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PREFACE

It is not without some degree of sadness that we present the third edition of Nuanced Garbling in an exclusively online format. Initially, there was hope for another year of distributing physical copies of the journal to our members, and discussing contributions in-person – unfortunately, this was not to be. Throughout the year, we still managed to hold online discussions and events, although the elusive in-person pub night tragically never eventuated. Hopefully, this online journal serves as a fitting bookend to a year of online discussions in linguistics amongst the club's regular event attendees.

This year's journal contains a diverse set of papers on topics such as markers of accent in colloquial Australian English, the grammar of Australian Indigenous languages, and the very concept of what it means to be a 'native speaker' of a particular language. Every single author included in this volume deserves enormous congratulations. Each of their papers represents an immense amount of work, not only because of the dedicated research required to produce it, but also the immense isolation from academic and social peers throughout the course of such research. It has been hard, at times, to keep up the regular discussion of an academic topic such as linguistics in the current environment.

The first goal of Nuanced Garbling, as stated in the editor's note of the first ever issue two years ago, is to allow passionate students of linguistics to "share their achievements and to inform other students." It is our sincere hope that current students of linguistics, from those entering their undergraduate degrees to those pursuing graduate studies and beyond, can inform each other of the fascinating linguistic research they have each been pursuing from within their own little slice of locked-down life. If you read something in here that interests you, please, write to the club, get in contact with the author, and re-start the discussion.

Happy reading,

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Evidentiality and Epistemics in Australian Indigenous Languages

Rachael Skerritt

1 Introduction

Many Australian languages have linguistic forms that express the concept of information source, known as ‘evidentials.’ In this paper, I adopt Mushin’s (2001) concept of ‘epistemological stance’, an approach that considers both information source (evidentiality) as well as the construal of speaker attitude to information (epistemic stance). Mushin’s model defines five epistemological stances: personal experience, inferential, reportive, factual, and imaginative. In this paper, I will first show how these categories can be applied to Australian Indigenous languages, then explore the reportive epistemological stance in three languages, Martuthunira, Warlpiri, and Diyari, to highlight the similarities and differences between the three languages.

2 Background

2.1 Evidentiality and Epistemic Stance

There have been many different approaches to epistemics and evidentiality in the literature, and almost every scholar has a different approach, as well as their own terminology. Broadly speaking, evidentiality is the grammatical coding of information source in language (Aikhenvald, 2018; Boye, 2012; Jakobson, 1957; Mushin, 2012). However, many scholars argue that evidentiality is actually about indexing attitudes to information source, which is known as the broad definition of evidentiality (Chafe & Nichols, 1986). Speaker attitude or orientation towards knowledge is also known as epistemic stance (Heritage, 2012; Kockelman, 2004; Mushin, 2013; Sidnell, 2012) and epistemic modality (Palmer, 1986; Willett, 1988). Scholars using the broad approach include Chafe and Nichols (1986), Mushin (2001), Palmer (1986), Sidnell (2012), and Willett (1988). Proponents of a broad approach argue that using a narrow definition does not capture the range of pragmatically motivated ways speakers use markers of information source (Mushin, 2001).

2.2 Epistemological Stance

In this essay, I adopt the analysis of Mushin (2001), whose approach incorporates both evidentiality as well as epistemic stance. Mushin uses the term ‘epistemological stance’ to describe the stance that speakers take towards how they acquired information (information source – evidentiality), and as well as speaker attitude towards that information (epistemic stance).

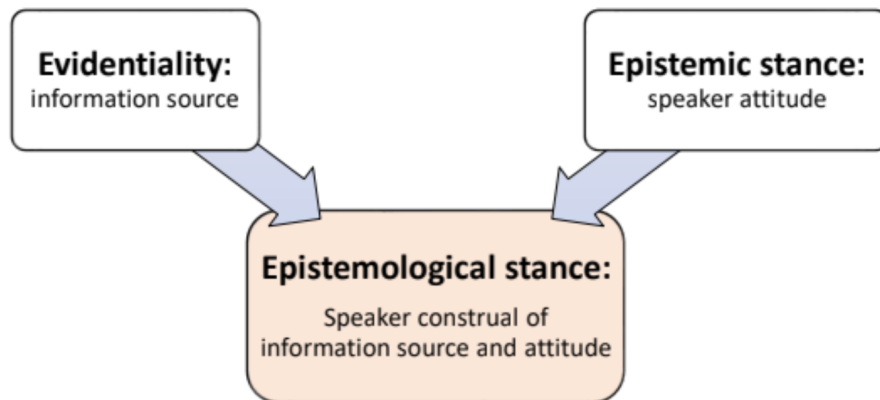


Figure 1: Epistemological stance combines evidentiality and epistemic stance

Even in languages with highly grammaticalised or compulsory systems of evidential encoding there is always construal of events by the speaker (Mushin, 2001, p. 58). Speakers can choose to construe events in different ways. Additionally, most languages that evidential markers can be used for other functions that do not specifically relate to information source (Mushin, 2001). For example, in several of the languages surveyed in this essay, reportive/hearsay particles are used for emphasis in imperative statements, even when the actual utterance is not hearsay. Additionally, evidential markers can be used for other functions such as irony and sarcasm, where the evidential is not actually encoding information source. The concept of epistemological stance captures the fact that information source and speaker attitude are two distinct components that influence how speakers construe information in discourse. Epistemological stance is assumed to be universal, but its actual manifestation in language and discourse will vary between languages and cultures. I have chosen to adopt this model because it captures the pragmatic motivations speakers have for choosing particular evidential forms in a way that a narrow model of evidentiality, such as Aikhenvald (2018), does not capture.

2.2.1 Evidentiality and Epistemics in Australian Languages

There has been very little typological discussion about evidentials and epistemic stance with a specific focus on Australian languages. Epistemic authority has been explored in Murrinhpatha (Mansfield, 2019), Warlpiri (Bowler, 2015), and Jaminjung/Ngaliwurru (Schultze-Berndt, 2017). Epistemic authority is the authority or right to speak about information, and ties into the cultural norms and systems that govern knowledge in many Australian Indigenous cultures (Mansfield, 2019). For example, in Warlpiri communities there are gender-segregated knowledge domains called men's/women's business. Warlpiri social norms govern who is allowed to know what, and members of one gender are not allowed to know the other's business (Bowler, 2015). Many Australian languages have particles, suffixes, or clitics that can encode information source and/or epistemic stance. Kayardild encodes evidentiality by using different types of finite subordinate clauses (Evans, 1995). The widespread presence of grammatical markers of evidentiality and of epistemic stance is perhaps a reflection of the importance of communication information source in Australian Indigenous cultures.

3 Epistemological Stance in Australian Languages

Recall that the term ‘epistemological stance’ describes the stance or attitude that speakers take towards how they acquired information (Mushin, 2001). Epistemological stance factors both evidentiality (information source) as well as epistemic stance (speaker attitude). I will now illustrate the types of epistemological stance that Mushin proposes, using examples from Australian languages.

3.1 Types of Stance

Personal experience: This epistemological stance construes information as coming from a speaker’s direct personal experience with a high degree of certainty. Particles or clitics expressing this stance are found in languages such as Ngiyambaa (Donaldson, 1980) Diyari (Austin, 2013), Jaminjung/Ngaliwurru (Schultze-Berndt, 2017), and Garrwa (Mushin, 2012).

- (1) *ngapa thalara wakara-lha ngana-yi-ku*
 water rain.nom come-fut aux-pres-sense
 ‘It looks/feels/smells like rain will come’

Diyari (Austin, 2013, p. 190)

Inferential: An inferential stance construes information as being acquired by inference or deduction on the basis of evidence that the speaker has. This stance can represent information coming from a private state, such as personal sensations, and can also represent information coming from public experiences that the speaker directly witnessed, which others may have also witnessed. Languages with morphological forms expressing this stance include Murrinhpatha (Mansfield, 2019) and Mangarayi (Merlan, 1989).

- (2) *karinganta Jakamarra ngulaju Napanangka-kurlangu*
 PP.ASSERT Jakamarra that is Napanangka-POSS
 ‘I know he’s a Jakamarra because his mother is a Napanangka.’

Warlpiri (Laughren, 1982, p. 145)

Reportive: This stance identifies the information as having been received from a third party. The level of certainty encoded by this stance varies between languages. Particles or clitics expressing this stance are found in languages such as Ngiyambaa (Donaldson, 1980), Diyari (Austin, 2013), Mparntwe Arrernte (Wilkins et al., 1989), Warlpiri (Laughren, 1982), Martuthunira (Dench, 1995), and Yankunytjatajara (Goddard, 1985). I explore reportives in greater detail in section 4.

Factual: This stance presents information as a verifiable fact. It conveys a high degree of certainty. Diyari has a suffix *-matha* ‘identified information’ that is used when the speaker wants to assert knowledge about a particular referent.

- (3) *marnpi, yani-ldra-matha nhawu yatha-lha ngana-yi,*
 pigeon.nom like this-addinf-ident 3sgnf.nom speak-fut aux-pres
mungka-rna-ldra-matha
 coo-imperfSS-addinf-ident
 ‘The bronzewing pigeon, it will call like this too, cooing as well’

(Austin, 2013, p. 187)

Imaginative: This stance involves a complete suspension of reality and a transition into an imaginary scenario. Many Australian languages encode this epistemological stance morphological using the irrealis. One example is Murrinhpatha, where the irrealis is used to express a range of hypotheticals, such as counterfactual statements, conditional statements, and negated statements.

- (4) *mere ngurri-dha Ngandimeli-yu*
 NEG 1SGS.GO(6).PSTIRR-PIMP Ngandimeli-DM
 ‘I didn’t go to Ngandimeli (yesterday).’

(Nordlinger & Caudal, 2012, p. 26)

4 Reportive Epistemological Stance

This epistemological stance involves construing information as being acquired from something someone else said (Mushin, 2001). It attributes the information to a third party, and completely distances the speaker from the information. This can either be direct, as in a direct quote, or indirect, as in a paraphrase. A direct reportive stance involves the optional use of a speech act predicate and reference to another speaker, as well as a shift in deictic centre from the time and space of the actual speech act (Mushin, 2001). This has typically been referred to as a reportive evidential in the literature. The reportive epistemological stance collapses the two categories of quotatives and reportives in Aikhenvald (2018) typology of evidentials. It also corresponds to an evidential based on hearsay under the typology of evidentials used by Palmer (1986). Reportive stances can also be used to distance oneself from the content of the utterance. A reportive stance can be construed as reliable or unreliable, depending on the source of the information.

4.1 The Surveyed Languages

Diyari: Diyari is a suffixing, typically SOV Pama-Nyungan language spoken by a small number of people in north-eastern South Australia (Austin, 2013). The language has several particles and inflectional suffixes, some of which express evidentiality or epistemic stance.

Martuthunira: Martuthunira was a Pama-Nyungan language that was spoken in the Pilbara region in Western Australia (Dench, 1995). The last speaker of Martuthunira died in 1995 (Ritz

& Dench, 2009). The language had several particles that Dench calls ‘propositional modifiers’, since the particles functioned to add pragmatic information about a given statement or proposition. The reportive clitic *-nu* behaved in a similar way to the particles. Dench (1995, p. 13) reported that conventions around classificatory kin relationships dictated what topics could be spoken about in the presence of different kin. Martuthunira had an avoidance register that was used around certain kin (either biological or classificatory).

Warlpiri: Warlpiri is a non-configurational Pama-Nyungan language spoken in the Northern Territory (Hale, 1983). Warlpiri has a range of propositional particles that encode speaker attitude towards the proposition. Some particles indicate source of information as well as speaker attitude. As previously mentioned, Warlpiri social norms govern who has access to certain knowledge and members of one gender are not allowed to know the other gender’s business (Bowler, 2015). Warlpiri has an avoidance register that is used around certain kin, both biological and classificatory (Bowler, 2015).

4.2 Comparison of Reportive Stance in Diyari, Martuthunira, and Warlpiri

Diyari:

Pinthi: ‘reportedly’

This particle means ‘reportedly’ or ‘rumoured’ and is used to indicate that the information or assertion that the speaker is talking about is not their own opinion, but is information that has come from someone else. In doing so they make no commitment to the truthfulness of the utterance. Unlike other particles in Diyari, *pinthi* can only ever be the first or last word of the clause it has scope over.

- (5) *pinthi nhawu wakara-yi*
 rumoured 3sgnf.nom come-pres
 ‘They say he is coming’
- (6) *thana-li waru mama-rna wanti-yi kupa pinthi*
 3pl-erg long.ago.loc steal-ptcple aux-pres child.acc rumoured
 ‘It is said that they used to steal children long ago’

(Austin, 2013, p. 179)

Martuthunira:

-nu: ‘reportedly, so they say’

This is a clitic that is used to indicate that the information or assertion is information that has come from someone else. This clitic is most commonly used for discussing information in the form of mythology. It is used when the speaker wants to distance themselves from the assertion they are making, as in the example below:

- (7) *Nhiyu-nu yarta-lpurtu-nu parla-nu panyu paju.*
 this.NOM-QUOT other-COMP-QUOT hill-QUOT good REAL
 ‘(It is said) this hill is different, it’s very good apparently.’

(Dench, 1995, p. 168)

Note how in the previous example, each element of the reported clause receives the suffix. This is reminiscent of the multiple case marking that occurs in Martuthunira. This is not always the case, however. The clitic is also used for direct orders and suggestions:

- (8) *Kartu-nu, manyka, puni-layi-rru thanuwa-a-rru mungka-ru.*
 2SG.NOM-QUOT son go-FUT-NOW food-ACC-NOW eat-PURPss
 ‘Son, you’re supposed to go and eat some food.’

(Dench, 1995, p. 168)

According to Dench (1995), the propositional modifiers have scope over the constituent that immediately precedes them. An exception to this is when the clitic -nu combines with the particle *mir.ta* ‘not,’ which is forward-scoping.

- (9) *Mir.ta-nu jarruru kanarra patha-rralha.*
 not-QUOT slowly wind blow-PST
 ‘The wind didn’t blow slowly (so they say).’

(Dench, 1995, p. 167)

In addition, the clitic is used when someone is directly quoting speech, as in the following example:

- (10) *Ngunhaa wangka-layi yartapalyu-u “Nhiyu-nu wirra ngathu*
 that.NOM say-FUT others-ACC this.NOM-QUOT boomerang 1SG.EFF
yinka-rnu”.
 chisel-PASSP
 ‘He says to the others, “This is a boomerang made by me.”’

(Dench, 1995, p. 167)

Warlpiri:

Nganta: ‘reportedly’

Interestingly, Warlpiri contains two reportive particles that have slightly different connotations (Harkins, 1986). *Nganta* is used to indicate that the information or assertion came from someone else. *Nganta* is used to distance oneself from the proposition, but implies that someone did

actually say the statement and it is being repeated (Laughren, 1982). *Nganta* also implies that the listener can recover where the information came from based on paralinguistic contextual clues. Laughren (1982, p. 139) states that “the use of *nganta* often involves a very high degree of co-operation or shared knowledge between speaker and addressee so that a specific value (referent) attaches to the role of original author”. This differs from the two previously discussed reportive particles in Diyari and Martuthunira, which encode a more general concept of “so they say” or “it is said,” which does not imply that the knowledge was gained from a specific person.

- (11) *Ngana-ngku nganta parkarnu?*
 who-ERG PP1 hit-PST
 ‘Who reportedly hit him?’/‘Who does she say hit him?’¹

- (12) *Ngana-ngku mayi nganta parkarnu.*
 who-ERG eh? PP-reportedly hit-PST
 ‘I don’t know who reportedly hit him.’/‘I don’t know who she says hit him.’

(Laughren, 1982, p. 140)

Nganta can also be used with imperatives for emphasis and is sometimes used to indicate that the speaker disagrees with the reported statement, sometimes in a sarcastic way:

- (13) *Yuntardi nganta!*
 beautiful PP1
 ‘She’s beautiful, so they say!’

(Laughren, 1982, p. 141)

O’Shannessy (2005, p. 51) reports that *nganta* is also used in Light Warlpiri, a variety of Warlpiri that emerged from the code-mixing of Kriol, English, and Warlpiri. The meaning of *nganta* in Light Warlpiri is largely the same as found in Warlpiri.

