimilating them into the dominant culture. The British Empire has been a large proponent of this. The second section will explore how language has the power to express both personal identity and reality. One example of this is the push for distinctly Australian speech, used to define the Australian cultural identity. This section will also analyse Indigenous languages, specifically the way in which multilingualism helps define the Indigenous group identity. What this uncovers is an "essentialist language identity" bias proposed by Friederike Lüpke (2016) — the idea that a single language that holds the greatest significance for an individual defines their personal identity (as cited in Singer, 2018, p. 10. This ill-judged bias — inapplicable for the Indigenous — illustrates the reality that Western ideals cannot realistically transfer across all cultures. These examples highlight how cultural groups can use language to liberate themselves from Western ideals, especially those which regulate language usage, which often comes back to the age of colonial expansion in empire.

## 2 The Employment of Elocution in Australia

The term 'elocution' refers to part of a mission to standardise speech, and also highlights the power of oration in controlling how diverse cultural groups speak (Damousi, 2010). In *Colonial Voices: A Cultural History of English in Australia*,1840-1940, Damousi (2010, p. 11) describes the

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British as experiencing a "linguistic fever" during the eighteenth century, which saw an obsession to ensure the supremacy of the English language, and, by extension, the British Empire. With the loss of America as a colony in the 1770s dealing a heavy blow to the empire's reputation, Damousi (2010) asserts that Australia served as an alternative to rebuilding its esteem. English was therefore used to control the Australian population and to ensure the British Empire maintained a stronghold over Australia.

## 3 The Repression of Indigenous Speech

In Australia, the British Empire used elocution to assimilate Indigenous people into a more 'civilised' society, intending to silence them and erase their 'primitive' culture (Damousi, 2010). The British rejected their Indigenous tongues and subjected them to compulsory education in English (Damousi, 2010). Unable to properly express themselves in English, they were robbed of their ability to voice their grievances. This enabled the British to easily control them by transforming Indigenous society to reflect what was valued in Britain at the time. Consequently, Aboriginals were encouraged to forgo their spiritualistic values in favour of Christian ones (Damousi, 2010). This was done by teaching Indigenous children English so they could learn to read the Bible, which was part of the British Empire's 'civilising' and 'Christianising'. Ultimately, enforcing English-language education on Indigenous people was a form of oppressive control employed by the British to strengthen the power of its empire. Distinct cultures were thereby stripped of their identity and forced to assimilate into the dominant 'British' one — a harrowing consequence of using language to control minority groups.

Even today, Indigenous children are expected to speak standard English, which reflects the desire to assimilate them into Australian culture. This can be seen through NAPLAN, a government initiative made to "Close the Gap" between non-Indigenous Australians and Aboriginals as well as Torres Strait Islanders (Macqueen et al., 2018, p. 3). The results show that Indigenous children in remote communities consistently received lower results than non-Indigenous Australians (Macqueen et al., 2018). What these tests failed to consider is that many Indigenous children learn English as a foreign language macqueen18 and that NAPLAN assumes these children have cultural knowledge generally associated with urban areas (Wigglesworth et al., 2011). For instance, in the first sample passage of a Grade 3 NAPLAN test in 2008, there was a poster of a film that would later be screened at a cinema (Wigglesworth et al., 2011). Indigenous children in rural areas do not have access to cinemas or any associated promotional material (Wigglesworth et al., 2011), so it is not appropriate to expect them to answer this question as well as those who live in urban areas. This highlights how English is still being used today to politically and culturally control Aboriginals, especially since these NAPLAN results were then used to scrap bilingual education in the Northern Territory (Wigglesworth et al., 2011). By rejecting Indigenous languages and forcing them to speak only standard English in schools, language is exposed as having the power to control minority cultural groups in society. This is especially the case for Aboriginals, who are forcefully assimilated into the dominant Australian society, stripped of their language and culture.

## 4 The Control Over Australian Speech

In the eighteenth and nineteenth centuries, Australian speech was also subject to opposition from the British. The Australian accent was regarded as unattractive and inferior to that of their metropole (Bongiorno, 2011). Since the manner with which one spoke was usually thought to mark their character and social standing (Bongiorno, 2011), the British put a great deal of effort into training Australians on how to 'properly' speak through elocution in schools. This was likely in fear that a British subject which was perceived poorly would paint the whole empire in a bad light.

One major concern for the British empire was the influence of American media on Australian speech and culture. Rickard (1995, p. 181) introduced the concepts of high and low cultures, and discussed how American English was part of a low culture that seemed to challenge the linguistic hegemony of the British Empire, the high culture. Considering this, the British discouraged the influence of the American "twang", which greatly offended British sendibilities (Damousi, 2007). They feared that the American sound would contaminate the English language damousi07, which would thereby weaken the empire's reputation as more 'civilised' than the rest of the world.

The British attempted to rectify this by promoting their 'cultivated' speech through elocution, especially in Australia. Middle class or gentry settlers arriving in Australia strove to re-invent themselves by adopting what they believed was a 'proper' way of speaking. As 'cultivated' speech was thought to improve one's stance in society, the demand for instruction manuals and texts on how to speak well grew exponentially (Damousi, 2010). Indeed, Lynda Mugglestone (1995) estimates that between 1760 and 1800, five times as many works on elocution appeared than the years before 1760 (as cited in Damousi, 2007). Here, it is clear that the growing desire for work on elocution gave the British Empire more power to control how individuals spoke, motivated largely by fear of a weak empire, but providing individuals with a standard on how to speak nonetheless.

## 5 The Development of Australian Speech

Whilst the power of language is often used to oppress, increased interest in how to speak well exposes how speech can also be used to define personal identity and thus empower individuals. Accents were thought to help define social identity (Damousi, 2007), but this was not limited to the British style. Many cultural groups began to move away from elocution, originally used to define speech and cultural identity (Damousi, 2010). Instead, they fought to define their own distinctive sound, intended to establish their own personal identity, which would thereby unchain them from Western control and its uniformity.

This occurred in Australia, where the question of a distinct cultural identity provoked a debate separating those who wanted to adopt a 'proper' British speech and others who sought to develop a distinct Australian sound. Whilst this debate did not at first make elocution obsolete, a shift in teaching styles did emerge; the focus was not on replicating the British vision of a 'proper' speech but instead determining what was an acceptable Australian 'sound', which would reflect both national and personal identity (Damousi, 2010). This became more preva-

lent from the 1920s onwards, where the formal practice of elocution became outdated, and radios, as well as films, became more popular (Damousi, 2010). Many were imported from overseas, which exposed Australians to a variety of accents (Damousi, 2010). For instance, radio commentators who used Australian pronunciation had a colloquial and emotive appeal to them, which led people to view the British speech as overly mechanical (Damousi, 2010). This contributed to the push for a distinct Australian sound, which helped establish a personal Australian identity (Damousi, 2010). As a result, Australians fought to be free from British control over their speech, no longer merely a colony of Britain but a distinguishable nation with its own culture.

## 6 The Persistence of Indigenous Linguistic Identity

The Western view on language defining personal identity cannot realistically transfer across all cultures. Lüpke (2016, as cited in Singer, 2018, p. 10) describes this as an "essentialist language identity" bias, where a singular language which holds the greatest symbolic value for people is thought to determine their identity. This is not the case for Aboriginals; research in the Warruwi region helps explain how Indigenous languages are distinctly used to define their personal identity.

In an article in the *Australian Journal of Anthropology*, Singer (2018) describes a performance she saw of a 're-enactment' of the first meeting with missionaries in Warruwi, part of the Centenary celebrations. In this performance, families could wear blue t-shirts, representing Mawng, or yellow t-shirts, representing Kunwinjku (Singer, 2018). After witnessing this, Singer (2018) describes her confusion on why people would wear these t-shirts, which only represented Mawng or Kunwinjku, when they spoke a diverse range of Indigenous languages not confined to these two.

Singer found a reason for this. In the Warruwi region, the language people identified as meaning the most to them was their grandfather's language, described as their "patrilineal clan language" (Singer, 2018, p. 10)). Despite this, the choice between the blue or yellow t-shirts was not solely based on the patrilineal clan to which they belonged. It also tied to Warruwi history and several other factors, such as how Aboriginals used a common rather than singular language to communicate with people from other regions. This means that Aboriginals are part of a diverse community, whose identity is not defined by a single language they all speak but by several of their Indigenous languages. What this illustrates is the "essentialist language identity" bias in action, which demonstrates the reality that the Western vision is not a lens we can use to understand other cultures, as it often leads to forced assimilation to Western ideals and uniformity. By understanding this, Indigenous people can be free of Western homogeneity, especially when determining their relationship towards language and identity.

## 7 Conclusion

Throughout history, language has had the power to both control and empower cultural groups. The British Empire has used language, especially English, to control their colonial subjects. Australian and Indigenous individuals are targets of this malignant use of power, with their

speech and use of language subject to careful regulation. Despite this, Australians began to push for a distinctive Australian sound during the interwar period. Furthermore, multilingualism commonly found in Indigenous communities has brought attention to the "essentialist language identity" bias inappropriately used to define the relationship between language and identity for Indigenous people. This ultimately demonstrates to Western powers the reality that their standards for speech are not always transferable to varied cultures. Ultimately, language is not an intrinsically malevolent device, but it must be pondered and questioned before its employment to ensure no harm comes from it.

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# Is Typology Possible?

Luci Keen *

## 1 Introduction

Typology has long been a cornerstone in linguistic research, exploring the similarities and differences between the grammatical structures of the world's languages through systematic classification. The very concept of typology, however, relies on the assumption that languages are comparable; that a single classification system can be meaningfully applied across the board. In order to dig deep into the complications cross-linguistic compatibility faces, this essay will follow the typology of a single linguistic feature, the order of verbal A and P person markers, analysing the hiccups, pitfalls, and roadblocks we run into along the way.