Murra: ‘reportedly’

Murra is used in a similar way to *nganta*, in that *murra* indicates that the information or assertion came from someone else, but *murra* also implies that the speaker agrees with the proposition (Laughren, 1982). It does not have the same connotations that *nganta* has of an actual utterance that a specific person said, nor can it be used in a sarcastic or sceptical way, as *nganta* can be. Laughren (1982, p. 158) notes that it tends to imply that the speaker agrees with the proposition, unlike *nganta* which tends to be used when the speaker disagrees with the proposition.

¹Note that Laughren glosses the propositional particles as PP.

- (14) *Murra-ja ka-lu nga-rni kuyu.*
 PP.QUOTE-EMPH IMPF-3PL eat-nonPST meat.
 ‘Reportedly they eat it for the meat.’

(Laughren, 1982, p. 158)

5 Conclusions

In this essay, I have applied the concept of epistemological stance to several Australian languages. I first explored the concept of evidentiality (the grammatical encoding of information source) as well as the concept of epistemic stance (the grammatical encoding of speaker attitude). I then explored the model of epistemological stance proposed by Mushin (2001) that unifies these two concepts, and introduced the epistemological stances of personal experience, inferential, reportive, factual, and imaginative. I applied these categories to several Australian languages. I then explored the reportive stance in detail in Diyari, Martuthunira, and Warlpiri. I have shown that it is not accurate to say that the sole function of reportive particles such as *pinthi* (Diyari), *-nu* (Martuthunira), and *murra* (Warlpiri) is to encode information source, since other functions occur, such as the expression of irony or incredulity. These morphemes are also used in imperatives where the statement does not actually come from a third party.

Warlpiri has a general reportive particle (*murra*) as well as a specific reportive particle (*nganta*) that is used to imply that the information was received from a specific person, the identity of whom can often be recovered from the context. There is also some evidence that *murra* is used when the speaker disagrees with the statement, and *nganta* is used when the speaker agrees with the statement, giving clear evidence that these particles encode speaker attitude as well as the source of information. More research is needed to elucidate whether the two particles in Warlpiri are an example of an implicational hierarchy, and whether such a distinction is found in any other languages. There is currently very little research specifically addressing evidentiality and epistemic stance in Australian languages, and much more research is required to fully elucidate these concepts.

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Targets of Surprise: A Cross-Linguistic Account of Mirativity

Brooke Hanson

1 Introduction

First coined by Delancey (1997) less than 25 years ago, 'mirativity' stands as a newfound revelation in the field of linguistic typology. The category refers to the grammatical marking of information, which is new or surprising for a speaker and not yet integrated into their overall knowledge system (DeLancey, 2001; Delancey, 1997). Its emergence as a feature independent of other related epistemic categories, such as evidentiality (Aikhenvald, 2012; DeLancey, 2012), has seen mirativity rapidly evolve since its inception.

One development that has been key in extending the notion of mirativity concerns who the fundamental meaning of surprise relates to. In their seminal paper, Hengeveld and Olbertz (2012) argue that, contra (Delancey, 1997), mirative marking can apply where a proposition represents newsworthiness or unexpectedness solely for the addressee, and not simply the speaker. This has been further expanded upon by Fang (2018), who claims that mirativity can be targeted towards both speaker and addressee at once.

In its present state, mirativity may hence be directed towards either the speaker, the addressee, or both simultaneously. Despite acknowledging this variation, the literature fails to clarify whether all languages with a mirative marker are capable of expressing all three interpretations. Through a cross-linguistic comparison of Magar, Tarma Quechua and Mandarin, this paper aims to address this question. It will be argued that not all languages can target the full range of discourse participants, and that the types of participants targeted are influenced by the temporal domains that a language's mirative can occur in.

The paper begins by providing a brief introduction to Magar, Tarma Quechua and Mandarin. Following will be a comparison of the discourse participants that these languages' mirative can target. Differences in the languages' discourse participants will then be analysed according to the temporal environments that the languages' mirative can exist in. The final section will offer a conclusion.

2 An Introduction to Magar, Tarma Quechua and Mandarin

2.1 Magar

Magar is a Central Himalayish language spoken in Nepal that belongs to the Tibeto-Burman language family. As in (1), its mirative takes the form of a complex verb construction, where

the verb stem *das* 'leave' attaches to the nominaliser *-o* and is followed by the grammaticalised copula *le* (Grunow-Hårsta, 2007). This copula also has the function of an imperfective marker and auxiliary (Grunow-Hårsta, 2007).

- (1) *hose-ko das-o le*
 D.DEM-PL leave-NOM IMPF
 '(I realise to my surprise that) They are leaving!'
 (Grunow-Hårsta, 2007, p. 176)

The verb complex in Magar expresses surprise at a fact that was not anticipated for (Grunow-Hårsta, 2007). This can be observed in (1), where the speaker was not mentally prepared for the relevant persons' departure.

2.2 Tarma Quechua

Tarma Quechua belongs to the Quechua language family and is spoken in the province of Tarma in Peru. Unlike Magar, Tarma Quechua uses the verbal affix *-na-* to encode the mirative (Adelaar, 2013). Cross-referential person marking affixes are suffixed to *-na-*, with the most common affix being *-q* (Adelaar, 2013). This affix indicates a 3rd person agent/subject, and is cross-referential with *turumanya* 'rainbow' in the case of (2). The *-naq-* form will be used throughout the paper.

- (2) *turumanya inti-ta-m muyu-ra-ya:-naq*
 rainbow sun-ACC-CERT turn-CONT-PROG-3A/S.MIR
 'a rainbow was surrounding the sun'
 (Adelaar, 2013, p. 102)

Although the *-na-* mirative marker is used in circumstances of sudden discovery, as in Magar, it is reserved for objective statements only (Adelaar, 2013). The observation about the rainbow in (2) is hence uttered without the same emotion that accompanies (1) in Magar.

2.3 Mandarin

Mandarin is a Sino-Tibetan language spoken worldwide. Unlike Magar or Tarma Quechua, Mandarin uses the sentence-final particle *le* to encode mirativity, as per (3) (Fang, 2018). Its form is generally homophonous with the post-verbal perfective marker, though exceptions are possible (Fang, 2018).

- (3) *ta tong-yi wo qu le.*
 3SG agree 1sg go MIR
 'He allowed me to go!'
 (as cited in Fang (2018, p. 591))

Similar to Magar and Tarma Quechua, the mirative marker is used to react to unknown and surprising information (Fang, 2018). However, unlike Tarma Quechua, Mandarin miratives, like Magar miratives, express speaker emotion, as indicated by the exclamation in (3).

3 Discourse Participants

Delancey (1997) first characterised mirativity as the “status of [a] proposition with respect to the speaker’s overall knowledge system” (p.33). While it is often the speaker’s relation to a novel or unexpected happening that warrants mirative marking, marking has also been found to occur where the belief system of an addressee or both addressee and speaker is challenged (Fang, 2018; Hengeveld & Olbertz, 2012). However, as will be shown below, not all languages are capable of targeting this full range of discourse participants with their mirative construction.

3.1 Magar

As is the case in a number of Tibeto-Burman languages, the primary discourse participant targeted by the Magar mirative is the speaker (Aikhenvald, 2012). This is seen in (4), where the speaker expresses surprise over the moving spirit.

- (4) *bhūt wɦa-o le*
 spirit move-NOM IMPF
 ‘(I realise to my surprise that) The spirit is moving!’
 (Grunow-Hårsta, 2007, p. 177)

This use of the mirative is so common in Magar that the first-person speaker in (4) is omitted from the sentence and is understood from context to be the entity experiencing new knowledge (Grunow-Hårsta, 2007).

A less common application of the mirative can be seen in (5), where mirativity is targeted towards the addressee, not the speaker. In Magar, this occurs in narrative and is used when an omniscient narrator states a fact that is contrary to the audience’s expectations (Grunow-Hårsta, 2007). The narrator thus employs the mirative in (5) not because they were surprised by the girl living with the frog, but because it is anticipated that this information will be unexpected for the audience, who is the ultimate addressee.

- (5) *ɦatai rokotyak kɦai mu-o le-a ta*
 then frog with sit-NOM IMPF-PST REP
 ‘They say that (the girl), surprisingly, went to live with the frog.’
 (Grunow-Hårsta, 2007, p. 185)

3.2 Tarma Quechua

Unlike in Magar, the mirative in Tarma Quechua almost never exclusively targets the speaker (Adelaar, 2013). A far more common use is seen in (6), where a proposition provokes a sudden realisation on behalf of the addressee. As in Magar, this operation of the mirative is used in the narrative genre (Adelaar, 2013). The activity of the toads in (6) is hence not a discovery of the narrator, but an expected one of the audience.

- (6) *rachak-shi kinra-n kinra-n çura-naka-ra-ri-naq*
 toad-REP side-3POSS side-3POSS place-RECIP-PERV-PL-3A/S.MIR
çaski-yubay-si
 relay_runner-COMPAR-ADD
 ‘The toads had [placed] each other on different spots along the track as in a relay-race.’
 (as cited in Adelaar (2013, p. 103))

Mirative meaning in Tarma Quechua may also be targeted at both speaker and addressee together (Adelaar, 2013), which is not possible in Magar. This occurs in (7), where neither the speaker nor addressee know whether the object moves, and so are both unprepared for the potential outcome.

- (7) *ma: tupa-yu-y kuyu-ri-naq-chu-sh*
 let_us_see bump_into-DIR-2A/S.IMP move-INCEP-3A/S.MIR-INTER-REP
 ‘why do not you [sic] give it a push to see if it moves or not!’
 (Adelaar, 2013, p. 105)

3.3 Mandarin

Like in Magar, the Mandarin mirative frequently targets the speaker (Fang, 2018). This is seen in (8), where the mirative indicates that the speaker did not anticipate the movie to provoke such high emotion.

- (8) *zhe bu dian-ying tai gan ren le!*
 this CL movie too touching people MIR
 ‘This movie is so touching!’
 (Fang, 2018, p. 597)

As in Magar and Tarma Quechua, the Mandarin mirative may also be directed towards the addressee (Fang, 2018). In (9), the mirative is hence not used to express the speaker’s surprise at all the food being eaten. Rather, it seeks to encode the foreseeable shock of the addressee, who has not yet integrated this new knowledge into their mental system.

- (9) *neng chi de dou chi le*
 can eat ATTR all eat PFV.MIR
 ‘All edible things were eaten.’
 (Fang, 2018, p. 598)

Like in Tarma Quechua, mirativity in Mandarin may also be targeted towards both the addressee and speaker at once (Fang, 2018). Thus, in (10), the upcoming departure of the train is not only surprising for the speaker, but also for the surrounding passengers.

- (10) *huo-che kuai yao kai le.*
 train fast will operate MIR
 ‘The train is about to leave!’
 (Fang, 2018, p. 601)

3.4 Summary

As summarised in Table 1, only the Mandarin mirative is able to target all three possible discourse participant options. Magar and Tarma Quechua are limited to only two combinations. This suggests that the preliminary definition of mirativity that concerns only the speaker (DeLancey, 1997), and the extended definition that includes the addressee and both speaker and addressee (Fang, 2018; Hengeveld & Olbertz, 2012), do not apply to all languages with a mirative marker. Rather, the discourse participants covered by these definitions act only as a set of possibilities, which a language’s mirative may or may not target.

There are, however, underlying temporal trends that influence the type of discourse participants that a language’s mirative may pick out. This will be discussed in the next section.

	Speaker	Addressee	Speaker and Addressee
Magar	X	X	
Tarma Quechua		X	X
Mandarin	X	X	X

Table 1: Targeted Discourse Participants

4 Temporal Domain

Due to its connection with newly attained knowledge, mirativity has long been associated with temporal reference (Bustamante, 2012; DeLancey, 2001; Delancey, 1997; Fang, 2018). As noted by Delancey (1997), a speaker can only be in contact with unknown information for a limited time before it ceases to retain its surprising value when uttered. The issue of time lapse thus means that, where a speaker is targeted, mirative marking most naturally occurs in the present tense and imperfective aspect (DeLancey, 2001; Delancey, 1997; Ko, 1989).

Despite this relationship being established between temporality and mirative marking, it is framed only in terms of the speaker. Indeed, this relationship has yet to be formally expanded to the discourse participants of addressee or both speaker and addressee (Fang, 2018; Hengeveld & Olbertz, 2012). Building on the theory of Delancey (1997), it will hence be argued that the temporal domain of a mirative construction is not only influential in determining whether a speaker is targeted, but also whether an addressee or both a speaker and addressee are targeted.

4.1 Magar

In Magar, the mirative may only be expressed in the non-past imperfective aspect when the knowledge system of the speaker is concerned (Grunow-Hårsta, 2007). This is seen in (1), where the grammaticalised copula *le* functions as an imperfective marker in the unmarked present tense. As stated by Delancey (1997) and Ko (1989), this is only logical, since the ongoing and immediate movement of the spirit coincides with the direct perception of the speaker, and must therefore mean that it was hitherto unknown knowledge.

- (1) *bhut wħa-o le*
 spirit move-NOM IMPF

‘(I realise to my surprise that) The spirit is moving!’
(Grunow-Hårsta, 2007, p. 177)

In (12), however, the imperfective marker *le* is now marked with the past tense suffix *-a*. This reflects the fact that the narrator is already aware that the girl lives with the frog and is no longer unprepared for this information. The only possible explanation for mirative marking, then, is that this knowledge will be surprising for the audience at the moment of utterance.

- (12) *hatai rokotyak kathai mu-o le-a ta*
then frog with sit-NOM IMPF-PST REP
‘They say that (the girl), surprisingly, went to live with the frog.’
(Grunow-Hårsta, 2007, p. 185)

4.2 Tarma Quechua

The Tarma Quechua mirative *-naq-* is in a paradigmatic relationship with tense in the verb complex (Adelaar, 2013). However, the mirative clause may continue to refer to past and future events, as well as combine with progressive, customary and perfective aspects (Hengeveld & Olbertz, 2012). No examples of the mirative referencing a present event have been documented (Adelaar, 2013).

As indicated by *-ra-*, the mirative in (13) is set in the perfective aspect and refers to a past event. This indicates that the activities of the toads are completed in the mind of the narrator and have been integrated into their knowledge at some point in the past. Like in Magar, this past reference means that the mirative must only represent novelty for an audience.

- (13) *rachak-shi kinra-n kinra-n çura-naka-ra-ri-naq*
toad-REP side-3POSS side-3POSS place-RECIP-PERV-PL-3A/S.MIR
çaski-yubay-si
relay_runner-COMPAR-ADD
‘The toads had [placed] each other on different spots along the track as in a relay-race.’
(As cited in Adelaar (2013, p. 103))

Reference to a future event is made in (14) (Adelaar, 2013), where the object has not yet moved. Since the outcome of the experimental push has not been realised in either the past or present, neither the speaker nor addressee have had the opportunity to integrate this knowledge. The mirative hence extends to both participants.

- (14) *ma: tupa-yu-y kuyu-ri-naq-chu-sh*
let_us_see bump_into-DIR-2A/S.IMP move-INCEP-3A/S.MIR-INTER-REP
‘why do not you [sic] give it a push to see if it moves or not!’
(Adelaar, 2013, p. 105)

4.3 Mandarin

The Mandarin mirative can exist in past, present and future temporal domains (Li & Thompson, 1981). It may also combine with the perfective aspect (Fang, 2018).

Like in Magar, mirative marking in Mandarin targets the speaker if it occurs in a present time frame. This is seen in (15), where the speaker's unexpected fondness of the movie is perceived directly as they are watching it. This knowledge is hence still new to the speaker.

- (15) *zhe bu dian-ying tai gan ren le!*
 this CL movie too touching people MIR
 'This movie is so touching!'
 (Fang, 2018, p. 597)

As in Magar and Tarma Quechua, an addressee is targeted in Mandarin where mirative marking relates to a past event. Similar to Magar, this use of the mirative is also expressed in the perfective aspect through the multifunctional use of *le*. This is observed in (16), where the absence of any food has previously been acknowledged by the speaker and represents a completed state of affairs in their mind. The information may therefore only be newsworthy to an uninformed addressee.

- (16) *neng chi de dou chi le*
 can eat ATTR all eat PFV.MIR
 'All edible things were eaten.'
 (Fang, 2018, p. 598)

Like in Tarma Quechua, mirativity extends to both speaker and addressee in (17) due to there being a future time reference. In (17), neither the speaker nor their fellow passengers have experienced the forthcoming and unexpected departure of the train. Both are hence waiting to integrate this upcoming moment into their present knowledge (Fang, 2018).

- (17) *huo-che kuai yao kai le.*
 train fast will operate MIR
 'The train is about to leave!'
 (Fang, 2018, p. 601)

4.4 Summary

As summarised by Table 2, there is a consistent, cross-linguistic pattern concerning which discourse participants a language's mirative may target. The knowledge system of the speaker is most frequently targeted where the mirative occurs in a present temporal domain. If aspect is involved, it is usually imperfective in this case. A different temporal environment is required for addressees, who are targeted in the context of a past event. If aspect is involved, it is typically perfective, though the imperfective may also be used in this instance. Finally, an association between mirativity and both speaker and addressee is formed if the relevant event has a future reference.

A mirative's failure to target certain discourse participants may hence be linked to its inability to occur in the relevant temporal environment.

	Past (+ Perfective / Imperfective)	Present (+ Imperfective)	Future
Speaker		X	
Addressee	X		
Speaker and Addressee			X

Table 2: Temporal Reference and Targeted Discourse Participants

5 Conclusion

Mirativity's status as a newly defined typological category has seen it become the subject of numerous studies, which have since advanced its preliminary application. Rather than merely expressing surprise on behalf of the speaker (Delancey, 1997), mirative marking has also been found to pertain to the knowledge system of addressees and both speaker and addressee at once (Fang, 2018; Hengeveld & Olbertz, 2012). The unanswered question of whether every language with a mirative marker can target this full range of discourse participants has been the focus of this paper. Through a cross-linguistic comparison of Magar, Tarma Quechua and Mandarin, it has been argued that this is not the case and that the types of participants targeted are influenced by the permissible temporal domains of a language's mirative construction. While this latter point in particular would benefit from further examples to test its validity, this paper has at least provided a starting point for future studies that examine the relationship between mirativity and its targeted discourse participants.

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Body Parts in Australian Languages

Rachael Skerritt

1 Introduction

Body parts are an ideal way to examine the theory of linguistic relativism, because we all have (roughly) the same body parts, giving us an equivalent point of comparison across languages and cultures. Does the way a language talks about and refers to the body influence the way its speakers conceive of or imagine the body? Are there universals in the way languages refer to the body? Studies in body partonomy – the way languages refer to the body – are only just beginning to answer these questions. So far, relatively little attention has been paid to Australian Indigenous languages and the way these languages refer to the body. In this essay, I will highlight patterns in the way body parts are labelled in Australian languages, a phenomenon also known as body meronymy or partonomy. Australian languages often derive labels for particular body parts from the labels of other body parts. Although not necessarily a typologically rare phenomenon, some Australian languages show higher levels of this kind of compounding than has previously been documented. Additionally, several languages from across the Australian continent have one word for the nose and face – something that previous typological surveys have shown as very rare. In this essay, I will also discuss some previously under-recognised typological diversity present in Australian languages. I will also compare previous partonomy studies with available information from a survey I conducted using grammars of Australian languages, and point to future areas of investigation that may shed light on whether the language we speak constrains the way we see the world.

2 Background

Linguistic relativity, also known as the Sapir-Whorf hypothesis, has generated consistent debate in linguistics over the years. Studies in linguistic relativity are aimed at showing how the language we use shapes the way we think. Body partonomy has received a comparatively small amount of research attention over the past few decades. While it is often assumed that all languages and cultures divide up the body in the same way, there is actually significant diversity cross-linguistically (Majid, 2010). Many languages divide up the limbs by joints, which function as a clear visual boundary between parts of the body. Studies in cognitive neuroscience and behavioural psychology have shown that the joints represent cognitive/perceptual boundaries in the segmentation of the body, and that these perceptual segmentation boundaries appear from a young age (De Vignemont et al., 2009; Le Cornu Knight et al., 2017; Shen et al., 2020; Shen et al., 2018). However, some authors argue that there is more crosslinguistic

diversity in the words used to refer to body parts, as well as in speakers' mental representations of the body, than has previously been recognised (Devylder et al., 2020; Enfield et al., 2006). Although it is very common that languages divide the body up at the joints, this is not always the case. For example, Tidore, a Papuan language spoken in Indonesia, has a word that describes the lower limb from the foot to three-quarters up the thigh (Van Staden, 2006). Many languages have a word that refers generally to the region that covers both the arm and hand, thus ignoring the wrist joint. Similarly, many languages have one word that refers to the lower leg and foot, such as in the Inuit language Iñupiaq, or Purépecha, spoken in the highlands of Mexico (Brown, 1976). Clearly, there is diversity in the way languages refer to the body.

The way languages divide up the body is known as meronymy or partonymy. Initial studies in this area are credited to Brown (1976) and Andersen (1978), who were motivated to find linguistic universals with regards to the way languages refer to body parts. A key concept from Brown (1976) is the concept of 'partonymy', being the hierarchical division of the body into parts, beginning from the body as a whole, which is then subdivided into parts on another level, which are in turn subdivided into more parts. The body is superordinate to its parts (such as the head, torso, and limbs). These parts are themselves superordinate to the next level of parts which are superordinate to the next level of parts – such that the arm is composed of the upper arm and forearm (Brown, 1976). On the basis of his survey of 41 languages, Brown (1976) proposed a number of linguistic universals, all of which rested on the assumption that all languages have a partonymy. Other authors have also argued that the concept of 'having parts' is a universal feature of human language (Goddard & Wierzbicka, 1994; Wierzbicka, 2007). However, other authors have argued that there are languages that do not have a concept of 'part' or that do not have a partonymy (Devylder et al., 2020; Enfield et al., 2006; Gaby, 2006a).

A special issue of Language Sciences (volume 28, issue 2-3, 2006) contained a cross linguistic investigation of body part terms and their conceptualisation in 10 languages of the world (Jahai, Lao, Kuuk Thaayorre, Yéli Dnye, Punjabi, Tiriyo, American Sign Language, Tidore, and Savo Savo). While it was found that several of the languages did indeed have a concept of the body as a whole several languages – Kuuk Thaayorre, Tidore, and Savo Savo – lacked the concept of 'body' and instead had a broader concept of personhood (Enfield et al., 2006). There was also evidence that several languages (such as American Sign Language, Jahai, Savo Savo, and Kuuk Thaayorre) did not have a hierarchical partonymy at all (Enfield et al., 2006), contra the hypothesis that all languages have a hierarchical partonymy.

Additionally, Enfield et al. (2006) make the distinction between morphemes/lexemes on the one hand, and "literally descriptive expressions" on the other. Literally descriptive expressions in the context of body parts are expressions that describe a body part, such as 'the back of the knee' (Majid, 2010). This contrasts with lexemes (and sometimes morphemes) that name a specific referent – such as the word *warangarama* 'lowest rib on a person' in the Australian language Mara (Heath, 1981, p. 509). So, while Mara has the word *warangarama*, an English speaker is equally capable of referring to the same body part, by using a literally descriptive expression. This essay will focus solely on lexemes rather than descriptive expressions.

3 Complex terms for body parts

Australian languages often derive labels for particular body parts from the labels of other body parts. Enfield et al. (2006) use the terms complex and simplex to describe this phenomenon. A simplex term is an unanalysable, monolexemic word that cannot be broken down into smaller meaningful units (Gaby, 2006a). The simplex terms combine together to produce complex terms. The name is often derived from some kind of shared characteristic, whether that be physical shape or function. Other times, the semantic connection between the primary lexeme and the compounded form can be less clear. This kind of compounding in and of itself is not typologically rare; English contains several complex body part labels such as ‘eyeball’ and ‘forehead’. However, Australian languages are notable for the relatively small number of simplex body part terms. The large amount of complex body part labels also contrasts with some of the universals proposed by Brown (1976), who, amongst other things, claimed that all languages should have a simplex term for the face, hand, and foot. In this section, I will explore some Australian languages that show extensive use of complex body part terms, and illustrate points of similarity and difference in the way these compounds are constructed.

3.1 Kuuk Thaayorre

Kuuk Thaayorre is a Paman language spoken in Cape York, QLD, and has many body part labels that are complex (Gaby, 2006b, p. 140). Many body terms are derived from a combination of two other simplex body parts, or sometimes a body part word combined with a term for another object. Notably, Kuuk Thaayorre only has 4 primary lexemes for parts of the face - *koow* ‘nose’, *meer* ‘eye’, *thaaw* ‘mouth’, *therpr* ‘chin’. Table 1 below contains examples of complex body part terms.

Thaayorre term	English term	Gloss
<i>meer-nhapn</i>	‘eyeball’	eye-egg
<i>mee-pungk</i>	‘eyebrow’	eye-knee
<i>thaa-petan</i>	‘lower lip’ (also labia)	mouth-skin
<i>koo-ranth</i>	‘nostril’	nose-hole
<i>kaal-thamr</i>	‘earlobe’	ear-foot
<i>man-werngr</i>	‘collarbone’	throat-boomerang
<i>thaathin-meer</i>	‘nipple’	breast-eye
<i>thamr-thip</i>	‘sole of foot’	foot-liver
<i>yuur-thip</i>	‘palm of hand’	hand-liver

Table 1: Kuuk Thaayorre complex body part terms. (Gaby, 2006a, pp. 212–214)

3.2 Mparntwe Arrernte

Complex body part labels are also found in Mparntwe Arrernte, an Arandic language spoken in and around Alice Springs in the Northern Territory. Wilkins et al. (1989) refers to this as

a type of nominal compounding, which also occurs outside body part labels. Arrernte also has reduced forms of some simplex body part labels, which can only appear in compounds. So, while *iltye* is the free form of the word meaning ‘finger/hand’, *akwe-* is the bound form meaning ‘arm/hand’. This example is interesting because the bound form and the free form seem to have slightly different denotations, with the free word *iltye* referring to the finger and the hand, while the bound form refers to the arm and hand. However, further targeted elicitation studies, such as in the form of colouring tasks, are needed to confirm this. A number of similarities can be observed between Kuuk Thaayorre and Arrernte. For example, both languages have a complex term for the eyeball that is composed of eye+egg - *meer nhapn* in Kuuk Thaayorre and *alknge-kwarte* in Arrernte. Additionally, both languages show a metaphorical extension of an abdominal body part label to describe the palm of the hand, with *yuur-thip* hand+liver in Kuuk Thaayorre and *iltye-artnerte* hand+stomach in Arrernte.

Mparntwe Arrernte term	English term	Gloss
<i>werlatye-alhe</i>	‘nipple’	breast-nose
<i>alhe-altywere</i>	‘nostril’	nose-opening
<i>alknge-arlpelhe</i>	‘eyelash’	eye-feather
<i>alknge-kwarte</i>	‘eyeball’	eye-egg
<i>arryenpe</i>	‘lips’	mouth-skin
<i>iltye-artnerte</i>	‘palm of hand’	hand-stomach

Table 2: Mparntwe Arrernte complex body part terms. (Wilkins et al., 1989, p. 146)

3.3 Yandruwandha

Breen (2015) reports that the Innamincka dialect of Yandruwandha also shows this kind of body part compounding. Complex body part labels are most commonly formed by a resemblance of the form of one body part being applied to another. This is a type of metaphorical extension. In contrast to Kuuk Thaayorre and Arrernte, which have an abdominal metaphor to describe the palm of the hand, Yandruwandha combines the word for hand with a different body part, the brain, giving *mara-thangka* ‘palm of hand’ from hand+brain. However, Yandruwandha does apply the word for stomach to the word for foot, giving *thina-thundru* ‘sole of foot’ from foot+stomach.

Yandruwandha term	English term	Gloss
<i>mara-mitji</i>	‘finger’	hand-eye
<i>thina-mitji</i>	‘toe’	foot-eye
<i>thina-thundru</i>	‘sole of foot’	foot-stomach
<i>mara-thangka</i>	‘palm of hand’	hand-brain
<i>thina-warta</i>	‘heel’	foot-trunk

Table 3: Yandruwandha complex body part terms. (Breen, 2015, p. 109)

Given that there are many languages in Australia that show high levels of complex body part labels, an area of potential future research is to see whether this type of compounding affects the way speakers think about these body parts.

4 The nose and face

4.1 Languages having one word for both ‘nose’ and ‘face’

In a survey of 118 languages, Brown and Witkowski (1983) found that 42% used one word to refer to both the eye and face, which the authors described as being eye/face polysemy. They also found that none of the 118 languages had nose/face or mouth/face polysemy, and they used this as evidence to conclude that the eye is the most salient feature of the face worldwide (Brown & Witkowski, 1983). Despite their findings, it has been documented elsewhere that at least two Australian languages show a relationship between the terms used for the nose and face (Gaby, 2006a; Ponsonnet, 2011).

4.2 Dalabon *dje-no*: nose, nostrils, face

Dalabon is a non-Pama-Nyungan Gunwinyguan language spoken in Arnhem Land, Northern Territory. Ponsonnet (2011) used a mixture of elicitation methods, such as a colouring task as well as pointing tasks on life models and photos, to establish the denotational range of body part lexemes from four Dalabon speakers. In these tasks, participants were asked to either colour in or point to a particular body part lexeme in Dalabon. Based off spontaneous discourse outside the elicitation tasks, *dje-no* can be used to refer to the nose, face, and nostrils. During the elicitation experiments, when speakers were asked to point out or circle a *dje-no* on an image of a person they pointed to or circled either the tip of the nose or the whole nose. In colouring tasks, the speakers coloured in the whole nose. Ponsonnet (2011) also reported that some speakers pointed twice, at each nostril, indicating that a secondary denotation is ‘nostril’. Interestingly, despite *dje-no* being commonly used in spontaneous discourse to mean ‘face’, Ponsonnet (2011) also reported that this denotation was not observed in the stimuli-based elicitation tasks. According to Ponsonnet, the only example of the ‘face denotation’ was in response to figure 1 below, to which a speaker said ‘*nunh dje-no kah-dje-dih*’, which Ponsonnet translated as ‘this face has no nose’. However, Ponsonnet states that this speaker deemed this utterance to be unusual or ungrammatical. Dalabon has no other word for ‘face’, nor even a word for ‘head’¹. This leads Ponsonnet to conclude that main denotation of *dje-no* corresponds is ‘nose’, and that Dalabon speakers do not have a well-defined concept that is equivalent to the English word ‘face’.

¹Dalabon does have a word that means ‘crown of the head’ – *kodj-no*.



Figure 1: drawing of a face without a nose used in Ponsonnet (2011)'s elicitation experiments.

4.3 Kuuk Thaayorre *koow*: nose

Interestingly, the correspondence between nose and face that is present in Dalabon also appears in Kuuk Thaayorre. The word *koo-miing* ‘face’ in Kuuk Thaayorre is derived from a compound of the word for nose (*koow*) and the word for daytime (*miing*) Gaby (2006b). In fact, many terms for parts of the face are compounds involving the word *koow* ‘nose’.

Thaayorre term	English term	Gloss
<i>koo-miing</i>	‘face’	nose-daytime
<i>koo-mut-panjr</i>	‘moustache’	nose-back-body.hair
<i>koo-petan</i>	‘upper lip’	nose-skin
<i>koo-rirkr</i>	‘forehead’	nose-shell
<i>punth-man-koow</i>	‘forearm’	arm-throat-nose
<i>thamr-koo-ngamal</i>	‘big toe’	foot-nose-big
<i>yuur-koo-ngamal</i>	‘thumb’	hand-nose-big

Table 4: Parts of the body and face containing *koo*- ‘nose’ in Kuuk Thaayorre (Gaby, 2006b, pp. 142–143; Gaby, 2006a, p. 212)

Here we see two different kinds of compounding. Parts of the face adjacent to the nose contain the ‘nose’ lexeme due to the spatial association - *koo-petan* ‘upper lip’ from skin+nose refers to one part of the skin that is adjacent to the nose. However, there are other body parts in Kuuk Thaayorre that are located far from the nose, yet still contain the ‘nose’ lexeme. In these cases, it appears that the ‘nose’ label appears as a result of grammaticalized metaphorical extension, on the basis of physical resemblance, perhaps indicating protrusion in some way, such as in *thamrkoongamal* ‘big toe’ or *yuurkoongamal* ‘thumb’.