The World Atlas of Language Structures (WALS) classifies 193 languages as having verbal person marking of both the A and the P arguments (Siewierska, 2013b), with Feature 104A exploring the order these markers appear in cross-linguistically (Siewierska, 2013a). There are a number of reasons why this question is of interest to linguists. For one, it relates to speculation of statistical universals in affix order such as that explored in Harmon (1994)'s research of tense and aspect marker order, Hawkins and Gilligan (1988) research into suffixation, and Trommer (2002)'s exploration of person and number marker order. Furthermore, the question is relevant to discussion around the morphology-syntax interface (Mykhaylyk, 2010) - for example, exploring if morpheme order has syntactic origins as Givón (1971)'s proposed 'Diachronic Universal' model claims. With regard to the current study, however, the feature is also of interest for the range of subfields it is influenced by and relevant to. Morphology requires phonological understanding (Bertinetto and Jetchev, 2005, p. 16; Saldanya and Vallès, 2005, p. 54; Viaplana, 2005, p. 172), whilst person marking is influenced by syntactic principles and affix order, itself subject to semantic restrictions (Ryan, 2010, p. 758; Korotkova and Lander, 2010, p. 345). As such, the order of A and P verbal person marking affixes in relation to the root is a perfect feature for exploring difficulties in linguistic typology whilst also being relevant to the linguistic theories which typology explores.

## 2 Defining 'A and P Verbal Person Marking'

The first step towards systematically classifying the world's languages is developing criteria to identify languages with A and P verbal person marking affixes. Languages must have person markers for both the agent of a transitive verb and the patient. Those person markers must

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be affixes, and those affixes must be attached to verbs. For example, Tawala (Ezard, 1997) and Macushi (Abbott, 1991) provide prototypical demonstrations of this feature, with Tawala exemplifying an AVP order, whilst Macushi demonstrates a PVA order:

(1) Tawala (Ezard, 1997, p. 99)

*Kedewa* *Kamkam* *i-uni-hi*
Dog chicken 3sg.A-kill-3pl.P
'A dog killed the chickens.'

(2) Macushi (Abbott, 1991, p. 24)

*i-koneka-'pî-i-ya*
3sg.P-make-pst-3sg.A-erg
'He made it'

Apply this criterion across the breadth of the world's documented languages however, and a number of complications emerge.

Firstly, it is worth noting that the concept of 'language' itself is blurred. Dialects are generally said to be mutually intelligible, whilst different languages are not (Nomoto & Long, 1999, p. 298), however this theoretical distinction can be elusive in practise. Political boundaries are particularly salient in overruling linguistic distinctions. Bugarski (2012)'s discussion of Yugoslavian language classifications revealing how linguistic evidence is not sufficiently definitive to withstand this pressure. Furthermore, the lines of dialect and language have a tendency to be drawn differently by different linguists. Gunyan, for example is considered a dialect of Bidyara by Breen (1981), whilst WALS classifies it as a language in its own right (Dryer, 2013). Yet it is not only linguists who disagree over language/dialect boundaries. A 2010 Scottish government study revealing 64% of the population do not view Scots, an official language of Scotland, as a language (Sebba, 2018, p. 342). Non-Scots speakers were the least likely to consider it as such. There is also evidence that perception of dialectal differences differs between individuals. This is unsurprising given that language variation is a continuum, and where your own variant sits on that continuum will determine what variants are most similar to your own. However, this is not the only factor. Research into children's perception of dialects reveals five-year olds show an impaired ability compared to adult speakers to perceive regional dialects (Wagner et al., 2013, p. 1081). This is of interest as it suggests that dialectal differences have a learnt component, further complicating our understanding of the continuum between language and dialect. Typology compares languages, but 'language' itself is a subjective classification.

'Subject' is an equally tricky concept for which to provide a definitive definition, classification of A and P relying on identifying the subject of transitive constructions. There are many approaches to determining subject - Chomsky (1965), for example, labels the defining feature of grammatical subject its 'immediate dominance'. Paul (2010) argues against this criterion. Keenan (1979) also comments that it is 'problematic' for SOV, VSO and variable word order languages. Instead, Keenan promotes three other criteria: autonomy principles, case marking,

and semantic distinctions. Each, however, contains their own shortfalls. Paul's discussion of Keenan's criteria stresses that it is 'crucial' to understand there is no single measure that can be applied to all languages, autonomous features such as acting as antecedent to reflexives only a 'tendency' of subjects. Case marking also illustrates a difficulty with subject identification; it requires knowledge of how a language marks subject in the first place. Meanwhile, passive constructions highlight just one flaw with semantic distinctions, showing how patients can be subjects too. Indeed, pro-drop languages prevent ellipsis of subject being a universally meaningful distinction between passive voice in a nominative-accusative language, and active voice in an ergative (de Zarobe, 1998). Rather subject itself is a concept that can only be completely understood within the context of a specific language, reducing the comparability of A and P person marker order cross-linguistically.

Whilst the concept of subject and verb provide their own complications, such as whether auxiliary verbs will be considered, by far the greatest complication in defining the feature itself is what can be classified as an affix. Indeed, the WALS entry for Verbal Person Marking bows out of this deliberation, including both affixal and clitic marking (Siewierska, 2013a). When it comes to morpheme order, however, clitics are influenced by different factors than affixes, their preference for external positions potentially skewing the data (Terzi, 1999, p. 69; Goria, 2000, p. 144). This raises the issue of actually identifying clitics, the term having become something of a catch-all for those language segments that don't quite behave like affixes, nor demonstrate the properties of a word. Russell, 2006, p. 342 illustrates the potential this approach opens to inconsistent classification, discussing how focusing on distinguishing clitics from words yields a different definition to concentrating on their distinction from affixes. It is Mansfield's discussion of clitics that captures the difficulties with this category most clearly, his research into Murrinh-patha morphology highlighting how clitics are haunted by multiple defining features. Clitics are syntactically unselective, modify entire phrases, and lack the independent phonology of a prosodic word whilst remaining prosodically distinguishable from their host (Mansfield, 2019, pp. 167–168). Whilst in some languages these features align, Mansfield, 2019, p. 169 outlines the varied analyses of Murrinh-patha's grammatical morphemes given by focusing on each criterion in turn, coming to no clear consensus on which distinction is central. Even English has segments that rebel against easy classification. Take, for instance, the possessive marker "s'. It demonstrates syntactic independency, whilst requiring a host to be utterable. Unlike clitics however this host effects the phonological realisation of "s' - compare 'car's', /kɐːz/, to 'bus's', /bɐsəs/. Indeed, in a thorough discussion of criteria frequently applied to distinguish between affixes and word, (Haspelmath, 2011, p. 37) makes a compelling conclusion that such notions of 'affix' 'clitic' and 'word' can only be defined language specifically, vastly reducing the ability to objectively compare languages.

Finally, there is a question regarding what should be the threshold of person marking for a language to be considered as having this feature. Will only languages with compulsory A and P marking be considered, or is any degree of person marking enough? Here, the answer seems obvious considering the original interest in exploring potential universals and correlations in affix order. All that is required is enough data to determine what order A and P person markers take when they are present. This is of interest in a discussion of the nature of typology, as it demonstrates that judgement calls around parameters of specific typologies are driven

by more than just "charting linguistic diversity" (Plank, 2016, p. 2). Rather, these decisions are shaped by comparative aims. Typology is inherently targeted towards finding correlations (Comrie, 1988, p. 145), and increasing the "predictive power" (Mithun, 2016, p. 467) of the linguistic community's grammatical knowledge. That language-specific judgements are required to determine subject person markers and carve the continuum that stretches between affix and word, undermines this comparative goal.

## 3 Subcategorising Verbal Person Marking Affix Order

Having established that determining which languages contain A and P verbal person marking affixes can be imprecise, there is then the task of deciding how to subcategorise these languages. On the surface this seems simple enough: examine each relevant language and state the order of A person marker, P person marker, and the verbal root. As such it would be expected the scope of possible values are APV, AVP, VAP, VPA, PAV, and PVA. However, in studying the actual diversity of languages and morphological phenomenon, this reveals itself to be a large oversimplification. These categories only capture the potential for prefix and suffix person markers, barely scratching the surface of observed affix placements and patterns. Whilst affixes have traditionally been viewed as requiring a set-position, emerging evidence from languages such as Chintang (Bickel et al., 2007), Tagalog (Ryan, 2010), and Murrinh-patha (Mansfield, 2015) promotes the phenomenon of variable order. Chintang is particularly relevant, the below examples illustrating how the language demonstrates both APV order and PAV order, with no semantic difference:

(3) Chintang (Bickel et al., 2007, p. 44)

a. *u-kha-ma-cop-yokt-e.*
3NS.A-1NS.P-NEG-see-NEG-PST
'They didn't see us'

b. *kha-u-ma-cop-yokt-e.*
1NS.P-3NS.A-NEG-see-NEG-PST
'They didn't see us'

Even when languages do have set affix placements however, these do not always fit snugly into categories such as AVP and PAV. Consider the below example of infixation:

(4) Lakhota (Albright, 2000)

| | |
|---|---|
| máni 'he walks' | ma-wá-ni 'I walk' |
| aphé 'he hits' | a-wá-phe 'I hit' |
| hoxpé 'he coughs' | ho-wá-xpe 'I cough' |

Without the addition of more values, Lakhota would not be classifiable in this typology, however simply adding an infixation category is insufficient. Not only does this group all infixing languages together regardless of what person marker is being infixed, it also fails to

account for the ”analytical problem” (Albright, 2000, p. 4) of variable realisation of infixes. Infixes in Ulwa, for example, are placed after the first foot, resulting in infixes being realised as suffixes when attaching to roots with only a single foot.

Circumfixation offers up similar complications, including ambiguity around what classifies as a circumfix. Take the below paradigm of Georgian A person markers:

(5) Georgian (Hewitt, 1995, p. 128)
Affixal Agreement - Set A

| | Singular | Plural |
|---|---|---|
| 1st person | v- | V- -t |
| 2nd person | ∅(/x)- | ∅(/x)- -t |
| 3rd person | -s/a/o | -(a/e)n/es/nen |

At first glance it would appear the paradigm includes circumfixes, however alternatively the ’-t’ affix could be analysed as a suffix corresponding to number, plural person markers formed through a process of parasynthesis. These two processes are usually distinguished by considering whether one of the morphemes can be used independently of the other (Klégr, 2018, p. 54). However, in the case of a language with obligatory person marking, this criterion can become meaningless. In the example of Georgian the lack of a ’-t’ component of the 3rd person plural marker leans towards a circumfix analysis.

The Georgian paradigm also showcases another complication. Third person singular A person agreement is a suffix, whilst first and second person singular is a prefix. This is a very different kind of variation to that seen in Chintang, and to group it along with no dominant order languages, or to ignore the variation and simply classify it by the most common order would vastly simplify the reality of affix placement.

Less transparent person markers must also be taken into account. One example of this phenomenon where a single segment does not translate to a single meaning is portmanteau morphology, such as in the examples from Sienna Populuca below:

(6) Sierra Popoluca (Elson, 1960, p. 211)

*i-koʔc-pa*
3A.3P-hit-INC
’He is hitting him’

*a-koʔc-pa*
3A.1P-hit-INC
’he is hitting me’

*aŋ-koʔc-pa*
1A.3P-hit-INC
’I am hitting him’

*mi-koʔc-pa*
3A.2P-hit-INC
’he is hitting you’

*iŋ-koʔc-pa*
2A.3P-hit-INC
’You are hitting him’

Capturing the order of person marking affixes in Sierra Popoluca would therefore require a category for A+P V that indicates whilst A and P precede the verb, it is not possible to break the order down further.

Finally, there is the issue of systematic variation caused by principles of grammatical relations. One such complicating phenomenon is split ergativity, where the animacy of the subject determines whether A and S, or P and S are marked the same (Tollan, 2014, p. 417). For languages where affix placement marks grammatical relations, this can result in different affix order of A and P depending on the nature of the subject. The category of 'split ergativity' would still not be sufficient to capture this idea however, languages such as Yimas demonstrating the relationship between affix order and grammatical relations can be extremely complicated, and highly language specific:

(7) Yimas (Foley, 1991, p. 172)

a. *pu-ka-tay*
3plO-1sgA-see
'I saw them'

b. *Mpu-ŋa-tay*
3plA-1sgO-see
'they saw me'

At first glance the examples above would appear to be explainable through the concept of split ergativity, 1st and 2nd person pronouns higher on the animacy hierarchy and therefore being treated with Nominative-Accusative alignment (Deal, 2015, p. 534). Examining Yimas's paradigm however, and the story becomes a lot more complex:

(8) Yimas (Foley, 1991, p. 170)

| | A | O | S |
|---|---|---|---|
| 1DL | ŋkra- | ŋkra- | kapa- |
| 1PL | kay- | kra- | ipa- |
| 1SG | ka- | ŋa- | ama- |
| 2DL | ŋkran- | kul- | kapwa- |
| 2PL | nan- | kul- | ipwa- |
| 2SG | n- | nan- | ma- |
| 3SG | n- | na- | na- |
| 3PL | mpu- | pu- | pu- |
| 3DL | mpi- | impa- | impa- |

Rather, Foley describes Yimas's person marker order as being governed by two principles, first a 'person hierarchy' where 1st outranks 2nd, which in turn outranks 3rd. Secondly, there is a 'role hierarchy' where for 1st and 2nd person, O outranks A, but for third person A outranks O (Foley, 1991, p. 173). The highest ranked argument occupies the position closest the verb. As complicated as all this sounds, what it demonstrates most clearly is for all these examples, a value which represents this specific circumstance is not practical, whilst a definitive classification of affix order without such a value is simply not possible.

At this point it should be becoming clear that the degree of diversity within affix ordering is at odds with the typological aim of illuminating patterns. The number of values required, and specificity of those values to each language, would create a typology far more confusing than insightful, and as such, choices have to be made about what values to focus on, and what to group together in an 'other' category. As this feature is about affix order, the grouping of languages that use similar processes, such as infixation, but with different orders effectively excludes this data from the analysis, editing the true diversity of the world's languages.

## 4 Classifying Languages

Finally, there is the process of actually assigning the appropriate value to each language. Regardless of the values being used, there remains the complication of non-systematic variation itself, and how to distinguish between language inherent variation, social variation, and individual variation. The WALS entry for Order of Subject, Object and Verb discusses the concept of 'dominant order', approaching language variation by looking at what is statistically most common (Dryer, 2013). However, this opens the potential for grammatically acceptable variation to be obscured, whilst classification of no dominant order could be effected by social variation, such as that associated with age and indicative of diachronic change (Traugott & Smith, 1993, p. 272). That is to say, this method does not distinguish between variation between variants, and variation within variants. Further, the use of percentages and majorities relies on having sufficient quantities of data from a range of speakers, some languages such as Bidyara, lacking this wealth of data (Breen, 1981), risking idiolects and sociolects being recorded as representative of the language. Assigning values accurately requires diverse and representative data, with the use of one-size fits all thresholds creating potential for yet more inaccuracies and biasing against less common phenomenon. Relying instead on language-specific judgements however, once again reduces the cross-linguistic compatibility of these classifications.

## 5 Conclusion

Language is complex, and cross-linguistic analysis faces many challenges. Typology demands continuums are carved into categories, definitions stretched and pulled to encompass the breadth of linguistic diversity and most damaging of all, variation smoothed over in the path of definitive rulings. Ultimately, typology is a compromise between being accurate and being informative, every step of the process steeped in judgement calls, imprecision and language-specific analyses. This is not to say that typological research is worthless, however, or incapable of providing insight. Rather, in order to make best use of this research tool it is important to understand its shortfalls and acknowledge that truly objective cross-linguistic categorisation is an illusion.

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# Noun Incorporation and Noun-Verb Compounding in the Aboriginal Languages of Australia

Henry Leslie-O'Neill *

## 1 Introduction

Noun incorporation (NI) has been discussed in the linguistic literature since the 1800s, beginning with documentation of highly polysynthetic Native American languages (e.g. Brinton, 1886). In the early 1900s, a seminal paper by Sapir, 1911 clarified confusion about the feature, distinguishing NI from other processes such as pronominal incorporation or noun-verb compounding (NVC), which laid the groundwork for the following century of research on NI. Most of this research focuses on analysing the morphosyntactic processes underlying NI (e.g. M. C. Baker, 1988; M. C. Baker et al., 2005; Caballero et al., 2008), as well as its semantics (e.g. Bonvillain, 1989; Tersis and Mahieu, 2006; Woodbury, 1975; see Massam, 2009 for a summary of NI literature). There is also much work on NVC (e.g. Bagasheva, 2011; Kim and Baldwin, 2006; Mellenius, 1996; Yoon, 2011; Zhang et al., 2010) and its differences from NI (e.g. M. C. Baker, 2014; Johns, 2007; Mellow, 1990; Mithun and Corbett, 1999).

Little attention, however, has been given to creating overarching typological comparisons of NI in the world's languages (Mithun, 1984 is a notable exception), especially outside of the Americas. NI is a prominent feature of many Australian Aboriginal languages, and while it is discussed within grammars of languages that have it (e.g. N. Evans, 2003; van Egmond, 2012), there exist only brief discussions of its distribution and variation across the continent (Nordlinger, 2014; Waters, 1989). In the present paper, I aim to contribute to the literature by providing a sketch typology of NI and NVC across Australia. In order to do this, I will first discuss two prominent works on NI that have greatly informed my typology.

## 2 Literature Review

Mithun's (1984) typology of NI and discussion of implicational universals relating to NI is one of the most influential works on the topic. She described four different types of NI, mainly distinguished based on functional discourse purposes, and ordered them in an implicational hierarchy such that if a language has Type-IV NI it also has Type-III, if it has Type-III it also has Type-II, and if it has Type-II it also has Type-I. I will briefly outline the four types here.

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Type-I: Incorporation to build a more complex meaning of the verb, usually only for actions that are "name-worthy": thus *mountain-climbing* is used but not *ladder-climbing* (Mithun, 1984, p. 848). The noun in this construction does not act as an argument to the verb, it simply modifies the meaning of the verb. Mithun seems to waver about whether English has NI or not, stating in the introduction that it does not, but continuing to use English examples as examples of NI.

Type-II: Incorporation to manipulate the argument structure of a sentence. In this process, an oblique argument is promoted to the position vacated by the noun that has been incorporated. Take the following example of Type-II NI from Yucatec Mayan (Bricker, 1978, in Mithun, 1984, p. 858):

(1) a. *k-in-č'ak-Ø-k* *če'* *ičil* *in-kool*
INCOMP-I-chop-it-IMPF tree in my-cornfield
'I chop the tree in my cornfield.'

b. *k-in-č'ak-če'-t-ik* *in-kool*
INCOMP-I-chop-tree-TR-IMPF my-cornfield
'I clear my cornfield'

The oblique argument *inkool* 'my cornfield' in (1a) becomes a core argument in (1b), replacing *če* 'tree' which is now incorporated into the verb.

Type-III: Incorporation to reduce the saliency of a referent. When a referent is unimportant or previously mentioned, referring to it with a full noun phrase might draw attention away from the newer, more important referents. If that noun phrase is instead incorporated into the verb, it becomes less obstructive.

Type-IV: Incorporation of a noun classifier or a general noun to co-refer with a specific noun in the same sentence. This is exemplified in the following utterance in Bininj Kunwok (Oates, 1964, in Mithun, 1984, p. 867):

(2) ... *bene-dulg-naŋ* *mangaralaljmayn*
they.two-tree-saw cashew.nut
'... They saw a cashew tree.'

Here, the incorporated noun *dulg* 'tree' does not by itself indicate a particular tree; that only happens in conjunction with *mangaralaljmayn* 'cashew nut'.

These different types of NI provide a good sense of the uses of NI. However, the framework differs slightly from the present typology, in that Type-I NI is not considered to be true NI. Instead, Type-I is an example of NVC, which is discussed and defined below.

M. C. Baker (1988) provides a thorough analysis of NI from a formal generativist perspective. What is most interesting for us, however, is his outline of the difference between NI and noun-verb compounding (NVC). Both NI and NVC are processes which combine a noun and a verb into one complex unit, but Baker presents two significant differences between them: deverbalisation and specificity of reference. He argues that English only has NVC. When nouns and verbs are compounded in English, the new word is deverbalised and cannot act as the main verb of a clause (M. C. Baker, 1988, p. 78).

(3) a. *I picked berries yesterday.*
b. *Berry-picking is fun.*
c. *I went berry-picking yesterday.*
d. **I berry-picked yesterday.*

These examples show that when the noun *berry* is compounded with *pick*, the combination can only be a noun (3b) or a participle (3c) and is ungrammatical if used as the main verb (3d). A more recent paper, Feist (2013), contradicts this and shows many attested examples of constructions similar to (3d), such as *I probably would never have mountain climbed or skied without it* (Feist, 2013, p. 166). My own intuitions are that this kind of construction is something I would definitely say, but it does not seem wholly grammatical. Perhaps this is a relatively new construction, then, which may not have been used in the 80s. Thus, Baker's claim about English may be incorrect, however the deverbalisation distinction between NI and NVC is important and it is held in the present paper.