4.4 Surveying other Australian languages

A lot of the research around body parts in Australian languages has focused on the alienability/inalienability distinction as well as noun incorporation (eg, Chappell and McGregor (2011)) rather than the semantic denotation. In order to explore the differences in the semantic denotation of body parts in Australian languages, I performed a survey of 33 Australian language grammars for references to body part labels. A spreadsheet with all references to body part

labels was created to highlight similarities and differences between the languages. Only languages with multiple examples of the body part labels in spontaneous use by native speakers were included in the survey. This survey revealed that, like Kuuk Thaayorre and Dalabon, several other Australian languages use one word to refer to both the nose and face or have a complex label for the face that is derived from the word for nose (summarised in table 5 below). This contrasts with the previously mentioned survey of 118 languages by Brown and Witkowski (1983), which did not find any languages that had what they termed nose/face polysemy. It is also interesting to note that many of the languages in this survey showing this nose/face polysemy are not closely related, and that this phenomenon is present across the entire continent. This survey highlights that there is much more diversity in the semantic denotation of body part terms than has been previously discussed in typologies.

Language (classification)	Grammar	'nose' label	'face' label
Kayardild (Tangkic, NW QLD)	Evans (1994, p. 64)	<i>kirrka</i> ²	<i>kirrka-miburl-da</i> nose-eye-NOM
Kuuk Thaayorre (Paman, Cape York QLD)	Gaby (2006b, p. 140)	<i>koow</i>	<i>koo-miing</i> nose-daytime
Kunbarlang (Gunwinyguan, NT)	Kapitonov (2019, p. 215)	<i>kumerle</i> (free form) <i>mirl-</i> (incorporated form)	<i>kumerle</i> (free form) <i>mirl-</i> (incorporated form)
Diyari (Karnic, SA)	Austin (1981, p. 262)	<i>mulha</i>	<i>mulha</i>
Arabana Wangkangurru (Karnic, SA)	Hercus et al. (1994, p. 37)	<i>midlha</i>	<i>midlha</i>
Worrorra Worrorran, non Pama- Nyungan, northern WA)	Clendon (2014, p. 136)	= <i>minguma mana</i> ³	= <i>minguma mana</i>
Nyulnyul (Nyulnyulan, non Pama- Nyungan, northern WA)	McGregor (2011, pp. 238, 258)	<i>-mirl</i>	<i>PF⁴-lerr-PF-mirl</i> PF-mouth-PF-nose
Wardaman	Merlan (1994)	<i>yi⁵-jurn</i>	<i>yi-jurn</i>
Dalabon (non-Pama- Nyungan Gun- winyguan, northern NT)	Ponsonnet (2011)	<i>dje-no</i>	<i>dje-no</i>

Table 5: Languages with a lexical relationship between 'face' and 'nose'.

²Note that word-final a is not pronounced before any pause in Kayardild, leading Evans to write this word in isolation as *kirrk_* in order to reflect this. I have retained the a here for clarity.

However, a significant limitation of this survey, as well as the survey by Brown and Witkowski (1983), is that it relies on the use of grammars rather than targeted elicitation studies with native speakers. The Brown and Witkowski (1983) predominantly used dictionaries alone, which typically do not contain examples of the words in use, making it very difficult to get an accurate picture of the scope of the semantic denotation of the words listed in the dictionary. Descriptive grammars were used to develop the table above, and were only included if they had contained examples of the body part labels in use as spoken by actual native speakers of the language. However, as Enfield et al. (2006) and (Devyllder et al., 2020) point out, the most accurate way to determine the denotation of a body part label is through elicitation tasks such as pointing or colouring tasks that make use of images or diagrams of bodies, such as the studies by Gaby (2006a) and Ponsonnet (2011) discussed above. Further targeted elicitation studies are needed to establish the true prevalence of the nose/face polysemy.

5 Conclusion

In this essay, I have highlighted the diversity that exists in the way languages refer to parts of the body. Many Australian languages show numerous complex body part labels that are derived from simplex body part labels. Given that there are many languages in Australia that show high levels of complex body part labels, an area of potential future research is to see whether this type of compounding affects the way speakers think about these body parts. Kuuk Thaayorre is typologically unusual in that it does not have a simplex term for ‘face’ (Gaby, 2006a). Additionally, on the basis of elicitation and pointing tasks, Dalabon speakers do not have a well-defined concept of the ‘face’ in the English sense of the word, i.e. as an assemblage of other features/body parts (Ponsonnet, 2011) something that contradicts previous theories of partonomy such as Brown (1976). Additionally, several other Australian languages use one word to refer to both the nose and face or have a complex label for the face that is derived from the word for nose – something that was previously shown to be typologically rare (Brown & Witkowski, 1983). Further typological research in the area of body part semantics in Australian languages has the potential to reveal even more features that were previously thought to be typologically rare or impossible.

³Mana is the noun classifier.

⁴PF stands for the prefix that reflects the person and number of the person whose face is being talked about (McGregor, 2011, p. 283).

⁵Yi is the noun classifier.

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“I’m Just Another Jaffy”: The Limits of Linguistic Reappropriation

Tessa Barrington*

1 “I’m Just Another Jaffy”

Language is not merely a form of communication, but also a method of constructing and revealing identity within social frameworks (Meyerhoff, 2011). Hence, when the social meaning of words change, this can lead to a change in attitudes about groups and individuals, and can modify peoples’ sense of identity (Darvin, 2016). This is particularly evident with category terms, the meanings of which are predominantly constructed through discourse (McNamara, 2019). A further understanding of language change and linguistic re-appropriation with relation to category terms could enable insight into how individual and group identities are constructed within certain “communities of practice”—groups of people who share a mutual social engagement (Eckert & McConnell-Ginet, 1992). The current study will focus specifically on the category label *jaffy* (i.e. “just another fucking first year”) and its developing social meaning and lexicalisation as used in the online Facebook community of practice “Unimelb Love Letters” (UMLL) between 2018 and 2020. I will further examine whether *jaffy* could be considered a subject of linguistic re-appropriation, and if not, how the limits of linguistic re-appropriation could be further defined to clarify the research in this domain.

The term *jaffy* can be traced back to at least 2010 (Urban Dictionary, 2010): “Jaffy stands for “*Just a Fucking First Year*” and is used at some universities by second year and above years to describe the latest intake. More often used by people who [live]...on residence.”

In 2013 the term was further defined by the Monash Student Association (note the change from “a” to “another”):

“An Australian term used to describe first year students, particularly the overly enthusiastic type that irritates the older, seasoned and cynical second and third years. It stands for *just another fucking first year*” (Maddy, 2013).

The meaning of lexemes is informed by both (i) the patterned association of the word with specific language choices and contexts, and (ii) the form of the lexeme itself. Therefore, if either

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of these aspects change, a semantic shift can occur (i.e. changes in the meaning of a word from its original meaning) (Meyerhoff, 2011). For example, the acronym “LOL” shows a semantic shift, from the overt marker of laughter, “laugh out loud”, towards an indication of positive valence (Baron & Ling, 2011) and empathy (McWhorter, 2013). This example demonstrates lexicalisation, where the acronym loses its full meaning, and gains new semantic and pragmatic characteristics (Bennane, 2017). Lyons (1977) suggests that a semantic relation between an acronym and its full form may be lost in such a way that the acronym gains a positive or negative connotation, while its full form maintains neutrality. This may suggest that acronyms, through the process of lexicalisation, undergo a semantic shift. I propose that the term *jaffy* is such an acronym.

The process of a semantic shift could be viewed as a foundation of “linguistic re-appropriation”—a group reclaiming terms that were previously used by others to negatively identify that group (Galinsky et al., 2003). Galinsky et al. (2003, p. 223) suggests that re-appropriation is only possible due to the “contextually sensitive” nature of labels. Their 2003 study focuses on stigma, which Crocker et al. (1998, p. 505) define as “some attribute, or characteristic” that imbues a “social identity” that is deemed negative in “a particular social context”. Linguistic re-appropriation is often enacted to combat this enforced negative identity, through manipulating the connotation of the stigmatizing label to neutralise its power to harm (Galinsky et al., 2003).

As a result of linguistic re-appropriation, a greater sense of “in-group affiliation and cohesion”, and therefore identity, can ensue (Galinsky et al., 2003, p. 234). Galinsky et al. (2013) conducted a study requiring 73 undergraduate participants to list a social group with which they identified, and to provide a stigmatizing label that has been used to refer to that group. Participants were asked to remember times that they referred to themselves with this stigmatizing label, and times when the label was used “against them” (Galinsky et al., 2013, p. 2023). Results showed that when the label was used to self-identify, the participants felt more powerful than when it was used by others to identify them. The study similarly examined whether linguistic re-appropriation is “limited to stigmatizing labels”, through examining the effect of the stigmatizing label “queer” in comparison to equivalent non-stigmatizing labels such as “lesbian” (Galinsky et al., 2013, p. 2026). Findings showed that self-identifying vs other-identifying did not significantly “affect the evaluations of the nonstigmatizing... label” (Galinsky et al., 2013, p. 2027). In the current study, I posit that *jaffy*’s full form, “just another fucking first year”, connotes a negative relation to first year students. Hence, I suggest that *jaffy* may be a subject of re-appropriation.

The current study aims to examine how the form and social meaning of the term *jaffy* has developed over time, in reference to the self and the other. Furthermore, the study aims to determine whether *jaffy* is a subject of linguistic re-appropriation. Firstly, it is hypothesised that the term *jaffy*, as used on UMLL, will have undergone lexicalisation from 2018 to 2020. Secondly, in relation to social meaning and the theory of linguistic re-appropriation, I hypothesise that (i) the use of *jaffy* to refer to the self will have become more frequent from 2018 to 2020 on UMLL, (ii) the use of *jaffy* to refer to the self will have become less negatively connotated from 2018 to 2020 on UMLL, and (iii) the general use of *jaffy* will have become less negatively connotated from 2018 to 2020 on UMLL.

2 Method

2.1 Participants

Participants included University of Melbourne students who anonymously posted on the Facebook page UMLL between April 9th 2018 and October 13th 2020.

2.2 Data Collection

A total of 2358 posts out of 24,486 were gathered from UMLL using a web scrape on October 13th 2020. Data from each post included the text, date and post number. Of these posts, 29 included the term *jaffy*. Following this process, a manual scrape was conducted by searching for the term *jaffy* on the Facebook page and filtering by year. This process extracted an extra 102 posts, of which some included more than one token of the term *jaffy*. A total of 143 tokens of *jaffy* were gathered from 131 anonymous text posts.

2.3 Data Processing

The researcher coded each instance of *jaffy* according to the following coding categories:

Capitalisation	Example
All letters are lowercase	“ <i>jaffy</i> ”
All letters are capital	“ <i>JAFFY</i> ”
The initial letter is capital	“ <i>Jaffy</i> ”

Syntactic Context of Use ^a	Example
Det__	“Unfortunately, he’s a <i>jaffy</i> ” “To the <i>jaffy</i> who sat in a third year Chemistry: Reactivity and Mechanism tute” “Please help this <i>jaffy</i> out and educate me” “da Jaffies”
ADJ__	“A terrified <i>jaffy</i> ”
Just another/Just a/Only a__	“I was just a <i>jaffy</i> ” “I’m just another <i>jaffy</i> ” “Remember he’s only a <i>jaffy</i> ”
__Noun	“ <i>Jaffy</i> vibe”
__ + Subordinate Clause	“A <i>jaffy</i> that has only been on campus for 1 week”
Acronym (where the syntactic context aligns with the use of <i>jaffy</i> as an acronym)	“ <i>JAFFY</i> here”
Plural	“my fellow <i>jaffys</i> ”
Verb__	“...who aren’t <i>jaffy</i> ’s” “Look at all these second year’s shitting on jaffies”

<i>Jaffy</i> by itself/ __ (often used when listing attributes)	“- <i>jaffy</i> ”
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Note: ^aAnalysis includes cross-over between categories for individual tokens.

Lexical Category	Example
Noun	“I’m a science <i>jaffy</i> that is looking for some love”
Adjective	“Do I just happen to have a <i>jaffy</i> fetish..”

Spelling Variants	Example
Jaffy	“A frustrated <i>jaffy</i> ”
Jaffie	“A shy <i>jaffie</i> ”
Jaffies	“Not going to parties with da <i>Jaffies</i> ”
Jaffys	“To all my fellow <i>jaffys</i> ”
Jaffy’s	“We wont be able to tell the <i>jaffy</i> ’s from the third years”

Semester of Publication	Date Range
Semester 1	9th April 2018 – 30th June 2018
Semester 2	1st July 2018 – 31st December 2018
Semester 3	1st January 2019 – 30th June 2019
Semester 4	1st July 2019 – 31st December 2019
Semester 5	1st January 2020 – 30th June 2020
Semester 6	1st July 2020– 13th October 2020

The 143 tokens of *jaffy* were further coded in relation to self/other identification and negative/neutral/positive connotation:

Identification	Example
Self: tokens of <i>jaffy</i> that refer to the self.	“I’m a self-conscious, skinny <i>jaffy</i> ..”
Other: tokens of <i>jaffy</i> that don’t refer to the self.	“Her baby face could mistake her as a <i>Jaffy</i> ” “WHAT THE HECK IS A <i>JAFFY</i> !?!?”

Connotation	Example
Negative: posts that present the term <i>jaffy</i> in a negative manner by relating it to negatively connotated terms.	“Just another <i>jaffy</i> having a crisis” “A desperate <i>jaffy</i> ”
Neutral: posts that present the term <i>jaffy</i> in neither a positive nor negative light.	“A mature age <i>Jaffy</i> ” “A <i>jaffy</i> here”
Positive: posts that present the term <i>jaffy</i> in a positive manner, by relating it to positive terms.	“A hopeful <i>jaffy</i> ” “A very content <i>jaffy</i> with a better designed science hoodie”

A second person coded 20% of the tokens of *jaffy* for identification and connotation. Cohen’s K was conducted to determine inter-rater reliability, demonstrating perfect agreement for identification ($K = 1.0$) and moderate agreement for connotation ($K = 0.773$) (Landis & Koch, 1977).

3 Results

An analysis of the syntactic context in which *jaffy* was used on UMLL from semester 1 to 6 is shown in Figure 1. Furthermore, the proportion of posts using the lowercase form (i.e. *jaffy*), the initial letter capitalised form (i.e. *Jaffy*) and the fully capitalised form (i.e. *JAFFY*) from Semester 1 to 6 is shown in Figure 2. An analysis of the developing orthography of *jaffy* over time was similarly conducted (Figure 3). The lexical category of *jaffy* was categorised into noun or adjective, and its development over time was plotted (Figure 4). Finally, the frequency of the use of *jaffy* to refer to the self in comparison to its use to refer to others from Semester 1 to Semester 6 is shown in Figure 5.

A multinomial logistic regression analysis was conducted to predict the connotation of tokens of *jaffy* based on identification and semester (Table 1). Findings were non-significant. However, the odds ratio (OR) indicates that as identification increases from other to self, the odds of a token of *jaffy* being neutral in connotation as opposed to negative increases by 32%. Similarly, as identification increases from other to self, the odds of a token of *jaffy* being positive in connotation as opposed to negative increases by 63%.

In relation to semester, the data suggests that for each unit by which the semester of publication increases, the odds of a post being neutral in connotation compared to negative decreases by 6%, and the odds of a post being positive in connotation compared to negative increases by 14%.

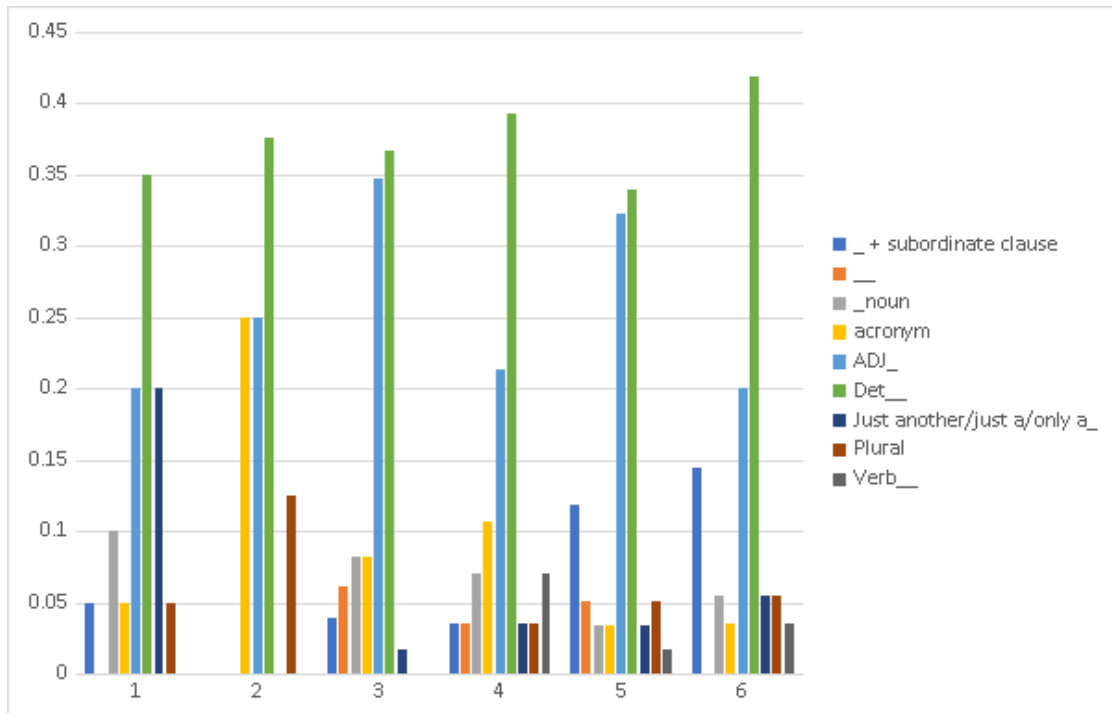


Figure 1: The Contexts in Which the Term Jaffy was Used from Semester 1 to Semester 6.

Note: “__” = jaffy

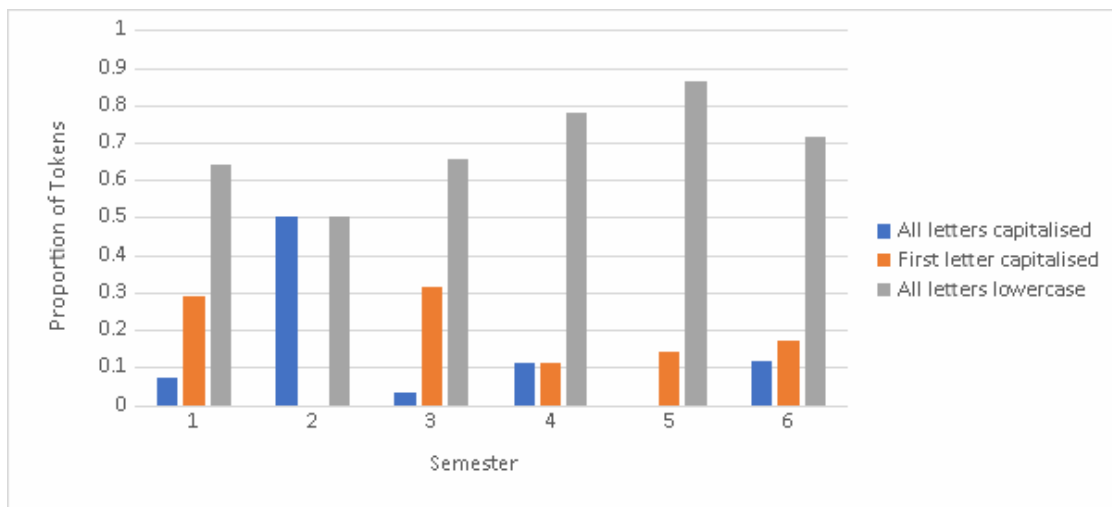


Figure 2: The Capitalisation of the Term Jaffy from Semester 1 to Semester 2.

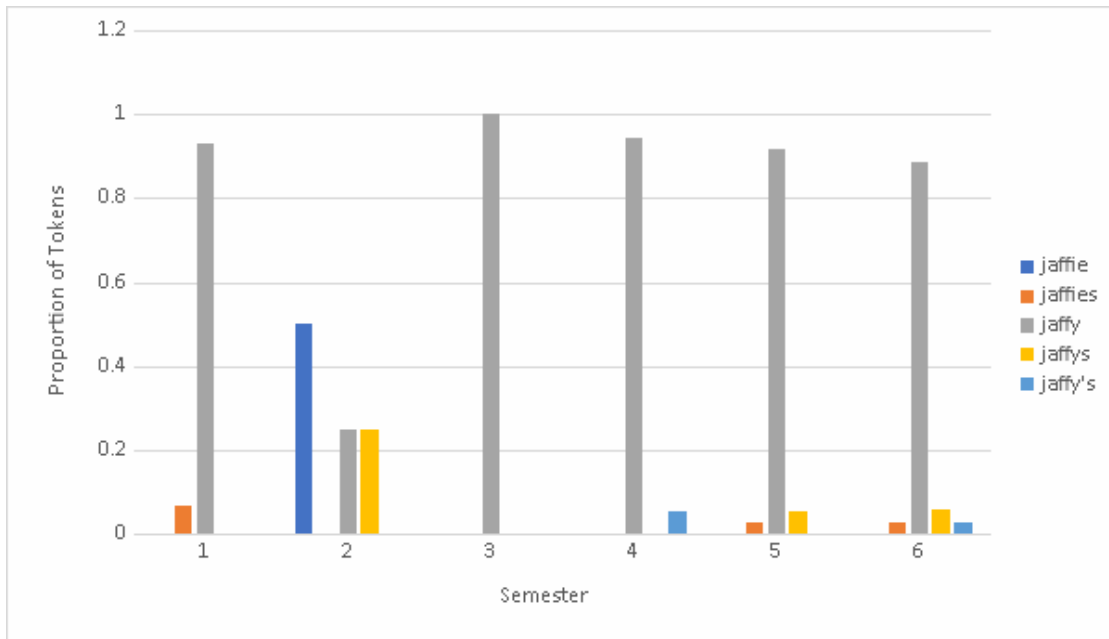


Figure 3: The Orthography of the Term Jaffy from Semester 1 to Semester 6.

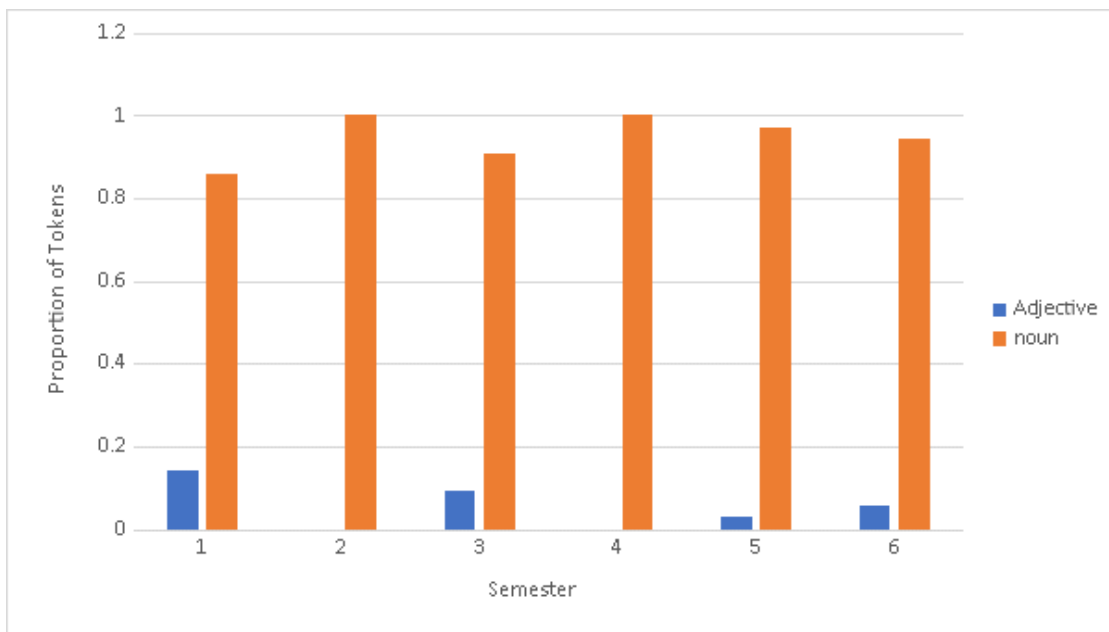


Figure 4: The Lexical Category of the Term Jaffy from Semester 1 to Semester 6.

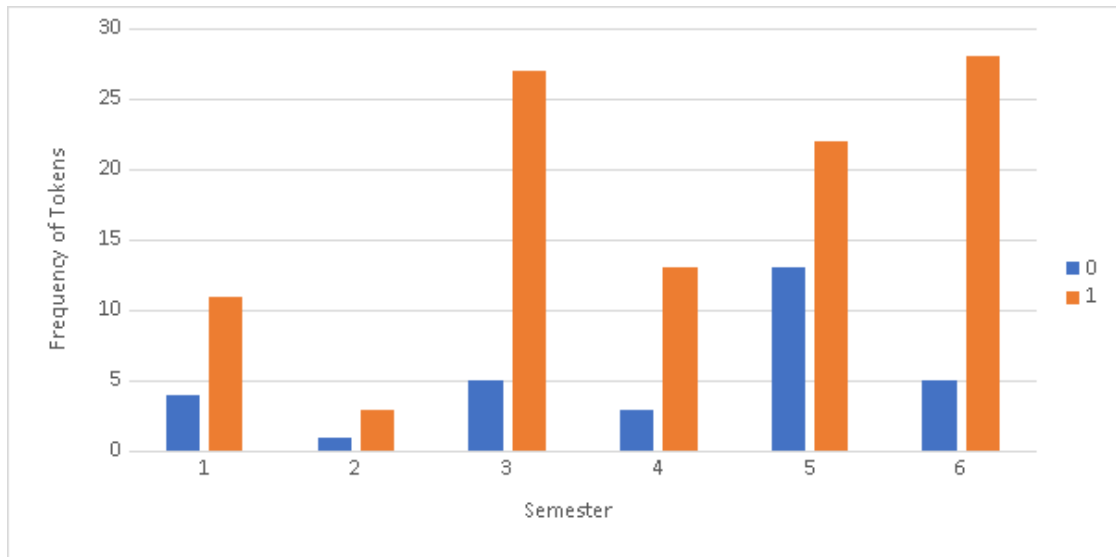


Figure 5: The Frequency of Use of *Jaffy* to Refer to the Self vs. Others from Semester 1 to Sem 6. Note: 0 = Other, 1 = Self

Connotation ^a		b	se	χ^2	df	p	E β
Neutral connotation	Intercept	.678	.510	1.762	1	.184	-
	Identification	.280	.410	.468	1	.494	1.323
	Semester	-.064	.113	.322	1	.570	.938
Positive connotation	Intercept	-2.339	1.164	4.039	1	.044	-
	Identification	.487	.781	.389	1	.533	1.627
	Semester	.108	.244	.196	1	.658	1.114

Table 1: Multinomial Logistic Regression Analysis of the Connotation of *Jaffy* with Reference to Identification and Semester.

Note.^aReference category is negative connotation (1).

3.1 Discussion

The aim of this study was to analyse how the meaning and form of the term *jaffy* has developed from 2018 to 2020, and to examine whether *jaffy* could be considered a subject of linguistic re-appropriation.

The hypothesis that the term *jaffy* has undergone lexicalisation was predominantly supported by our results. Figure 2 shows that the proportion of tokens of *jaffy* with full capitalisation (i.e. *JAFFY*) has decreased over time, whilst lowercase tokens of *jaffy* have increased. This demonstrates a shift from *jaffy* being used as an acronym, and towards it being used as a lexeme. This is further supported by Figure 1, which shows that the use of *jaffy* in syntactic contexts aligning with its use as an acronym decreased slightly following Semester 2.

Moreover, Figure 1 demonstrates that the proportion of tokens of *jaffy* following a determiner increased from Semester 1 to Semester 6. Syntactically, this implies that the full form is

increasingly being disregarded in the use of *jaffy*, given that it already includes a determiner (i.e. "another"). This is suggested to be an aspect of lexicalisation by Brinton and Traugott (2005, p. 144), who state that with the "loss of internal constituency" an acronym "may become more lexical". Similarly, it is suggested that acronyms that have undergone lexicalisation become "ambiguous with regard to [their] internal structure" (Bennane, 2017, p. 158). Interestingly, the use of *jaffy* following "just another" etc. showed its peak in Semester 1 and dropped to around 5% of tokens or less thereafter. This may further elucidate how the meaning of *jaffy* has become separated from its full form.

These findings regarding the lexicalisation of *jaffy* are similar to the analysis of "LOL" and its semantic shift (Baron & Ling, 2011; McWhorter, 2013; Yudytska, 2018). In a comparative manner, *jaffy* has appeared to diverge from its full meaning of "just another fucking first year" and instead towards being an identity marker of first year students at the University of Melbourne, with the capacity to indicate neutral, positive and negative connotations depending on the context in which it is used.

In relation to linguistic re-appropriation, our results supported the hypothesis that the use of *jaffy* to refer to the self has become more frequent than the use of *jaffy* to refer to others. This is evident in Figure 5, which outlines that the frequency of tokens of *jaffy* referring to the self within a semester increased from approximately 11 to 27 between Semester 1 and Semester 6. In comparison, the use of *jaffy* to refer to others remained relatively low at around 5 tokens or less per semester, except for the outlier Semester 5, which produced approximately 13 tokens of *jaffy* referring to others.

However, I found no significant results to support the hypothesis that the use of *jaffy* to refer to the self has become less negatively connotated from 2018 to 2020. Nevertheless, the results did suggest a trend towards *jaffy* being more neutral and positive compared to negative when it was used to self-identify as opposed to identifying others.

Finally, results were not significant in relation to the hypothesis that the use of *jaffy* has become, in general, less negatively connotated from 2018 to 2020. However, the results show that there is trend towards a more positive connotation of *jaffy* as the semester of publication increases. That said, the logistic regression analysis indicated lower odds of a token of *jaffy* being neutral in connotation as opposed to negative as the semester of publication increased.

The results of the current study extend the findings by Galinsky et al. (2013), through further outlining the limits of linguistic re-appropriation. Although Galinsky et al. demonstrated that the perception of nonstigmatizing terms does not differ between self and other identification, they did not outline the minimum level of stigma required for a term to be re-appropriated in a manner that neutralises the term. It is possible that *jaffy* was not found to be neutralised through linguistic re-appropriation because it did not originally meet the threshold for stigmatization. Hence, the current study may show that in order for a term to be neutralised through re-appropriation, it must originally connote a higher level of negativity towards the group it is labelling than *jaffy* did in 2018.

However, we cannot conclusively assume that *jaffy* is not a subject of linguistic re-appropriation, as the current study was limited by its sample size and the time period analysed. The 143 tokens of *jaffy* demonstrated a small sample size per semester, making it difficult for significant inferences relating to the change of connotation over time to be made. Furthermore, given

that *jaffy* was coined in 2010, if not earlier, the period of use of the term on UMLL forms a small proportion of its total lifespan. Hence, this study cannot examine the total evolution of the term *jaffy*, meaning that our understanding of the greater trend relating to its change in meaning and form is minimal. Nevertheless, the current study had the asset of focusing on a specific community of practice (UMLL), which allows for a strong understanding of how this community of practice has informed the meaning and form of *jaffy* from the time the community was initiated. The findings relating to the use of *jaffy* on UMLL could therefore be compared to other communities of practice, such as the Facebook page “Monash Love Letter” to examine whether there are differences in the way the term has developed over time between communities of practice.

Therefore, future research could conduct a broader analysis of the use of *jaffy* across various communities of practice in Melbourne, such as other Melbourne university Facebook pages, the University of Melbourne subreddit (i.e. /r/unimelb) and within synchronous online communication of university students. If earlier examples of *jaffy* could be gathered, this would provide a better reference point for comparison with the current social meaning and form of *jaffy*, and may uncover the greater evolution of re-appropriation from the time the term was coined.

Future research could also examine the limit of linguistic re-appropriation, through an analysis of the varying levels of stigmatising terms and how the perception of power may differ when these terms are used to refer to the self or to refer to others. This could delineate the point at which terms carry enough stigma to be neutralised through re-appropriation. Such research would have important implications for our understanding of how groups construct and protect their identities, and how harmful language can be stripped of its power to hurt others through sociolinguistic processes.

Ultimately, the term *jaffy*, as used on UMLL, has undergone lexicalisation over the period of 2018 to 2020. In this manner, the meaning of the term has diverged from its original base phrase, and towards a marker of identity that is imbued with social meaning through its context of use rather than its full form. Furthermore, the study provides greater insight into the potential limits of linguistic re-appropriation and may act as a foundation for further research into the role of stigma in both linguistic and more general re-appropriation. That said, we cannot conclusively state that *jaffy* has not undergone re-appropriation, and therefore, greater research on this term, with a larger time period and sample size is required.