The second feature of NI that is not present in NVC is the possibility of retaining a specific referent (M. C. Baker, 1988). With NVC, such as in English, the noun is necessarily generic; with NI, the noun can be specific. Take the following pairs of utterances:

Nahuatl (F. Merlan, 1976, p. 185):

(4) A: *Ne tlakatl kontlamionik noa·*
That man 3SG-it-PV-finish-drank 1SG-water
'That man just drank up my water.'
B: *Ke·na, ne? kontlamia·onik, niyon ači*
Yes, 3SG 3SG-it-PV-finish-water-drank, not even a little
'Yes, he just finished it (the water) off; there's not even a little bit.'

English:

(5) A: *That man just drank up my water.*
B: *Yes, he is a water-drinker.*

In the Nahuatl example, the incorporated noun *a·* 'water' in B refers specifically to person A's water (F. Merlan, 1976). In the English example, the noun *water* in B cannot be understood to specifically refer to person A's water; it only entails that it is typical of *the man* to drink water, thus this is an example of NVC. This distinction between NI and NVC is also important, however it is harder to apply in typology since grammars are not likely to include enough examples to see a distinction. More generally this is a part of the fact that an incorporated noun remains part of the syntax of a sentence: it still refers to a distinct entity, it still acts as an argument of the verb, and so on. Compounded nouns, on the other hand, are removed from the syntax of a sentence, so their only function is a lexical influence on the meaning of the verb.

Definitions of NI, and distinctions between NI and NVC, are further discussed by many other authors. Theory driven analyses of NI come from many frameworks including LFG (B. Baker et al., 2010; Nordlinger and Sadler, 2008), formal lexicalist (Rosen, 1989), Construction

Morphology (B. Baker, 2014), Systemic Functional Grammar (Feist, 2013), and from a discourse perspective (F. Merlan, 1976). NI is also given a detailed treatment in many descriptive grammars (such as N. Evans, 2003; F. Merlan, 1988; Reid, 1990; Wilson, 2013). Seiss (2013) discusses the applicability of computationally analysing the morphology of Murrinh-Patha, including its NI. These perspectives have also been considered.

## 3 Method

Following from the works described above, I defined both NI and NVC to be processes whereby a noun is fixed to a verb. Instances of NI must also meet the following criteria:

- The noun-verb construction must continue to be a verb;
- The incorporated noun must continue to have a syntactic role within the clause, rather than only changing the meaning of the verb; and
- The process must be productive. There may be restrictions on which nouns or verbs can be used, but with those nouns and verbs the process must be productive.

NVC, on the other hand, fails to meet this criterion by:

- Resulting in a deverbalised word;
- Removing the noun from the syntax of a sentence; or
- Being unproductive.

English only has NVC, not NI, according to these criteria because the incorporated noun, such as those listed by Feist (2013), cannot remain part of the syntax of a sentence. The noun only modifies the meaning of the verb.

Other similar constructions that were not included in either of these sets were derivational affixes such as inchoatives, factitives, proprietives, and others which convert a noun into a verb, because in these cases there is no verb, only a verbalising affix. Compounds between verbs and preverbs, such as occurs in Warlpiri (Nash, 1986), were also not included, because there is no noun. The simplicity of my definitions here reflects my goal to use criteria that could be easily compared cross-linguistically rather than relying too heavily on a single theoretical framework that a) may not be equally applicable across different languages, and b) would be difficult to apply using the few examples included in most grammars.

Languages were chosen first to get a wide distribution across Australia, and then to narrow in on regions where NI exists in order to delineate potential linguistic areas. Some languages were chosen because they were mentioned in the literature as having NI, and the sample has not been controlled for factors such as genetic relations, topography, or culture. As this typology involved a small sample and has little precedence, my main goal was to produce a preliminary sketch of the geographical distribution of NI in Australia and some of the ways that it varies language to language, rather than developing robust conclusions as to the exact percentage of languages with NI. A total of 24 languages were included in this typology: 8 Pama-Nyungan

(PN) languages and 16 non-Pama-Nyungan (nPN) languages. Information on each language was mainly collected from grammars, but also from articles focusing specifically on NI (such as B. Baker, 2014; or Nordlinger, 2014).

I coded each language for a number of attributes. First I noted whether the language was PN or nPN, as well as its (sub-)family, and the area where it is predominantly spoken. If a grammar did not mention NI or NVC but had a detailed description of the language's morphology, I assumed these processes did not exist and marked that section as 'U' for 'unmentioned' (An author could not, after all, mention every feature that does *not* exist in the language). If a grammar did not mention them but did not have such a detailed description, another resource was found or that language was not included. Some grammars specifically denied the existence of NI or NVC in that language, in which case that was marked as 'N' and the rest of the grammar was examined to ensure there was not just a difference in definition between me and the author.

If the language had NI or NVC, I then noted if these processes were productive. NI is necessarily productive according to my criteria, so this section is more informative for languages with only NVC. If the language had NI, I also noted whether there appeared to be a restricted category of nouns that could be incorporated or verbs that could have nouns incorporated into them. I also ranked languages on Mithun's scale, where evident. Finally, I noted whether the language had NI according to my own criteria laid out above. Because of my clearly laid out criteria for NI and NVC, classifying each language was fairly straightforward. The fact that the assessment of the existence of NI according to my criteria consistently agreed with the authors' is evidence that these criteria accurately represent the understanding of NI in the literature. This agreement could also be due to confirmation bias on my part, which I did my best to suppress, or due to the fact that if the author thinks NI exists they will mention it and provide examples, whereas if they think it does not exist (even when it might) they will not mention it nor give examples of it.

## 4 Results and Discussion

Table 1 summarises the existence of NI in the sampled languages:

| | **Body parts <** | **General nouns <** | **Non-'natural kind' nouns <** | **'Natural kind' nouns** |
|---|---|---|---|---|
| **NI** | Murrinh-Patha | Anindilyakwa | Dalabon | ? |
| | Ngan'gityemerri | Bininj Kunwok | Ngalakan | ? |
| | | Tiwi | Wubuy | ? |
| **NVC** | Kuuk Thaayorre | ? | Ritharr'ngu | ? |

*Table 1: A tentative hierarchy of incorporable noun sets in Aboriginal languages*

No PN languages had NI, and half the nPN languages had NI. Controlling for genetic biases by comparing language families (sub-families for PN languages) rather than languages, NI appears to exist in around a third of nPN language families (Table 3). As has been stated, the small and barely controlled sample in this study means that these results are very tentative. All languages with NI also had restrictions on what sets of nouns could be incorporated, as

| | *NI Exists (My Criteria)* | |
|---|---|---|
| | **Y** | **N** |
| **PN** | 0 | 8 |
| **nPN** | 8 | 8 |
| **Total** | 8 | 16 |

*Table 2: NI in PN and nPN languages*

| | *NI Exists (My Criteria)* | |
|---|---|---|
| | **Y** | **N** |
| **PN** | 0 | 8 |
| **nPN** | 3 | 7 |
| **Total** | 3 | 15 |

*Table 3: NI in PN and nPN languages*

did some languages with only NVC. Body parts were always incorporable in these languages. Some languages also incorporate general nouns (e.g. Bininj Kunwok (N. Evans, 2003)) or some other small set of nouns (e.g. Ngalakan (F. Merlan, 1988)). In Dalabon and Wubuy, all nouns are incorporable except those from the 'natural kind' class; in fact no Gunwingguan languages allow incorporation of 'natural kind' words (B. Baker, 2014; Ponsonnet, 2015). Thus we can construct an implicational hierarchy, where each level subsumes all the levels to its left:

More research would have to be done a) to find if there are any Australian languages that incorporate 'natural kind' nouns (i.e. no restrictions), b) to delineate the third level so that a language like Ngalakan, which only incorporates a few nouns that are not body parts or general, is distinct from a language like Dalabon, which incorporates *all* nouns except 'natural kind', c) to see if the same hierarchy holds for languages elsewhere in the world, and d) to determine why such a hierarchy exists. A partial explanation may lie in Van Egmond's (2012) argument that incorporable generic nouns have largely developed by semantic extension from body part incorporables, thus entailing that if a language has generic incorporables it must already have body part incorporables.

Mithun (1984) discusses two reasons explaining the prevalence of body part incorporation. First, body parts are closely related to many actions expressed by verbs, both as part of the agent and part of the patient (when those agents and patients are humans or animals), so having ways to easily specify body parts is useful. For example, if one person hits another, body parts are necessarily involved and NI allows speakers to specify what body part is used in the hitting (e.g. *hand-hit, foot-hit*) or what body part is being hit (e.g. *face-hit* 'to hit in the face'). Second, when a body part is incorporated, the possessor of that body part can be promoted from an oblique to a core argument (Mithun's Type-II NI), which is symbolic of the possessor's role in the action. For example, a sentence like *the man's hand hit the wall* can become *the man hand-hit (punched)* the wall, which focuses more on the agentive role of the man rather than the hand.

No languages with NI had restricted sets of verbs that could be used. Two languages with productive NVC did: Kayardild could only productively compound with the verbs *marutha* 'put' and *barrwaaja* 'block off' (N. D. Evans, 1995, p. 291); and Yankunytjatjara with verbs of stance (e.g. 'lying', 'sitting', 'standing'), *tju-n* 'put', *pu-ng* 'hit', and several others (Goddard, 1985, pp. 120–121).

Attempting to code for where a language lies on Mithun's scale was not successful. The only values that could be reliably entered were Type-I and Type-IV. Because Mithun's Type-I

NI corresponds to my definition of NVC, if a language had NVC but not NI it was clearly Type-I. Ngan'gityemerri, Tiwi, and Wubuy could all be shown to be Type-IV because the author either explicitly discussed Mithun's types and showed that it was Type-IV (for Wubuy: B. Baker, 2014; and for Tiwi: Wilson, 2013), or they gave example sentences where Type-IV NI was clearly happening (Ngan'gityemerri: Reid, 1990). I found no evidence that a language was Type-II or III but not IV. The definition of Type-III is based on intent of the speaker, which is hard to extract from the sentences given in a grammar; Type-II is theoretically easier to find evidence for, as it is a clear structural process, but I found none.

All languages with NI also had NVC. This implication aligns with Mithun's (1984) findings: using her terms, all languages with Type-II, III or IV NI also have Type-I. This is not a trivial finding, because, although NVC seems like an undeveloped version of NI, they are separate processes according to my definitions and it would be theoretically possible for a language to have NI and not NVC.