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Real Housewives: Audience Design and the Effect of Confessionals on Speech

Nicholas Zagoudis

1 Introduction

The Real Housewives of Melbourne (RHOM) is a reality TV show that started in 2014. Each episode typically follows the lives of a group of affluent women in Melbourne, showcasing their lavish lifestyles. In this paper, I will analyse intraspeaker variation of phrase-final post vocalic /t/ in five main cast members of RHOM season 4 (Washington et al., 2017). Post-vocalic /t/ is a variable that has been the subject of many sociolinguistic studies in recent years across a number of English varieties. In Australian English, /t/ frication appears to be associated with females of higher socioeconomic class (Jones & McDougall, 2009; Loakes & McDougall, 2007) and formal rather than informal speech (Tollfree et al., 2001). In this study, I will examine the possible existence of style-shifting between two settings in reality TV: the ‘confessional’ and ‘on set’. Here, I define ‘confessional’ as scenes where the housewives narrate over what is happening in the episode. This is filmed at a different time and in a different location. On the other hand, I define ‘on set’ as all other scenes, i.e. actual scenes following the housewives’ lives and their interactions with others. With two distinct settings, I will analyse variation through the lens of frameworks that have been created to explain the motivations behind style-shifting, namely Attention to Speech (Labov, 1966) and Audience Design (Bell, 1984). With greater focus on Audience Design, I hope to examine the potential effect of different audiences on intraspeaker variation, and how the same audience can have more influence in one context than in others.

2 Background

Many theories have been proposed to explain intraspeaker variation and style-shifting. In his New York City English study (1966), Labov proposed that style is affected by the amount of attention paid to one’s own speech. Under this model, we would expect that more standard variants are uttered when someone is more conscious of their own language use (Schilling-Estes, 2013), e.g. when they are reading out a list of words rather than speaking casually to a friend. However, this model has been highly criticized due to its one-dimensional view on intraspeaker variation, where stylistic variation is only based on socioeconomic class in a one way standard-to-non-standard spectrum (Schilling-Estes, 2013). Thus, other explanations such as Bell’s 1984 Audience Design model have been developed to account for a more nuanced approach to stylistic variation. While Labov’s theory predicts that different speech activities

elicit different styles, Bell's sees style shifting as a response to an audience (Schilling-Estes, 2013). Developed from Accommodation Theory (Giles & Powesland, 1975), Audience Design similarly holds that we attune our speech depending on our audience. As he hypothesises that our speech is primarily affected by audience members who hold more importance in a conversation, Bell (2001; 1984) separates audience members into 4 different types. "Addressees" are directly addressed, "auditors" are ratified (i.e. their existence is acknowledged), "overhearers" are known and "eavesdroppers" are unknown. Within the framework of Audience Design however, one's speech may not necessarily converge to the audience's own speech (Schilling-Estes, 2013). Instead, one's speech is shifted more to what is expected by the audience. For instance, in his study on the speech of New Zealand radio announcers, Bell (1984) found that the announcers shifted to British Received Pronunciation on more prestigious radio stations rather than to the actual speech of audience members.

Furthermore, variation in phrase or word-final post-vocalic /t/ has been an area of increased focus in sociolinguistic study across English varieties. It is highly variable, being realised as multiple variants in Australian English (Loakes et al., 2018). Wider sociolinguistic literature of world Englishes have typically analysed released versus unreleased stops (Docherty et al., 2006; Podesva, 2008; Podesva et al., 2015), yet in recent years, especially in Australia, focus has been put on the nature of fricated /t/ (Jones & McDougall, 2009). /t/ frication seems to be a marker of female speakers and high socioeconomic class (Jones & McDougall, 2009; Loakes & McDougall, 2007). Similarly, Tollfree et al. (2001) found that /t/ release was more frequent in the middle socioeconomic group (compared to the lower socioeconomic group), and more frequent in formal interview style (as opposed to conversational interview style). Similar trends can be found in other varieties of English, such as New Zealand English where it was found that female and professional speakers were more likely to use released forms of /t/ than males and non-professionals (Docherty et al., 2006). In American English varieties, /t/ release is perceived to be more related to articulate speech (Podesva et al., 2015) and formal speech (Podesva, 2008). Moreover, /t/ release and frication has even been stereotyped in popular media such as "Kath and Kim", where caricatures of two women of high socioeconomic class exaggerate /t/ frication for comedic purposes (Jones & McDougall, 2009).

Taking all of this into account, there is still much to learn about the nature of style-shifting and how it relates to the Audience Design framework in specific circumstances. Focusing on style within reality TV, my research questions are the following: Do reality TV contestants style-shift when narrating in 'confessionals' compared to speaking 'on set'? And if so, how can the Audience Design framework be used to examine intraspeaker variation in reality TV?

3 Method

The aim of this study is to investigate variation of phrase-final post-vocalic /t/ in five housewives from RHOM season 4 (Washington et al., 2017). Intraspeaker variation will be analysed using proposed explanations for style-shifting, with a focus on the Audience Design framework. I expect that there will be a large amount of variation in phrase-final post vocalic /t/ as previous studies have demonstrated (Loakes et al., 2018; Loakes & McDougall, 2007; Tollfree et al., 2001). This is in part due to the identity of my participants – females of high socioeco-

nomic class. Here, I judge socioeconomic status by the fact that they are contestants on this show. The *Real Housewives* series is known for showcasing the extravagant lifestyles of rich women, thus it is expected that only women of high socioeconomic status are cast.

In this study, I watched the first four episodes of the fourth season of the show, focusing on five of the seven housewives: Jackie Gillies, Gina Liano, Janet Roach, Lydia Schiavello and Gamble Breaux. All these participants are white, female, have high socioeconomic class, have English as their native languages, grew up in Australia and are currently living in Melbourne. Across the five, I collected 382 tokens, tallying each token in an Excel spreadsheet (see Appendix A) while watching the show with captions. Each token was also transcribed and timestamped, e.g. “E3 6:54 what” (see Appendix B). 48 tokens were collected from Jackie, 111 from Gina, 59 from Janet, 61 from Lydia and 103 from Gamble. This is perhaps somewhat reflective of the uneven screen time afforded to the cast members.

I narrowed down the variable of focus to intonation phrase-final post-vocalic /t/ similar to Docherty et al. (2006) to reduce the prevalence of phonologically-conditioned variation. For instance, alveolar tap [ɾ] is a variant of Australian English /t/ that frequently occurs intervocalically (Loakes et al., 2018), but rarely if at all phrase or word finally (Tollfree et al., 2001). Given the constraints of this paper, I decided to follow the wider sociolinguistic tradition of comparing released versus unreleased stops. For my unreleased category, I included the following /t/ allophones: pre-glottalised [ʔt], glottal [ʔ] and no audible release [t̚]. For my released category, I included the following: plosive [t], canonical [tʰ], spirantized/affricate [tʰs] and fricated [t̪]. This is similar to past literature (Docherty et al., 2006; Tollfree et al., 2001) but I account for more variants that have been noted in Australian English in Loakes et al. (2018) and that appeared in my study.

Furthermore, I split each phonetic category into the settings in which they appear, thus having four categories for each speaker’s tokens: unreleased on set, unreleased confessional, released on set, and released confessional. As mentioned previously, the ‘confessional’ setting are scenes filmed separately from the main scenes of the episode where the housewives narrate over top of what is happening. ‘On set’ designates all other scenes where the women are typically interacting with each other or other characters. Therefore, if for example Gina said “We had fun last [naetʰs]” in the confessional, it would be counted as “Gina - Released - Confessional”. To analyse my data, I divided the total number of released variants in each separate setting for each speaker by the total number of tokens (released and unreleased) that appeared in that setting. I then converted the values into percentages and formed Figure 1.

Thus, given previous literature, I expect more released variants in the “confessional” setting than in the “on set” setting. As Tollfree’s 2001 study found, released /t/ variants, especially fricated /t/s, are found more often in formal interview settings than in conversational settings. As a confessional is likely to be more controlled and perhaps more scripted, I would expect it to be perceived as a more formal setting than the speech elicited on set which is perhaps more spontaneous and less scripted.

4 Results

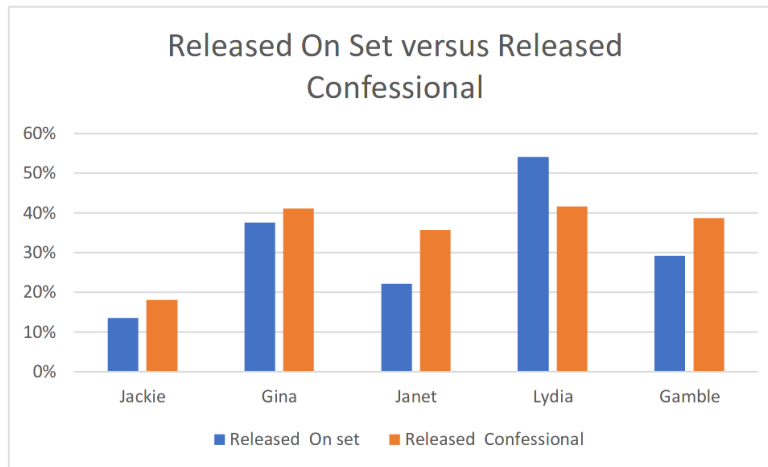


Figure 1: Percentage of phrase-final post-vocalic /t/ released variants on set (blue) compared to released variants in confessionals (orange) across RHOM cast.

On average, four out of the five speakers used released variants more often than unreleased variants in confessionals, as opposed to on set. Jackie had the lowest percentage of released variants out of all the speakers, with only 14% released on set and 18% released in the confessional. Gina had the least amount of variation, with 38% released on set and 41% released in the confessional. Janet had the largest amount of variation between the two settings, releasing her /t/s 22% of the time on set and 36% of the time in the confessional. Lydia was the only housewife who released her /t/s more often on set (54%) than in the confessional (42%). Lastly, Gamble released her /t/s 29% of the time on set and 39% of the time in the confessional.

5 Discussion

From the results of this study, we see that to an extent, all speakers varied in their frequency of /t/ release between the two settings. Jackie and Gina had very slight variation, while Janet, Lydia and Gamble had a larger percentage of variation. Lydia was an anomaly as she was the only housewife who used released variants more often on set than in the confessional. She also had the highest percentage of released variants in both settings. This is interesting because, in the episodes that I watched, Lydia was often the target of ridicule due to the way that she spoke. For example, Janet says “I never understand her, you know? She speaks in gobbledegook anyway” (Washington et al., 2017)(Season 4, Episode 3).

Analysing their style shifting through Labov’s Attention to Speech model, we would have expected a higher number of prestige variants in the confessionals than on set. The confessional scenes are much more controlled, less spontaneous and are presumably more scripted than the on set scenes. Released /t/ has been argued to signal formality and competence in American English (Podesva, 2008), and seems to be related to socioeconomic class in Australian English

(Loakes & McDougall, 2007), thus we would expect it to be more frequent in confessionals where speakers are more conscious of their own speech. Similarly, in Tollfree et al. (2001), /t/ release was more frequent in the more formal setting than the casual setting. Yet as was noted, Lydia does not follow the expected stylistic shift, and Gina and Jackie only do so slightly. Thus, Labov's Attention to Speech model cannot completely explain the motivations for style shifting between on set and confessional style.

As previous literature has suggested, we must go further than Attention to Speech to have a better picture of the motivations for style-shifting. Using the Audience Design framework, we can seek to more accurately explain these individual motivations. While we do not know the exact audience demographic of RHOM, we can speculate that it would typically be middle class women who perhaps aspire to have higher socio-economic class. The show is not available on free to air television, thus it is less accessible to the wider population, perhaps creating a feeling of exclusivity. Yet as Bell (1984) notes, the actual audience for mass communication is not what will affect the speaker – it is who they perceive the audience members to be. Thus, this can account for Lydia's anomaly – perhaps the audience she perceives is different to that of the other housewives. Furthermore, as Schilling-Estes (2013) has noted, Bell's Audience Design does not mean to say that the speaker will converge towards the speech of their audience. They instead converge towards the audience's "expectations" (p. 338). Perhaps this is a situation of dialect leveling, since Lydia's /t/ release is already high while on set. Therefore, while Lydia must lower her /t/ release frequency to attune it to her audience's expectations while addressing them, while the other women must raise it.

Perhaps the most interesting part of the Audience Design framework to this study is the different levels of audience members, and their varying affects on the speaker. In a confessional, I would argue that the TV audience fills the addressee category. Speakers face the camera to directly address the audience, with potential producers being auditors, and other people on the set such as production staff being overhearers. On set, the role of the TV audience shifts from addressee to auditor, as the speakers do not directly address them but they are definitely known and acknowledged due to the nature of reality TV shows. It could be argued that the TV audience remains an addressee as all the interactions are specifically made with the TV audience in mind, but I would argue that no matter what, the TV audience plays a larger role in influencing style in the confessional rather than on set.

While the TV audience may expect the housewives to project their prestige through their speech using more prestigious variables like released /t/, the effect of this expectation varies depending on the role of the TV audience. In the confessional, the housewives would be more conscious of this expectation. Alternatively, while on set and communicating with others, they would be less conscious of it. This is not to say that they are not aware of the TV audience on set however – as it is a reality TV show, they would be very aware and conscious of their speech choices. Yet in a confessional, the direct address would bring this to the forefront of their minds. Thus, for Janet and Gamble in particular, perhaps they use more released variants in the confessional as they are more conscious of their audience and therefore would like to appear more articulate to them. Yet the shifting role of the TV audience seems to have little effect on the speech of Gina and Jackie, at least for this specific variable. Perhaps this is because Gina and Jackie perceive the TV audience to have similar expectations of their speech to that

of the on set addressees, thus demonstrating little style shift. More variables would need to be analysed to see if this lack of style-shift is variable specific or setting and audience-specific.

6 Conclusion

Ultimately, it appears that speakers on reality TV shows shift in style between confessionals and on set to varying extents. While some speakers varied minutely between the two settings, others demonstrated a shift which in part can be explained using the Audience Design framework developed by Bell (2001; 1984). Audience Design has proved to be a useful lens to analyse the importance of audience in different situations, and how a TV audience has potentially more influence in confessional style rather than on set style. Further research could also seek to analyse the effect of confessionals in reality TV on one's stylistic variation as they create a clear, narrative style that is straight forward to separate from on set interactions. Due to the nature of confessionals, they can be used to analyse style-shifting applying either Labov's Attention to Speech model or Bell's Audience Design framework. By doing so, we can better understand the motivations surrounding intraspeaker variation, not only in the context of a real audience, but a perceived one.

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A Excel spreadsheet for data collection and coding

	A	B	C	D	E	F
1		Variants of phrase-final post-vocalic /t/				
2		Unreleased		Released		
3		On set	Confessional	On set	Confessional	Total
4	Jackie	32	9	5	2	48
5	Gina	48	20	29	14	111
6	Janet	35	9	10	5	59
7	Lydia	17	14	20	10	61
8	Gamble	51	19	21	12	103
9	Total	183	71	85	43	382
10	Total (rel/un)	254		128		
11						
12						
13		Episode/Timestamp/Example (S4)				
14		Unreleased		Released		
15		On set	Confessional	On set	Confessional	
16	Jackie	E1 -36:08 what	E1 -26:37 Janet	E1 -53:21 light	E4 -10:12 shit	
17	Gina	E1 -48:58 out	E1 -37:40 Janet	E1 -54:45 that	E1 -57:14 apart	
18	Janet	E1 -52:20 it	E1 -44:47 admit	E1 2:17 right	E1 -21:36 it	
19	Lydia	E1 -48:23 not	E1 -46:42 that	E1 -48:31 that	E1 -47:11 eat	
20	Gamble	E1 -42:39 that	E1 -28:47 carpet	E1 -42:55 fruit	E1 -20:07 diet	
21						
22						
23						
24		Token %				
25		Unreleased		Released		
26		On set	Confessional	On set	Confessional	
27	Jackie	86%	82%	14%	18%	
28	Gina	62%	59%	38%	41%	
29	Janet	78%	64%	22%	36%	
30	Lydia	46%	58%	54%	42%	
31	Gamble	71%	61%	29%	39%	
32	Total (#)	68%	62%	32%	38%	

B Example of expanded token list for Gamble Unreleased On Set

		Episode/Timestamp/Example (S4)			
		Unreleased	Released		
		On set	Confessional	On set	Confessional
13					
14					
15					
16	Jackie	E1 -36:08 what	E1 -26:37 Janet	E1 -53:21 light	E4 -10:12 shit
17	Gina	E1 -48:58 out	E1 -37:40 Janet	E1 -54:45 that	E1 -57:14 apart
18	Janet	E1 -52:20 it	E1 -44:47 admit	E1 2:17 right	E1 -21:36 it
19	Lydia	E1 -48:23 not	E1 -46:42 that	E1 -48:31 that	E1 -47:11 eat
20	Gamble	E2 -3:30 it	E1 -28:47 carpet	E1 -42:55 fruit	E1 -20:07 diet
21		E2 -2:51 part			
22		E2 -1:45 it			
23		E2 -1:40 it			
24		E3 -38:53 it			
25		E3 -38:12 cute			
26		E3 -38:07 it			
27	Jackie	E3 -33:43 that			
28	Gina	E3 -32:47 not			
29	Janet	E3 -27:17 not			
30	Lydia	E3 -26:53 about			
31	Gamble	E3 -24:25 it			
32	Total (#)	E3 -23:46 night			
33	Total (%)	E3 -23:32 bullshit			
34	Total (%/5)	E3 -23:22 it			
35		E3 -22:10 that			
36		E3 -16:39 tonight			
37		E3 -10:09 it			
38		E3 -6:54 what			
39		E3 -5:51 that			
40		E3 -1:50 delete			
41		E4 -42:39 it			
42		E4 -42:23 alright			
43		E4 -39:23 it			
44		E4 -34:31 Burnett			
45		E4 -33:00 sweet			

Token %				
		Released		
		Confessional	On set	Confessional
27	Jackie	82%	14%	18%
28	Gina	59%	38%	41%
29	Janet	64%	22%	36%
30	Lydia	58%	54%	42%
31	Gamble	61%	29%	39%
32	Total (#)	62%	32%	38%
33	Total (%)	325%	157%	175%
34	Total (%/5)	65%	31%	35%

Age and Intensifier Use on Gogglebox: An Australian English Account

Brooke Hanson

1 Introduction

Imbued with versatility and zest, intensifiers have long been used to index the originality of a speaker's attitude (Peters, 1994). Intensifiers' association with individual thought means that they are invariably tied up with identity and vary greatly from speaker to speaker. This variation in personal style makes intensifiers an ideal subject for a sociolinguistic analysis, where the apparent randomness of their use can be patterned according to social factors (Meyerhoff, 2019).

One such factor that is viewed as influential in understanding intensifier use is age (Barbieri, 2008; Saarenpää, 2016; Tagliamonte, 2008; Xiao & Tao, 2007). The ability for language to indicate age is what guides speakers' linguistic tendencies and preferences (Xiao & Tao, 2007). This belief is reflected in the long-held generational assessment of language use, where younger speakers are perceived to prefer non-standard modes of expression while older speakers are taken to favour more conservative ones (Eckert, 1997; Stenstrom, 2000). According to Poynton (1990), this generational difference is particularly salient in the realm of intensifiers, in terms of how frequently they are used and which specific types are drawn upon.

An intensifier's use in "impressing, praising, persuading [and] insulting" (Partington, 1993, p. 178) means that their interaction with factors, such as age, can be best observed from the domain of reality television. The spontaneity of this genre motivates a speaker to fulfil a wide range of social functions with language and capture the attention of their audience in doing so. Reality television has therefore been a favourable context for a number of linguistic studies seeking to access speakers' authentic vernaculars (Coupland, 2007; Eberhardt & Downs, 2015; Sonderegger et al., 2017).

The objective of this study is hence to investigate the relationship between age and intensifier use from the perspective of Australian English. Owing to the advantages offered by reality television, this relationship will be analysed according to the speech of diverse age groups on the series, *Gogglebox Australia*.

2 Background

The intersection between age and intensifier frequency has been studied across multiple varieties of English. In their corpus studies on British and American English, respectively, both Xiao and Tao (2007) and Barbieri (2008) found that intensifiers are used much more commonly

in younger speakers compared to older speakers. This finding consolidates prior studies on intensifier use (Paradis, 2000; Stenstrom, 2000), which observe that younger speakers are more inclined to exaggerate assertions rather than express them in a neutral manner. While older speakers are also found to use less intensifiers in New Zealand English, Saarenpää (2016) corpus study revealed that the highest usage comes from middle-aged speakers, rather than younger speakers. Divergence is again found in the case of a Canadian English (Tagliamonte, 2008) corpus study, where overall intensifier use was levelled across the generations.

Undertaken in apparent time, these studies also seek to determine whether generational change is taking place across specific intensifiers. The intensifiers *very*, *really* and *so* are consistently the most popular intensifiers across all studies (Barbieri, 2008; Saarenpää, 2016; Tagliamonte, 2008; Xiao & Tao, 2007). In British, Canadian and New Zealand Englishes, *very* is the most popular intensifier for speakers above 50, with its use increasing steadily from the younger to older generations (Saarenpää, 2016; Tagliamonte, 2008; Xiao & Tao, 2007). From the opposite view, *really* is the most common intensifier among speakers below 50 in American, Canadian and New Zealand Englishes (Barbieri, 2008; Saarenpää, 2016; Tagliamonte, 2008), with its use decreasing gradually from younger to older generations. *So* does not have a clear increasing or decreasing pattern in these studies, and therefore does not illustrate the same generational change that is seen across *very* and *really* in certain varieties (Barbieri, 2008; Saarenpää, 2016; Tagliamonte, 2008; Xiao & Tao, 2007).

A noticeable gap in the current literature, therefore, is how the relationship between age and intensifier use is characterised in the context of Australian English. To address the lack of broader research undertaken in this area, the following research questions have been developed for study:

- (1) Does the overall frequency of intensifiers used index the age of Australian English speakers?
- (2) Is generational change evident across any of the specific types of intensifiers used in Australian English?

3 Method

3.1 Aims, Gogglebox and Participants

This study aims to explore the relationship between age and intensifier use in Australian English, according to the two research questions introduced in the Background section. This relationship will be explored through the participants on the reality television series, Googlebox Australia.

Googlebox Australia invites audiences into the living rooms of ten Australian households, who watch and react to a wide range of television programs. These programs often evoke animated and emotional responses from the participants. Given that intensifiers are typically found in contexts where “emotional display is foregrounded and encouraged” (Beltrama, 2015, p. 18), this reality series is thus highly conducive to a study on intensifier use.

Due to the wide age range reflected in the Gogglebox Australia cast, this series also supports an analysis of age as a social variable. In this study, all 31 participants ranging from ages 9-76 are examined. The participant age groups and their respective frequencies are summarised in Table 1. The age categories are organised in accordance with Tagliamonte (2008). In this study, ‘younger’ speakers correspond to 9-29-year-olds, ‘middle-aged’ speakers to 30-49-year olds, and ‘older’ speakers to 50-76-year-olds, per Tagliamonte (2008).

In conjunction with age, the participants constitute a diverse range of genders, ethnicities and social classes.

Table 1: Age Group Frequencies on Gogglebox Australia

Age Group	Total
<13	2
13-16	2
17-19	1
20-29	5
30-39	7
40-49	3
50-59	8
60+	3
Total	31

3.2 Data Collection

Data was collected by watching 12 episodes of Gogglebox Australia (McDonald, 2020), from seasons 11 and 12. The seasons were both filmed in 2020. All relevant tokens were recorded electronically while watching each 50-minute-long episode.

The seasons were selected on the basis of retaining the same 31 participants and spanning the single time period of 2020. Indeed, by analysing speakers of different ages at one point in time, an apparent time construct (Labov, 1975) could be achieved for this study. That is, each speaker acts as an exemplar of a historical time period (Wagner, 2012), allowing for generational change in the Australian English speech community to be examined. For this study, generational change is defined as the steady increase or decrease (Meyerhoff, 2019) of an intensifier across generations.

3.3 Data Analysis

As per the current literature (Fuchs, 2017), this study has defined intensifiers as amplifying adverbs that scale meaning “upwards from an assumed norm” (Quirk et al., 1985, p. 589). According to Quirk et al. (1985) these amplifying adverbs can be further divided into maximisers and boosters, with boosters expressing a higher degree of intensification than a maximiser. In line with Ito and Tagliamonte (2003), both maximisers and boosters were considered under the general term of ‘intensifiers’ in this study. Examples of these intensifier meanings can be seen in (1):

1. a. This is extremely salty.
- b. She is so clever.
- c. It is very hot today.

Despite being capable of modifying nouns, verbs and adverbs, the majority of intensifiers modify adjectival heads, according to Bäcklund (as cited in Tagliamonte, 2008). Only clauses with this particular context were studied for analysis. This can again be seen in the examples in (1), where only adjectives are modified.

1. a. This is extremely salty.
- b. She is so clever.
- c. It is very hot today.

Negative contexts were excluded in this study, given that they do not always denote a meaning that amplifies upwards (Ito & Tagliamonte, 2003; Tagliamonte, 2008). This is seen in (2), where *very* does not express the extreme opposite of being hungry, but instead indicates a moderate appetite and is therefore more aligned with a downtoner.

2. I'm not very hungry.

Although the intensifiers *quite*, *pretty*, and *fairly* are able to exert an amplifying meaning in certain contexts, they are typically restricted to downtoner meanings only (Stoffel, 1901). This ambiguity in their usage (Nevalainen & Rissanen, 2002) thus meant that they were also excluded from the study.

In instances of double intensification, such as in (3), the intensifier was counted as one token only, like in Tagliamonte and Roberts (2005).

3. This is really, really cool.

4 Results

4.1 Overall Frequency of Intensifier Use

275 tokens were collected for analysis in total. The overall frequency of intensifiers used by participants is summarised both numerically in Table 2 and schematically in Figure 1 according to speaker age group.

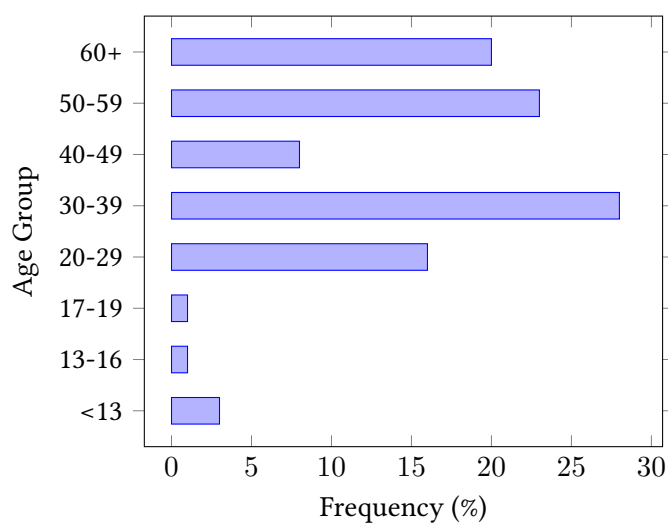
The data reveals that intensifiers are used most by the 30-39-year-olds (28%), followed by the 50-59-year-olds (23%) and then the 60+ age group (20%). There is a noticeable decline between the 30-39-year-olds (28%) and the 50-59-year-olds (23%), with the 40-49 age group being responsible for only 8% of the total intensifiers.

The least number of intensifiers are used by the 13-16-year-olds (1%) and 17-19-year-olds (1%), followed by the <13 age group (3%). There is a steep increase from these age groups to the 20-29-year-olds, who use 16% of the total intensifiers.

Table 2: Total Frequency of Intensifiers by Age

Age	N	%
<13	8	3
13-16	3	1
17-19	3	1
20-29	43	16
30-39	77	28
40-49	21	8
50-59	64	23
60+	56	20
Total	275	100

Figure 1: Total Frequency of Intensifiers by Age



4.2 Distribution of Specific Intensifiers

Intensifiers with a frequency of 5 or more are summarised in Table 3.

Table 3: Total Frequency of Specific Intensifiers ($N \geq 5$)

Intensifier	N	%
So	116	42
Very	56	20
Really	45	16
Super	12	4
Too	8	3
Absolutely	7	3
Bloody	7	3
Other	24	9
Total	275	100

The three most frequent intensifiers in the data are *so* (42%), *very* (20%) and *really* (16%), respectively. The frequency of *so*, *very* and *really* according to age group is represented numerically in Tables 4, 5 and 6, and schematically in Figure 2.

Table 4: Total Frequency of the Intensifier so

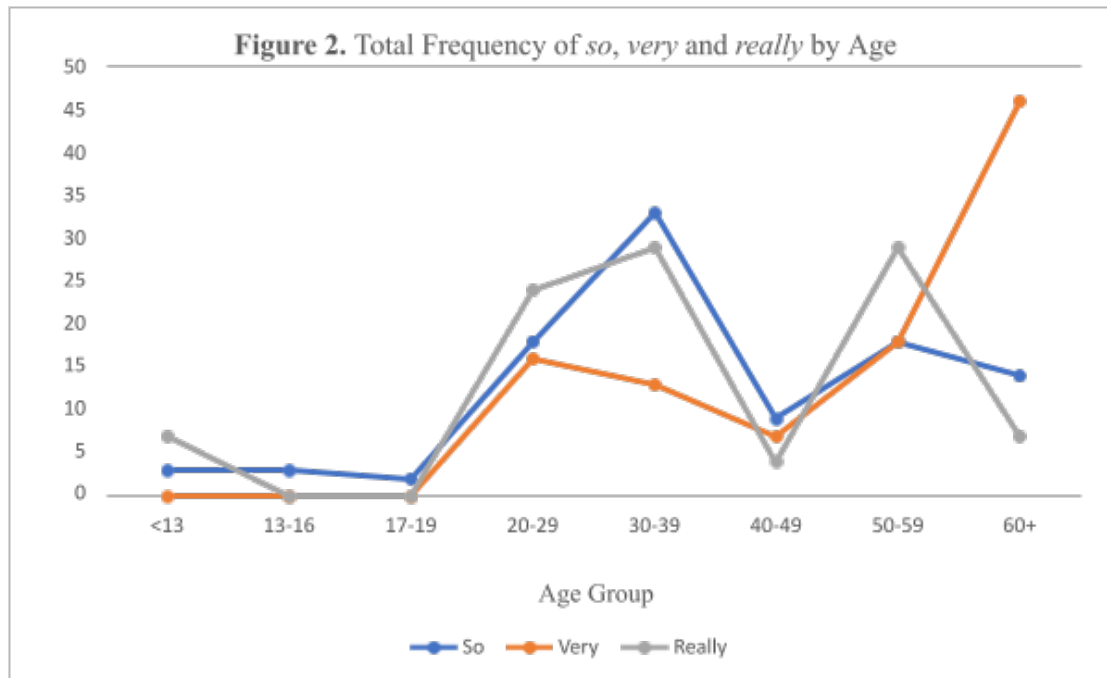
Age	N	%
<13	4	3
13-16	3	3
17-19	2	2
20-29	21	18
30-39	38	33
40-49	11	9
50-59	21	18
60+	16	14
Total	116	100

Table 5: Total Frequency of the Intensifier very

Age	N	%
<13	0	0
13-16	0	0
17-19	0	0
20-29	9	16
30-39	7	13
40-49	4	7
50-59	10	18
60+	26	46
Total	56	100

Table 6: Total Frequency of the Intensifier really

Age	N	%
<13	3	7
13-16	0	0
17-19	0	0
20-29	11	24
30-39	13	29
40-49	2	4
50-59	13	29
60+	3	7
Total	45	100



The apparent time perspective in Figure 2 shows that the frequency of *so* shows no consistent increasing or decreasing trend across the age groups. The clearest consecutive increase is from the 17-19-year-olds (2%), to the 20-29-year-olds (18%), to the 30-39-year-olds (33%), who show the highest usage of *so*. Despite a sharp decrease with the 40-49 age group, who are accountable for only 9% of *so* intensifiers, its popularity increases again with the 50-59-year-olds (18%), who are the equal second biggest users of the intensifier. Its use declines again with the 60+ age group (14%).

The frequency of *very* in Figure 2 shows a more consistent trend. Notwithstanding the peak that occurs among the 20-29-year-olds (16%) and 30-39-year-olds (13%), the intensifier decreases steadily from the 60+ (46%) age group. It is worth noting that *very* is entirely absent from the <13, 13-16 and 17-19 age groups.