Figure 1 shows the results of the NI typology laid out on a map, with the approximate area where each language is spoken as given by AIATSIS ("AIATSIS map of Indigenous Australia," 2015), and the line between PN and nPN languages taken from Harvey (2011). NI appears to only occur in the north of the NT and only in nPN languages. Figure 2 shows a detail of this area.

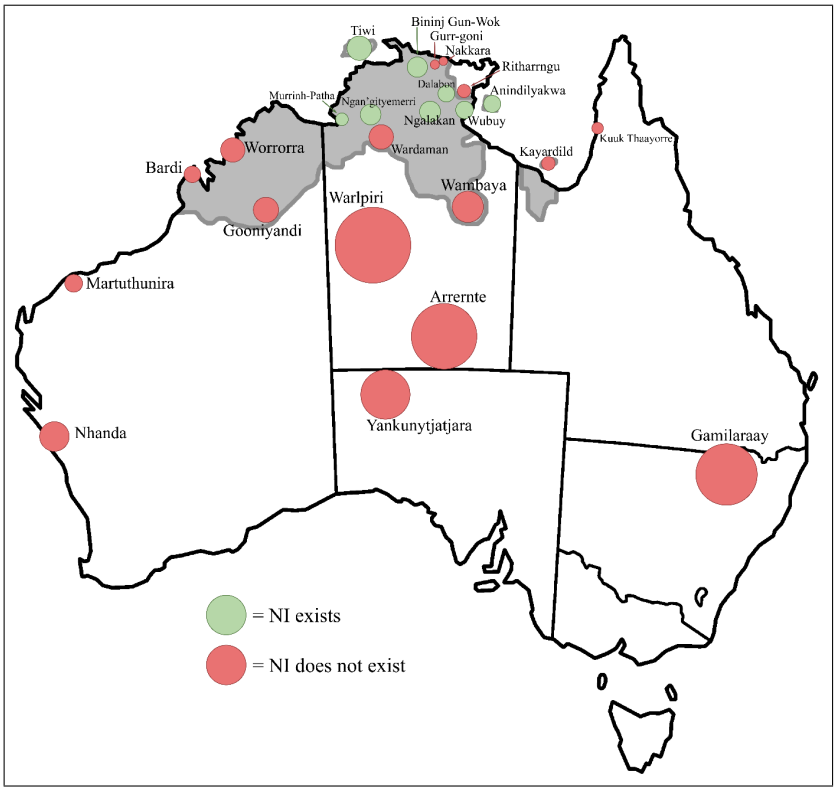


*Figure 1: Map of NI in 24 Aboriginal languages across Australia*

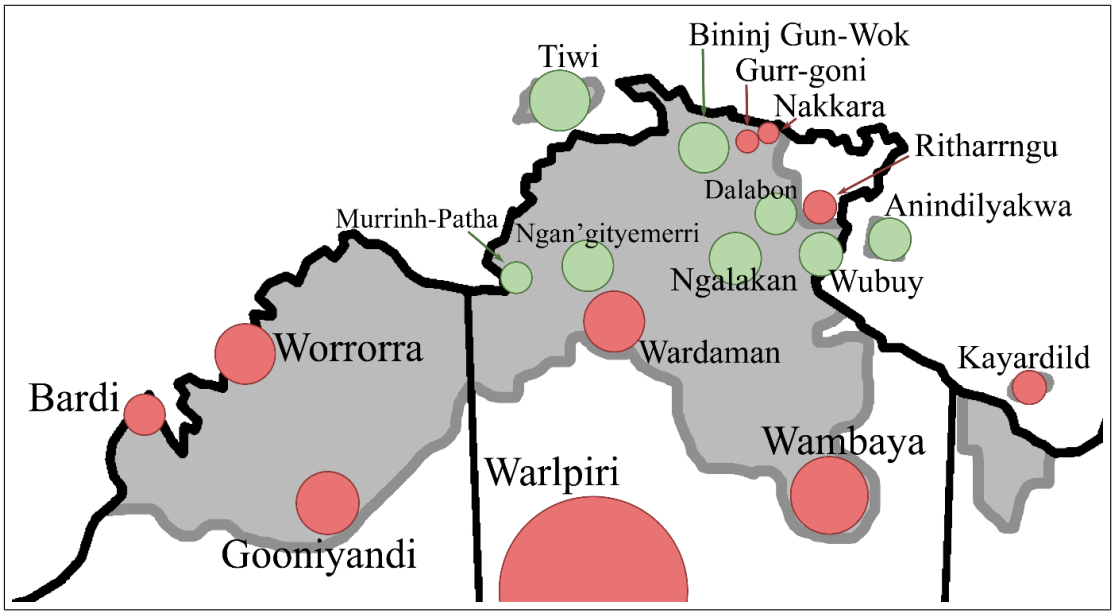


*Figure 2: Detail of NI in nPN areas of northern Australia*

Thus there is some evidence that NI is an areally diffused feature, since languages in this contiguous area that are not genetically related share NI and languages outside of it do not have NI, such as the nPN languages of northern WA, central NT, or western QLD. However, the sample is small, especially if counting by language family, therefore these conclusions are tentative. Historical reconstructions could further clarify whether this area of NI is due to areal influence or merely coincidence. Bininj Kunwok, Dalabon, Ngalakan and Wubuy are all Gunwingguan languages and therefore NI is shared among these languages due to genetic relations rather than areal diffusion. I. Green (2003) also shows that Murrinh-Patha and Ngan'gityemerri are genetically related, with their similar verbal auxiliary systems as evidence.

It would be interesting to see, in the future, whether the languages on the border of the NI area (such as Wardaman, and the Maningridan and Yolngu languages) begin to develop NI. Indeed, there is some evidence that this is happening if we look at the map of NVC in Australia (Figure 3).

Gurr-goni has non-productive NVC, and Ritharr'ngu, Kayardild, and Kuuk Thaayorre to the east all have productive NVC. Given that having NVC appears to be a pre-requisite for having NI, perhaps this is evidence that NI is spreading. Contradictory to this theory, however, is van Egmond's (2012) statement that use of NI is declining in Anindilyakwa. Perhaps some of these languages with NVC only are like Anindilyakwa, they historically had NI but are now only using the more general NVC. This especially makes sense for languages with non-productive NVC: those compound verbs might be fossils from a time of productive NI. The NVC across the rest of the country, furthermore, such as in Yankunytjatjara, Arrernte and Nhanda, cannot be explained by this spreading theory (Blevins, 2001).

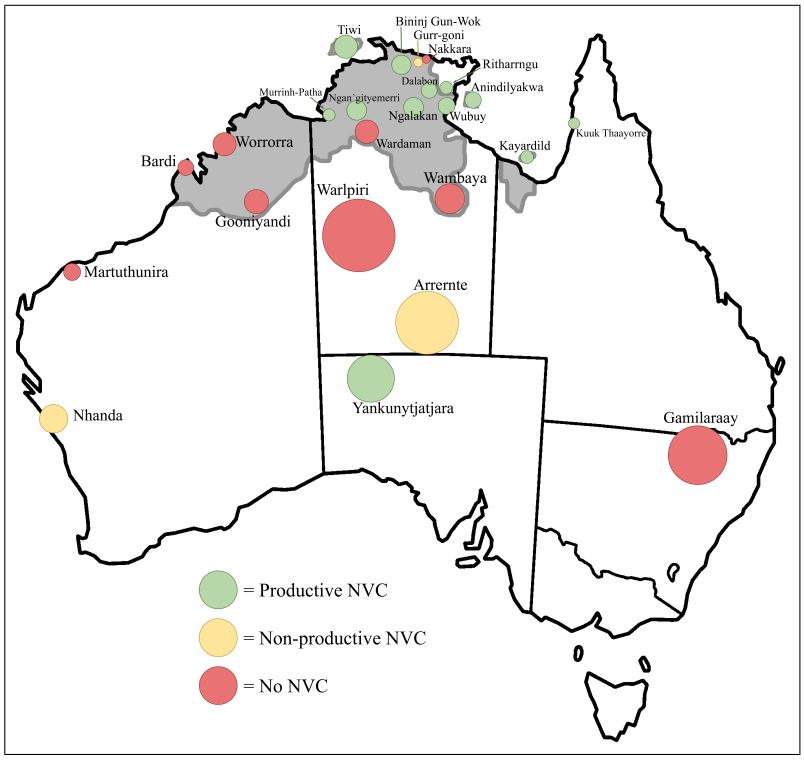


*Figure 3: Map of NVC across Australia*

## 5 Conclusion

This typology has provided the beginnings of an overarching cross-linguistic understanding of noun incorporation and noun-verb compounding in Australian Aboriginal languages. It has shown that NI is a fairly common feature of the non-Pama-Nyungan languages in a contiguous region in the north of the NT, but is non-existent elsewhere. NVC exists in all languages with NI as well as some others, especially on the border of the NI region. An implicational hierarchy of incorporable noun sets was found, with representative languages for each level except the hypothetical maximum level, which would include languages that can incorporate any and all types of nouns. The possibility that NI is spreading or diminishing was also discussed.

There are many topics where future research could build on our understanding of the similarities and differences of NI across Australia: comparing which grammatical or semantic roles can be incorporated (B. Baker, 2014; Mithun, 1984), whether incorporation is the marked or unmarked construction compared to its unincorporated paraphrase (N. Evans, 2003), diachronic accounts of NI and its potential development from or contraction towards NVC (Singer, 2011). Further refining and finding evidence for or against the hierarchy of incorporable noun sets would be another interesting topic, as well as comparing whether languages from the same level actually incorporate the exact same nouns or if there is variation, e.g. what counts as a body part (N. Evans, 2003).

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# Problems with Formalistic Grammars in Analysing Colloquial Indonesian

Evan Keith

## 1 Introduction

The influence of modern urban colloquial Indonesian, or Bahasa Gaul, on standard Indonesian is a well-documented phenomenon (see Smith-Hefner, 2007, Sneddon, 2016). Despite this, extant descriptive grammars of Indonesian have tended to focus almost exclusively on the standardised formal written variety of the language. This has led to an underemphasis on describing the grammar and discourse patterns of Bahasa Gaul, even where these differ substantially from the standard language. This article will demonstrate this point by analysing a text in Bahasa Gaul according to the rules of grammars written by Dyen (1967), Kridalaksana et al. (1985), and Sneddon et al. (1996). The three grammars were deliberately selected so as to cover a diversity of time periods and authors. Each is separated by more than a decade from the others, and although each is written with a different audience in mind, each one purports to provide a 'descriptive' analysis of modern Indonesian grammar. The *Bahasa Gaul* sample text is taken from an online rant posted to Facebook in 2017, as quoted in a paper by Swandy (2017) on the unique discursive practices of *Bahasa Gaul* in online spaces.

## 2 Background

*Bahasa Gaul*, hereafter referred to simply as Gaul, is a blanket term used to refer to many informal varieties of Indonesian, spoken primarily in large urban centres such as Jakarta and Yogyakarta (Smith-Hefner, 2007). Swandy (2017) notes that the drivers behind the development of early Gaul in the Suharto era tended to be disadvantaged youth, in particular the urbanised poor, members of street gangs, and Indonesia's LGBT community. These early forms of Gaul were characterised by the development of new slang vocabulary through intentionally obtuse morphological patterns (in order to avoid being understood by non-members of the aforementioned groups), the simplification of complex and compound verbs, and heavy, unpredictable elision (Smith-Hefner, 2007; Kusuma and Mardijono, 2013. Gaul's origin from amongst sections of Indonesian society often considered 'undesirable' by mainstream society has historically contributed to a perception of Gaul as being unworthy of research or investigation. (Smith-Hefner, 2007) However, despite the best efforts at standardisation by the government of the Suharto era as discussed by Smith-Hefner (2007), the influence of Gaul on so-called 'standard' Indonesian is rapidly growing, even outside the communities where Gaul was originally spoken (Swandy, 2017; Smith-Hefner, 2007). Both the tendency towards elision of affixes

in early 'street' forms of Gaul and the influence of Chinese languages in more recent years have resulted in a shift towards Gaul being relatively isolating, in contrast to standard Indonesian, which is generally considered an agglutinative language (Kridalaksana et al., 1985; Tadmor, 2007). For these reasons, among others, the grammar of Gaul is different, sometimes radically so, from standard Indonesian.

The various forms of Gaul in common use today are undoubtedly different from the language described in early formalistic grammars of Indonesian. Pronoun lists given in Dyen (1967) and Sneddon et al. (1996) do not include, even in passing, the Hokkien-derived set of informal pronouns which Gaul uses as its standard repertoire. When Sneddon et al. (1996, p. 168) does acknowledge the existence of the informal pronoun set, he does so only in passing, providing only one example and admitting the incompleteness of his own review. However, it would be mistaken to conceive of Gaul as an abhorrent or divergent vernacular. Given the status of Indonesian as a second language to the vast majority of its speakers, slang and informal forms are especially vital in driving linguistic change, including grammatical change (Smith-Hefner, 2007). It therefore seems vital that a truly 'descriptive' grammar of modern Indonesian engage with those grammatical features which are characteristic of Gaul. Unfortunately, this has not been the case historically. To elucidate this point, this article will examine the failings of otherwise sturdy models of standard Indonesian grammar in analysing some sentences in Gaul.

## 3 Analysis

The following is an analysis of several sections of text from a rant posted on Facebook by an anonymous source, as quoted in Swandy (2017). The glosses for each excerpt are written according to the specifications of each grammar. Wherever the gloss does not align with the translation given, this is indicative of problems in the analysis suggested by the relevant grammar, as discussed in the text following the analysis. Note that this article uses the standard, 'perfected' orthography (*Ejaan Yang Disempurnakan*) as in common use after 1973 to render all Indonesian text. Where quoted texts written before 1973 have used other orthographies, and where informal online sources have used abbreviations and other 'text-speak' that does not reflect how a passage would be spoken if read aloud, this has been corrected to match the modern standard spelling.

### 3.1 Analysis Using Dyen (1967)

*Figure 1: an excerpt of text from Swandy (2017), glossed using Dyen (1967)*
*Note: null signs represent morphemes absent in respective grammars.*

| *Mem-per-tahan-kan* | *sese-orang* | *itu* | *tidak* | *mudah.* |
|---|---|---|---|---|
| ACT-TR-withstand-TR | some.quantity-[+human] | those | NEG | easy. |

It's not easy to stand some people.

| *Sering* | *di-sakit-i* | *di-kecewa-in* | *di-bohong-i,* |
|---|---|---|---|
| Often | PASS-sick-frequently | PASS-dissappoint-Ø | PASS-lie-frequently |

I often get hurt, let down, lied to,

*hanya bisa sabar aja.*
only can patient Ø
but I just have to be patient.

*Banyak yang bilang bodoh.*
Many which say stupid
There are many (people) who call me stupid.

Parsing these sentences using Dyen's rules as a guide, several strange things occur, all of which imply that Dyen's model is ill-suited to understanding Gaul. Perhaps the most easily remedied aspect of Dyen's analysis is the fact that he tends to analyse the meaning of multi-morphemic affixes as created by their underlying individual morphemes, rather than treating the meaning of these complex affixes as unique to each permutation. For instance, when analysing the first word in the text, *mempertahankan*, a transitive verb derived from the lexically ambiguous root *tahan*, Dyen's model would suggest that there are two constituent parts to the complex affix *memper- -kan*. These are: the circumfix *per- -kan*, itself consisting of the morphemes *per-* and *-kan* which each occur independently and in other complex affixes; and the prefix *me(N)-*, the N being a nasal consonant which shifts to the first place of articulation in the root. *Per- -kan* is called a 'transitiviser' by Dyen (p. 245), and *me(N)-* is referred to as an 'active' marker (p. 244). This analysis goes against the traditional understanding of *memper- -kan* as a single complex circumfix, an analysis more in line with elision patterns of Gaul. Given the tendency of Gaul to elide morphemes within these constructions without creating changes in meaning, it makes more sense to think of the complex affix *memper- - kan* as separate in meaning from its constituent morphemes; as a single circumfix whose elements can be elided at will to alter formality without changing its grammatical function. Given Dyen's willingness to analyse *per- -kan* as a circumfix despite the independent but related functions of both *per-* and *-kan* as monomorphemic affixes (pp. 244-245), it seems strange that he does not take it one step further and analyse *memper- -kan* as a circumfix.

The next sentence in the excerpt seems almost foolish to analyse with Dyen's grammar, since it is in the passive construction yet elides its object pronoun. Dyen does provide a model, although it is not particularly well-defined, of grammatical 'environments' (p. 57), in which an element or feature can be carried over from one sentence to the next and provide clues as to what has been elided. He uses this model to explain how, in colloquial use, a complex question can be answered with simply an aspect marker and a verb, leaving features like person and number to context since they have been specified in the 'environment' of the previous sentence. However, even in this model, this information must be specified in a prior sentence for it to be counted as part of the environment. Since the previous sentence contains no immediate indication of person or number, this would either need to be given by a null morpheme in the previous sentence, or the 'environment' model dropped. This explanation is indicative of a broader trend of explaining away a lack of explicit person, number, and TAM with reference to elision and context clues, rather than entertaining the notion that these features may not be encoded at all.

Reaching our final sentence in the excerpt, Dyen's syntax breaks down entirely. Parsing the final sentence in a way coherent with its actual meaning using the rules given by Dyen is impossible. To understand how Dyen's syntax fails to parse this sentence correctly, it is informative to look at a 'translation' of this sentence in more formal Indonesian. If we try to rewrite this sentence in formal language while altering a few words as possible, we get something resembling the following:

| *Ada* | *banyak* | *yang* | *meng-ata-kan* | *saya* | *bodoh.* |
|---|---|---|---|---|---|
| Exist | many | which | ACT-word-BEN | 1SG | stupid |

There are many (people) who call me stupid.

Dyen's syntax handles this adapted sentence with ease. The addition of *saya* means that we can straightforwardly analyse *yang bilang saya bodoh* for what it is: a nominal expression. If this is the case, Dyen's syntax allows us to stack nominal expressions recursively, which enables us to parse *banyak yang bilang saya bodoh* as what Dyen (p. 70) terms a "yang-modified nominal", a more complex version of a nominal expression (note that Dyen was writing before the advent of X-bar theory). Add the existential quantifier *ada* to this nominal expression, and the sentence makes perfect sense. A literal understanding of this sentence by this analysis might sound more like 'there exist many (people) who say (that) I am stupid', the central verb being *ada* rather than *bilang*, but this still scans on a phrase-structure level. However, this analysis is not in line with elision patterns in colloquial use, as shown by the elided version in the original Gaul text. The fact that the subject pronoun is elided in the informal variant means that *bodoh* by itself cannot be analysed as a verb phrase (at least not without positing that person and number are implied by a null morpheme, which Dyen does not) This is also the result of the lexical ambiguity of simple (i.e. unaffixed) words in Gaul, as discussed in the following section. Because of this, the whole complex nominal expression that formed the basis of the analysis of the more formal sentence falls in a heap.

### 3.2 Analysis Using Kridalaksana et al. (1985)

*Figure 2: an excerpt of text from Swandy (2017), glossed using Kridalaksana et al. (1985)*

| *So* | *kalau* | *nanti* | *gue* | *udah* | *benar benar* | *lelah,* |
|---|---|---|---|---|---|---|
| So | COND | later | 1SG | PERF | true ADV | be.tired* |

So if I end up getting really tired of all this,

| *pasti* | *gue* | *bakal* | *ny-erah* | *sendiri* | *kok.* |
|---|---|---|---|---|---|
| certainly | 1SG | plan.to | SIMUL-defend** | myself | EMP |

I'm bound to fight back.

In some ways, Kridalaksana's model works better than Dyen's. For one, Kridalaksana's provides an account of simulfixation (see **), the process whereby a verb is made explicitly active by nasalising its initial consonant (p.20). While Dyen's grammar could easily be reworked to include this by positing that the 'activiser' prefix *meN-* is elided but its presence implied by

the shift to nasalisation, this is not done by Dyen himself, which represents a glaring omission. Furthermore, since this phenomenon is extremely common in colloquial usage, the reference to simulfixation means that fewer null morphemes are required to adapt our morphological model of verbs in standard Indonesian to make it correctly parse Gaul verbs. On top of this more flexible understanding of syntax and morphology that allows for a better parsing of Gaul phrases, Kridalaksana provides a fuller account of the morphological processes underlying word formation in Gaul. Phenomena such as the use of reduplication to imply entire clauses (p. 23), the use of abbreviation and back formation (pp. 23-24), and the set of loan pronouns used most commonly by Gaul (p. 35; p. 72) are all discussed at length while they are absent from Dyen.

There are still issues with Kridalaksana's model, however. Chief among these is how it handles adverbs. In Kridalaksana's model, adverbs can refer to either adjectives or verbs, and can come anywhere in the sentence, not just next to the word which they modify (p. 61). Additionally, aspect markers (e.g. *udah, terus*) tend to be analysed as adverbs (pp. 70-71), meaning that a great deal of lexemes which actually possess a unique grammatical function are simply labelled 'adverbs', and the syntactic rules governing their placement not specified in adequate detail. This is compounded by the ambiguous ways in which Gaul identifies its lexical categories morphologically (or rather, how it often does not). For instance, in the text above, *lelah* could be parsed either as an adjective or a verb – each makes equal sense, and since the word is unaffixed, as is extremely common in Gaul, we are left with no morphological clues as to its lexical category. The best we can do is infer its lexical category through context. In the gloss above, *lelah* is analysed as a verb ('be tired', see *), and *benar-benar* as an adverb which modifies it, although since Kridalaksana allows adverbs to modify adjectives (p. 61) this is only one of two permissible analyses.

### 3.3 Analysis Using Sneddon et al. (1996)

*Figure 3: an excerpt of text from Swandy (2017), glossed using Sneddon et al. (1996)*

| *Terus* | *banding-in* | *ke-salah-an* | *gue* | *sama* | *lo* |
|---|---|---|---|---|---|
| HAB | compare-Ø | NMLZ-wrong-NMLZ | Ø | with | Ø |

And if you compare my mistakes to yours,

| *itu* | *apa* | *se-besar* | *ke-salah-an* | *lo* | *punya...* |
|---|---|---|---|---|---|
| PROX.DEM | what | EQU-big | NMLZ-wrong-NMLZ | Ø | have |

What have I ever done that's as bad as the mistakes you've made?

Sneddon's grammar is the most extensive and also the most prescriptive of the three surveyed. It is also, however, the only of the grammars not to prescribe generative rules for phrase structure. It is therefore difficult to evaluate the strength of the syntactic model it advocates for parsing entire sentences, but its analysis of the functions of individual words and morphemes can still be reviewed. Much like Dyen, Sneddon's analysis depends on the highly agglutinating morphology of standard Indonesian, and therefore fails to cope with the more isolating inclinations of Gaul. An example of the danger of relying on this complex morphology can be seen in the final noun phrase of the glossed excerpt, *kesalahan lo punya.* Although context clues

indicate that this is actually a noun phrase using the passive construction, the scant affixation gives us no way of deducing this by looking at the phrase in isolation. For this reason, there is no sensible way of interpreting this phrase with Sneddon's grammar. For one, Sneddon states that all transitive verbs must precede the objects to which they refer if they appear unaffixed (p. 277). Given that the root *punya* appears here completely unaffixed, with no morphological clues to either its passitivity or its transitivity, it would appear by Sneddon's analysis that the sentence is missing an object after *punya*. This is clearly erroneous, as the object is *kesalahan*. To make this noun phrase fit within Sneddon's model, we would either have to either posit that the passiviser is simply being elided, or that transitive verbs within noun phrases are not bound to the head. Neither of these concessions is particularly helpful, as both create additional ambiguity when identifying the structure of noun phrases.

Another, more minor flaw in Sneddon's analysis is his selective vocabulary. Take for instance the word *terus*. It is mentioned a number of times (pp. 218-219 inter alia), both as a standalone aspect marker and as the root of complex words, but always carrying the meaning of 'habituality'. While this meaning does exist in Gaul, its much more common function, and indeed its true function in the above text, is as a complementiser, carrying a secondary implication of causality. The word lagi, which has a very similar meaning, is subject to the same narrowing of meaning by Sneddon (pp. 211-212 inter alia). As another example, although my gloss records the informal second person singular pronoun lo for ease of reading, this pronoun is not present in Sneddon. This is indicative of a broader trend in Sneddon not to provide vocabulary which is incredibly common in Gaul, including words which have a specific grammatical function and would typically appear in a grammar on lists of pronouns, aspect markers, and such. Although Sneddon's grammar is extensive and well-equipped for analysis of written and formal language, it lacks the flexibility in both its syntax and vocabulary required to analyse Gaul. It is important to note that this is not so much a criticism of Sneddon's grammar when used to analyse standard Indonesian; it merely suggests that a model capable of handling formal standard Indonesian which does not make note of differences in register may be inadequate when dealing with Gaul. Sneddon himself has stated that contemporary Indonesian is "essentially diglossic", and that the grammar of Gaul should be viewed as separate from that of the standard language (Sneddon, 2003, pp. 17–18).

## 4 Conclusion

As stated in the introduction, the selection of grammars from across several decades was deliberate. The Indonesian language is subject to rapid change driven by a number of sociolinguistic factors. As such, grammars from as late as the 1960s suffer from a variety of inaccuracies which are the result of asynchronous language shift rather than poor research. However, as this article has demonstrated, the rules outlined in grammars of formal Indonesian struggle to cope with the grammar and discourse patterns of Gaul, irrespective of their date of publication. Furthermore, the tendency of supposedly 'descriptive' grammars of Indonesian to draw primarily from written sources, a behaviour which all three surveyed grammars admit to, has problematic implications for these grammars' ability to describe everyday spoken Indonesian. Whether or not the difference between standard Indonesian and Gaul truly does represent a

diglossia, as stated by Sneddon, is beyond the scope of this article, but what is clear is that the two are meaningfully distinct. Furthermore, since linguistic research into the grammar of Gaul is scant and typically conducted through the paradigm of written Indonesian, we are left with no alternative but to refer to ill-fitting formalistic grammars when analysing Gaul. Since, as discussed above, the prevalence and influence of Gaul is growing rapidly, this situation is undesirable both for linguists and for everyday speakers of Gaul alike.

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# Language Universals and Language Diversity: What we Know and their Implications on L2 Language Learning

Catherine Wen *

## 1 Introduction

Given the plethora of frameworks of second language acquisition (SLA) and abundance of theories on general language learning, second language (L2) teachers have the difficult task of deciding how best to teach their L2 learners so that their teaching is effective and students' learning is efficient. Many theories have been developed over the years in attempts to describe SLA, such as the behaviourist theory of Skinner (1957). He proposed that SLA was simply the development of new habits, where language learning was a repetitive process of practicing and reinforcing correct language production until it became a habit. Of particular interest to this essay are Chomskyan linguists, who have applied Noam Chomsky's (1976) theory of Universal Grammar (UG) to explain SLA as a resetting of parameters against universal principles. In addition to understanding how students acquire an L2, teachers also need to be aware of the differences between students' first language (L1) and L2, as students' errors or habits in the L2 can sometimes be explained by a process called "language transfer", where features of previous learned languages can appear in the language they are learning (Lightbown and Spada, 2013, p. 43; Selinker, 1972, p. 37). This essay will discuss the implications of what we know about language universals and language diversity for Chinese adult learners of English as an L2 and the teachers of these students. From a UG-based approach to SLA, the first section will briefly define UG, then examine whether adult L2 learners have access to UG and elucidate how learners and teachers are affected if access to UG is limited. Then, this essay will also discuss the implications of language diversity on these students and teachers, namely how knowledge of phonological and discourse-pattern differences between English and Chinese can impact the learning of L2 English for Chinese adult learners, and how this knowledge can benefit teachers of these students.

## 2 Language Universals And Their Implications

### 2.1 Universal Grammar

The term 'language universals' in this essay refers to Universal Grammar, with emphasis on universal principles; universal principles being very "abstract statements relating to general

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properties of language" (Ellis, 1994, p. 416). UG, as defined by Chomsky himself, is "the system of principles, conditions and rules that are elements or properties of all human languages" (Chomsky, 1976, p. 29). In other words, Universal Grammar is a template that contains all the possible principles in all human languages (Lightbown & Spada, 2013, p. 20), where human languages can choose which of these possible principles to exhibit. A natural human language might not make use of all the possible principles in UG, but it cannot exhibit something that is beyond this set of universal principles. Jackendoff (2002, p. 263) compares UG to a 'toolkit' where languages can choose which tools they use, and how extensively, but cannot choose a tool that is not within the toolkit. Some principles have parameters, which are a limited set of options or ways in which a principle can vary from language to language (White, 1989, p. 29).

Chomsky's UG, a genetically endowed mechanism (Bley-Vroman et al., 1988, p. 3), mainly details how a child can master any language in their environment, despite possibly not being exposed to sentences with complex and abstract properties, and without being explicitly taught (White, 1989, p. 5). In other words, UG is primarily concerned with FLA in children. But can the theory be used to account for SLA? This is exactly what many Chomskyan researchers investigating L2 acquisition aim to answer, wondering if adult L2 learners still have access to the innate system of UG. Gass and Selinker (2002, pp. 176–177) describe 5 possible positions regarding the availability of UG, centred around the two main variables of transfer of L1 and access to UG: full transfer/no access, no transfer/full access, full transfer/full access, partial transfer/full access, partial transfer/partial access. Following a general consensus from research that take a UG-based approach to SLA, this essay will take the position that adults have at least partial access to UG (Ellis, 1994; Smith and Tsimpli, 1995; Tsimpli and Roussou, 1991), with either full (Schwartz & Sprouse, 1996) or partial transfer of the L1 (Hawkins & Chan, 1997).

## 2.2 The Partial-access Position

While the "no access" to UG position relies on assuming that L1 and L2 acquisition are completely different processes and the "full access" to UG position assumes the exact opposite, the "partial access" position sees both similarities and differences between L1 and L2 acquisition. This position allows for UG to be available to the adult L2 learner, but certain factors may impede on its full operation leading to mastery of the L2 (White, 1989, p. 50). But what are the implications on adult SLA and L2 teaching when we understand UG and know that adults have partial access to it?

### 2.2.1 Implications for students

First, we need to understand how partial access to UG affects adults' SLA. In White (1989, pp. 51–54), having partial access to UG as an adult L2 learner can mean that learners are able to distinguish grammatical structures from ungrammatical structures, similar to L1 acquisition. Student errors made during any stage of acquisition would also not violate any universal principles in UG. For example, Chinese speakers may make the error of dropping pronouns in English, as influenced by Chinese: Is raining. This error is not a violation of UG, however, as it is a form that is permissible form in that it is a grammatical form in other languages. For White (1989, p. 53) learners are also able to "tap" into principles not activated in their L1, as

well as reset any parameters established in the L1. This ability to access all principles and parameters despite a learner's L1 not exhibiting all of the options means it is possible for adult learners to reach native-like levels. For Hawkins and Chan (1997), Smith and Tsimpli (1995) and Tsimpli and Roussou (1991), however, parameters cannot be reset by adult learners even if they have access to all UG principles that include 'grammatical options…not…adopted by the L1 grammar nor by the L2 target grammar' (Tsimpli & Roussou, 1991, p. 151). Therefore, even if Chinese speakers can access universal principles like the Phrase Structure Principle which describes the position of the phrase head in relation to the entire phrase (Ellis, 1994, p. 416), students are unable to reset their parameter settings once they have been set in childhood. This inability may explain why Chinese speakers who have learned English post-childhood sometimes struggle with the head-initial aspect of English. Chinese is mostly a head-final language, with exceptions to objects of verbs and prepositions, and some types of complements (Huang & Li, 1995, p. 55).

This does not mean, however, that Chinese students learning English as an L2 never correctly grasp the head-initial structures of English. In the early stages of L2 learning, L1 transfer errors tend to be present, but eventually students make the correct 'parametric choice' at the more advanced stages of L2 learning as a result of 'general learning mechanisms correctly analysing the input data' (Tsimpli & Roussou, 1991, p. 152). In other words, eventual correct production of language forms results from mechanisms such as pattern-recognition, problem-solving or simply memorisation, rather than from the resetting of parameters. We can see, then, that the implications of partial access to UG in adults can both assist and hinder SLA.

### 2.2.2 Implications for teachers

Now that we are aware of the implications for SLA, we can turn to the implications for teachers given limitations on parameter resetting as described in Tsimpli and Roussou (1991). If adult L2 learners are unable to reset parameters, then perhaps teachers need to focus on explicitly teaching the rules and pointing out the differences in these areas between the L1 and L2. For example, as Chinese is mostly a head-final language that allows ellipsis of subjects (pro-drop), teachers may find it useful to highlight to students that English is actually a head-initial language where subjects are obligatory in all sentences. SLA theory has found that students can only learn the grammatical structures that they "notice" and are aware of (Gass, 1988; Schmidt, 2001), but like a computer, a brain has limited capacity to process information, and can only focus on and master a few aspects of the L2 at a time. McLaughlin et al.'s "informational processing" theory (1983) posits that only through repeated practice can the initial laborious "controlled" processing of information eventually become an "automatized" process requiring minimal effort, 'free[ing] up cognitive processing resources' (Lightbown & Spada, 2013, p. 109) to process novel information that, in turn, will gradually become automatic. Thus, if students are aware of the differences between Chinese and English, students may be more likely to acquire these aspects of English accurately given adequate practice and exposure. Teachers should provide opportunities where students can produce, either orally or in writing, correct sentences focusing on these differing structures that exist between Chinese and English, so that errors resulting from L1 (Chinese) transfer can be eradicated. Forcing students to produce correct sentence structures allows learners to understand the gaps in their linguistic knowl-

edge, improving their grammatical accuracy as they challenge their linguistic resources (Swain, 1985).

To conclude this section, it must be said that there are various implications of language universals on second language learning and teaching. With a specific focus on adult Chinese students learning English as their L2, language universals have been shown to play a role in SLA, in that adult learners can still access the universals principles described in Universal Grammar, but may or may not be able to reset parameters. The implications on teaching would thus be for teachers to explicitly make students aware of these features in the L2 that supposedly cannot be reset, so that students can consciously make efforts to produce correct sentence structures in English despite inability to invoke a part of the innate mechanism.

Indeed, a UG-based theory of L2 acquisition only describes a relatively 'restricted phenomenon', namely 'that part of grammatical competence…determined by an innately specified and abstract knowledge of grammatical principles' (Ellis, 1994, p. 458). Because this branch of SLA theory does not account for other aspects of SLA, such as lexicon development, understanding speech acts and knowing how to appropriately use the language in different contexts, discourse-pattern conventions and phonetics, this essay will now turn to examining the implications of acknowledging language diversity on L2 learners and L2 teachers, to provide a more holistic (although still very limited) view on second language learning and teaching.

## 3 Language Diversity And Its Implications

Knowing that the world's languages are diverse and varied, and knowing where exactly two languages differ, can have crucial implications for the learner and for their teachers. An English teacher with a class of adult Chinese speakers may find it useful to understand the conventions and structures of Chinese, so that they are able to provide better assistance or explanations to their students. Errors in students' L2 may result from a superimposition of L1 rules, pronunciations, lexicons, etc. into the L2 as described in Selinker (1972), and one of the ways of correcting these unconscious errors is by making students aware and conscious of them through elucidating the differences between Chinese and English. Just as Ferdinand de Saussure claimed that concepts are defined by what 'the others are not' (de Saussure & Baskin, 2011, p. 117), English conventions, nuances, pronunciation and so on can perhaps be defined in a similar way: whatever Chinese (and other languages) is not. With a limited amount of space, only discourse-patterns and phonetics will be discussed in this section.

### 3.1 Discourse-patterns

Here, discourse-patterns refer to how individuals from a certain culture or group may tend to organise information and present arguments in a written text. Kaplan (1966) asserts that cultures have their own 'thought patterns' or 'rhetorical patterns', identifying five models for organising a written text and structuring an argument: English, Semitic, Oriental, Romance and Russian. He believed that every culture had differing logic and thought patterns, which were reflected in how writers would structure information. Kaplan defines Oriental as Chinese and Korean but not Japanese, and although this definition has been criticised for being too

simplistic (Severino, 1993, p. 46), there is some truth in saying that Chinese writers of English show a spiral-like pattern of argument structure where the subject is shown from a various angles, but never approached directly (Kaplan, 1966, p. 10).

Chinese culture likes to see matters from both sides, being 'accustomed to the harmony and unity of the world', and thus have a 'tortuous thinking mode' where speakers will describe all other relative information prior to reaching the main point; English in contrast, has a 'straightforward thinking mode', where the main point is at the beginning before moving on to present relevant information (Wang & Chen, 2013, p. 648). The Chinese generally shift from the broad to the specific and detailed, perhaps describing the objects before the result, while in English it is the result that appears before the reasons or objectives (Wang & Chen, 2013, p. 649). Perhaps it is due to these habits of presenting information that a native English speaker reading a piece by a Chinese speaker may find the text 'awkward and unnecessarily indirect' (Kaplan, 1966, p. 10), as if spiralling around the main point. In addition, because the Chinese rely on the context of the whole text to understand the logical and relation between sentences, two sentences without logical indicators connecting them can appear to be unrelated to an English speaker, as English relies on conjunctive phrases to show how sentences are connected to each other (Wang & Chen, 2013, pp. 649–650).

### 3.1.1 Implications for students and teachers

The implications of understanding diversity in discourse-patterns between languages is that adult Chinese learners of L2 English and their teachers can improve efficiency and effectiveness of students' language learning by focusing on and addressing problem areas. With studies such as Guo and Liu (1997) finding that logic reasoning of learners in the L2 are driven by their L1, Wang and Chen (2013, p. 650) believe that overcoming the 'impact of Chinese thinking in English learning process[es]' requires comparing the differences between Chinese and English thinking as this can help students 'improve cross-cultural awareness' and 'cultivate their English cultural sensitivity'. Knowing also that Chinese students may not have practice in this 'straightforward thinking mode' employed in English, teachers can emphasise the importance of including formal logical indicators in written texts and provide additional support in explaining how, when, and where conjunctions are used, while students are made aware of what is required when writing in English.

In terms of discourse-patterns, it is important for both students and teachers to understand the differences between English and Chinese conventions. Being aware of the Western culture and of the different way English organises information can improve students' mastery of the language, and teachers can better assist students in 'reducing Chinglish' (Wang & Chen, 2013, p. 651) in their writing.

## 3.2 Phonetics

Similar to how the universal principles in a language are drawn from the complete bank of principles from Universal Grammar, the sounds in a language are drawn from the International Phonetic Alphabet (IPA) which lists all the humanly possible sounds. Knowing how different languages like Chinese and English may differ in terms of which phonemes exist and which

do not, can help students and teachers identify the sounds that may be tricky to acquire, and thus attention can be focused on difficult sounds. Such attention is not to purport that only a Westernised English accent or pronunciation is acceptable; its aim is to ensure that adult Chinese learners of L2 English can be better understood and reduce misunderstandings.

### 3.2.1 Implications for students and teachers

Consonant pairs such as /n/ and /l/, and /l/ and /ɹ/ are often not distinguished in some Chinese languages (Pavlik, 2012, p. 7), often causing confusion for both the student and their interlocutors when these consonants are not articulated properly. In addition, research has found that, in fact, it is English vowels that are most difficult for Chinese-speaking L2 English learners (Jin & Liu, 2014). Chinese languages tend to have fewer vowel sounds than English, meaning English vowels are closer together (Swan & Smith, 1999). Especially as this essay examines adult learners, it is increasingly important to make efforts to consciously teach students how English vowels are different to Chinese. The older a student is, the more likely it is that L1 vowels are used in the L2, making understanding the L2 more difficult (Baker et al., 2008). Because Chinese languages lack distinction between tense and lax vowels while English distinguishes between short and long vowels, Avery and Ehrlich (2012) found that Chinese students often end up making short vowels too long but long vowels too short. Indeed, this could mean a word like 'hit' is interpreted as heat due to mistakenly elongating the vowel, causing confusion in spoken English. To lessen confusion, Tubbs (2016, p. 16) advocates for 'a systematic treatment' of English vowels complemented with knowledge of how Chinese and English differ phonetically, which can 'be of great benefit in helping students to be better understood'. Certainly then, we can see that an understanding of phonetic diversity has benefits for both Chinese students and their teachers.

## 4 Conclusion

In short, the implications of understanding and applying our knowledge of language universals and language diversity to second language learning and teaching are that adult Chinese students should become more aware of what may be difficult when acquiring English as an L2, while teachers should be able to provide more targeted assistance in these problem areas. Specifically, we know that UG is an innate cognitive mechanism that both helps and hinders SLA, and understanding this means teachers can find ways to best overcome these cognitive restraints. Knowing that languages can be diverse in many aspects such as in discourse-patterns and phonetics mean both learners and teachers of L2 English can reduce misunderstanding and confusion through better grasp of both Chinese and English. Such knowledge of the differences between both languages, and the special features of English, may ultimately provide students with a better chance to master English.

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