The distribution of *really* shows a remarkable symmetry with *so*. Like *so*, the frequency of *really* lacks a steady increasing or decreasing pattern in the data. As with *so*, however, there is a clear increase from the 17-19-year-olds (0%), to the 20-29-year-olds (24%), to the 30-39-year-olds (29%), who along with the 50-59-year-olds (29%), show the highest usage of *really*. Similar to *so*, a decrease takes place after the 30-39 age group, with the 40-49-year-olds using only 4% of *really* intensifiers. Another sharp decline takes place after the 50-59-year-olds (29%), with the 60+ age group using just 7% of *really* intensifiers.

5 Discussion

5.1 Overall Frequency of Intensifier Use

The fact that younger speakers are responsible for the least number of intensifiers in the data contradicts previous studies (Barbieri, 2008; Paradis, 2000; Stenstrom, 2000; Xiao & Tao, 2007). A possible explanation may come from the difference in data mediums. While these studies ascertained data from corpora, this study sourced data from a reality television program, where the youngest speakers from ages 9-19 are from five member households and therefore lack the opportunity to produce as much data as participants from smaller households. Since younger speakers are typically innovators in linguistic change (Romero, 2012), another possibility for this divergence is that younger Australian English speakers are finding means other than intensifiers to enhance the novelty of their speech.

Although Saarenpää (2016) New Zealand English study supports middle-aged speakers in being among the highest users of intensifiers, no previous studies find that older speakers are also among this group (Barbieri, 2008; Saarenpää, 2016; Tagliamonte, 2008; Xiao & Tao, 2007). Given that intensifiers are typically associated with nonstandard and colloquial language use (Fries, 1940; Stoffel, 1901), which is typically avoided by middle-aged and older speakers (Eckert, 1997), it may be possible that the pressures of linguistic conservatism are not upheld by these groups in Australian English. The outlier reflected in the 40-49-year-old category can likely be explained by there being only 3 participants in this bracket, which is comparatively smaller to the other middle-aged and older speaker categories and thus an explanation for the lower intensifier output. This analysis also explains the category's outlier status in 5.2 below.

From the data, it hence appears that the overall frequency of intensifiers used can index the age of Australian English speakers, with fewer intensifiers signalling younger speakers and increased intensifiers signalling middle-aged and older speakers. However, this must be qualified by recognising the limited scope of this study, which has not been able to consider the relevance of participants' gender, ethnicity or class. Gender in particular bears a strong relation with intensifiers, with women having a "fondness for hyperbole" (Jespersen, 1922, p. 250). An analysis of women speakers and their intensifier use may thus further clarify middle-aged and older speakers' strong intensifier frequencies.

5.2 Distribution of Specific Intensifiers

The status of *so*, *really* and *very* as the three most popular intensifiers in Australian English echoes the current literature (Barbieri, 2008; Saarenpää, 2016; Tagliamonte, 2008; Xiao & Tao, 2007).

While the failure of *so* to yield a clear increasing or decreasing trend across the age groups corresponds with previous studies, this is not the case with *really*, whose inconsistent pattern is not supported in the literature (Barbieri, 2008; Saarenpää, 2016; Tagliamonte, 2008; Xiao & Tao, 2007). The general prominence of *so* and *really* across younger, middle-aged and older speakers contradicts claims that these intensifiers are typically reserved for younger speakers (Romero, 2012). Although the 60+ age group evidently prefers *very* as an intensifier, as discussed below, the 50-59-year-old speakers are the second biggest users of *so* and the equal biggest users of

really. This indicates that *really* and *so* are starting to lose their reputation as historically vulgar intensifiers among older speakers (Fries, 1940). Hence, despite the status of *so* and *really* as relatively new intensifiers (Stoffel, 1901), the broader Australian English speech community seems to have adapted to their use, indicating that there is no generational change across the use of *so* or *really* in apparent time.

The overall decreasing trend of *very* from the older to younger ages corresponds to previous studies (Saarenpää, 2016; Tagliamonte, 2008; Xiao & Tao, 2007). The popularity of *very* among the older speakers may be explained by it being the oldest intensifier in modern use (Tagliamonte, 2008), and thereby connoting preferable qualities of standardness (Romero, 2012). The divergent peak of *very* among the 20-29-year-olds and 30-39-year-olds could be explained by the linguistic marketplace principle (Sankoff & Laberge, 1978), where the speakers' increased involvement in the workplace means they tend to use more standard variants at these ages, which they then carry across to other domains (Meyerhoff, 2019). Since this peak is relatively small, however, and there is no usage of *very* among the youngest speakers, the overall declining pattern of this intensifier indicates that it is undergoing generational change in apparent time and losing its popularity in the Australian English speech community.

Despite the generational insights offered by this apparent time study, it is limited by the fact that the 31 individuals are mere exemplars of each generation and cannot reflect the state of *so*, *really* and *very* across the entire Australian English speech community. By using the participants as exemplars, this assessment of generational change also depends on the adult speakers retaining a stable linguistic style across their lifespan (Wagner, 2012). There are, however, indications of this not always being the case, with *very* peaking among the 20-39-year-old age group and then declining again.

6 Conclusion

This paper has sought to reveal connections between age and intensifier use in Australian English through the lens of Gogglebox Australia. The paper suggests that the overall frequency of intensifiers used can index the age of Australian English speakers, with younger speakers being identified with a lower intensifier use and middle-aged and older speakers with a higher use. This preliminary finding would benefit from future research, which could replicate this study and examine intensifier frequency against additional social variables. The study also indicates that, among the three most popular intensifiers, generational change is only taking place across *very*, which is decreasing in popularity among the Australian English speech community. The intensifiers *so* and *really* do not indicate such change in apparent time. As already flagged, however, these findings are somewhat limited by the apparent time construct, whose drawbacks require greater attention in the literature.

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The Term ‘Native Speaker’: Myth or Reality? Acceptable or Problematic?

Haiyu Zhang

1 Abstract

In this paper, the core question “*is the concept of Native Speaker a myth or a reality?*” tends to be answered through analyzing pervious scholars’ proposed criteria towards the definition. Specifically, these would discuss why the term ‘Native Speaker’ fails to be defined, variations of interpretation from different perspectives of Applied Linguistics, and how the stereotype towards this term influences peoples’ lives in reality. Through viewing the purposes and applications on current debates towards defining ‘Native Speaker’, this article tends to convey the idea that the term ‘Native Speaker’ should not be totally accepted or abandoned, as the reality of ‘Native Speaker’ varies in definition across different linguistic areas. Still, it is necessary to be cautious about setting clear boundaries when utilizing this concept to avoid any confusion or misunderstanding.

2 Introduction

According to Davies (2004), the debate on concept ‘Native Speaker’ (NS) seemed to start when Chomsky firstly proposed the status of native speaker through a theoretical linguistic perspective: Being a native speaker is regarded as the ultimate achievement of the language aspect of human development and everyone must be a native speaker of a specific language. While the problem is that this statement ideally views language as an entity without considering any variations or special proficiency levels. Based on this case, people in reality who share ‘native speaker’ identity of a language have different perceptions towards their language competence. Besides, social factors such as migration, colonization, or even globalization could result in a loss of native speaker identity. Language development is a complex, dynamic and socially influenced process, but not fixed and changeless.

For the reasons discussed above, the ambiguous concept ‘native speaker’ has been constantly read with various explanations. A few scholars noticed its problematic utilization and managed to raise new concepts to replace the term, as well as to prevent applying ‘Native Speaker’ status to current academic literature (Dewaele, 2018; O’Rourke & Pujolar, 2013). Before discussing these, it is essential to clarify how scholars currently define the term ‘Native Speaker’ and its antonym ‘Non-Native Speaker’ through different views, and to separate myth from reality.

3 'Native Speaker' and 'Non-Native Speaker'

Even though the term 'Native Speaker' has been commonly used in different areas, its appropriateness and functions of usage have remained up for debate by scholars. Firstly, the appropriateness of this term depends on how it should be defined. Variations of its definition have been raised through different perspectives. For example, Chomsky, as a representative of theoretical linguists, tended to legitimize the concept in the way that native speaker should be the only valid speaker of a language. Specifically, it requires that a native speaker should naturally acquire all idealized linguistic features and competences within a completely homogeneous community. Nevertheless, a few scholars specializing in the field of ELT (English language teaching) and TESOL (Teaching English to the speakers of other languages) totally objected to Chomsky's proposal on 'Native Speaker', as it never took the reality of language usage into consideration and caused the potential problem of forming a stereotype towards language teaching that only native speakers could be an ideal language teacher (Llurda, 2016; Mahboob, 2005). Similarly, Davies (2004) also pointed out a phenomenon that a group of people who were supposed to meet the qualification rejected to view themselves as native speakers by following the Chomskian paradigm. This indicates that if Chomsky's ideas were approved, the concept of 'Native Speaker' would make its existence meaningless and be merely referred in literature, as few people are able to actually attain the highest proficiency level of a language, even it is their first language.

Additionally, other scholars tend to be conservative when setting boundaries and listing possible criteria to define this concept instead of making a complete statement. For example, Dewaele (2018) once agreed on Cook's (1999) argument that it is inevitable to mention the language firstly spoken by someone in their life when clarifying on the definition of native speaker. This is the crucial element for a person to be viewed as a native speaker, regardless of the possibility that first language would be lost in their later life (Schmid, 2011). Particularly, Davies (2004) raised an idea: to be a native speaker means not being a non-native speaker - and came up with six criteria summarized by common agreements on defining 'Native Speaker': FLA (First Language Acquisition) in childhood, intuitions on standard norms and idiomatic expressions, as well as the capabilities of discourse and pragmatic control, creating L1 performance, and interpretations into L1. In this respect, Davies's Davies (2004) intention seems not to normalize the general understanding towards 'Native Speaker' but to exclude those without qualifications from being defined as native speakers so as to narrow down the margins of a potential grouping. However, this idea brings another problem by eliciting the opposite term of 'Non-Native Speaker'.

'Non-Native Speaker' is also a controversial concept alongside 'Native Speaker'. It was initially proposed to refer to the rest of people who do not share the identity of 'Native Speaker' (Dewaele, 2018). However, this definition itself shows an implicit bias of dividing people into different categories and conveys a problematic 'mutual understanding' that native speakers always acquire a specific language better than non-native speakers. In other words, somebody would never attain the native-like language proficiency level or should be regarded as an unqualified language user as long as he or she does not be identified as a native speaker of that specific language. Dewaele (2018) once pointed out the flaw of the concept of 'Non-Native

Speaker' by making an analogy on a group of 'blue-eyed people' and claimed that people never define them as 'not green-eyed people', as it is known to all that there is no superiority and inferiority among colors and each of them is clearly described and nominated a unique name through its special properties. This is the goal that current scholars try to achieve when considering the problem of defining 'Native Speaker' and 'Non-Native Speaker' (Dewaele, 2018; Llurda, 2016; O'Rourke & Pujolar, 2013).

Above all, we can conclude that there still remains many doubts when defining the concepts 'Native Speaker' and 'Non-Native Speaker', and that there are many difficulties regarding how to rephrase the antonym of 'Native Speaker' due to its ambiguity. In particular, the following discussions will be extended to analyze whether the problematic concept should be reserved or abandoned, whether and how SLA (Second Language Acquisition) learners could achieve native-like proficiency, and to explore innovative ideas proposed to replace the concept of a 'Native Speaker'. Before that, it is necessary to elaborate on the core question of this paper as well as to clarify which properties of a 'Native Speaker' are myths, and which are based on reality.

4 Myth and reality: Different angles to look at 'Native Speaker'

To address the core question 'Is the concept of native speaker a myth or a reality', it is obvious that scholars in previous studies tend to skip the debate and directly elaborate on these two properties by prior agreement that 'Native Speaker' (NS) is both a myth and a reality. However, Davies (2003) once made a clarification on 'myth' and 'reality': the myth refers to mysterious, unqualified and doubtful properties of 'Native Speaker' when it is regarded as an abstract and universal theory, whereas the reality presents marginal and specific features when the concept of 'Native Speaker' is placed into discussions with particular social and contextual factors. Likewise, Dewaele (2018) rephrased the myth of NS as 'mystical property' in his previous study and elaborated that the property was due to the 'dynamic and ambiguous' features of the concept of NS.

Another explanation was given by Han (2004) who followed Davies' study on viewing the myth and reality of NS concepts respectively through different perspectives: the concept of 'Native Speaker' in sociolinguistics represents a concrete thing such as identity, powerful authority, or even a presence of language confidence. However, from the perspective of psycholinguistics, the concept is intangible like an icon.

To conclude, there is no doubt that the concept of 'Native Speaker' acquires both properties. But to determine whether it is a myth or reality depends on the angle of one's approach: 'Native Speaker' is a myth when the discussion of this concept is based on the premise of viewing it as a general linguistic idea, such as the discussion of legitimizing the standards of NS. 'Native Speaker' could also be a reality when being applied to discussions on specific sociolinguistic contexts. For instance, it refers to a reality when NS is discussed as an identity that SLA learners could aim to be.

5 Could SLA learners be able to achieve native-like language proficiency?

Speaking of the current debates on NS concepts, one of the hottest topics is whether SLA learners could attain the same language proficiency level as native speakers. Based on Chomsky's theory discussed above, the existence of NS provides an idealized language model. In this case, it indicates that perfect language attainment would never be successfully pursued by learners. Mahboob (2005) once agreed on the argument and elaborated on her point of view through TESOL perspective by eliciting two concepts as supporting evidences: fossilization and interlanguage. Specifically, interlanguage was firstly raised by Selinker (1969) to describe the outputs produced by learners' creation on foreign norms of the target language during the learning process. In other words, these productions could also be regarded as errors judged by standard norms of that specific language. Fossilization conveys an idea that once learners acquire enough knowledge and competencies of their target languages, the learning process would halt. These two concepts imply a common idea that a gap would always exist between learners and native speakers.

However, Cook (1999) objected to this argument and pointed out that since language development is constant, dynamic and endless, NS could never be the ultimate achievement for learners. Boyle (1997) quoted Davies' argument to indicate a possibility that SLA learners might achieve native-like proficiency level as well as communicative and linguistic competences. Specifically, Davies (2004) claimed this argument through analyzing his six criteria proposed to define NS concept: all these criteria except the early childhood acquisition could be attained by SLA learners with sufficient practices and contact with target language speakers. This was already proved in Coppieters' Coppieters (1987) previous study on differences between native speakers and advanced learners of French, which showed that a significant factor preventing the learners' proficiency was the learners' lower generalizing capacity, a result of the lack of early acquisition.

Therefore, although SLA learners might be restricted by factors such as the effect of fossilization and interlanguage to achieve native-like proficiency, it is still possible if enough efforts were put on target language learning.

6 Should the term 'Native Speaker' be rejected or accepted?

Compared with previous debates discussed above, the following debate on the extended use of 'Native Speaker' is reflected by a series of realistic problems. Here follows one typical example of job crisis as a result of the prejudice posed by NS and NNS:

Mahboob (2005) once stated a phenomenon discussed in her previous study that nowadays a large number of non-native speakers fail to become employed as teachers of their specialization languages due to the lack of 'Native Speaker' identity (Mahboob, 2005). Even worse, the situation still happened on the premise that both the native speaker and non-native speaker had similar proficiency of that target language. She mentioned, as a result of her study, that more and more program administrators view 'Native Speaker' as an important criterion of judging a teacher's language capability (Mahboob, 2005). In other words, when comparing with na-

tive speakers, non-native speakers of a language have no advantages in the competition for employment no matter how advanced their language skills and how abundant teaching experiences they acquire. Therefore, some scholars began to reflect on this job crisis by reviewing the concept of NS and considered eradicating the discrimination by calling for a stop on the utilisation of the term 'Native Speaker' Dewaele (2018), Llorca (2016), and Mahboob (2005).

However, although the concept of NS has already come under attack, other scholars noticed that it is still widely used by a large amount of people (Llorca, 2009). From my perspective, it is unattainable to force people to abandon this concept, no matter mentally or practically. But it is necessary to announce the flaws of NS concepts to and find solutions on advertising the advantages of NNS so as to increase its status. Specifically, Boyle (1997) once made positive comments on NNS as a language teacher in previous research which might give a clue for solving the job crisis problem: on one hand, as bilinguals or multilinguals, non-native speaker teachers should get more familiar with students' culture and native language to deal with anticipated teaching problems; on the other hand, non-native speaker teachers usually acquire professional pedagogical trainings and tend to perform better than native speakers who acquire higher language proficiency but less qualifications in teaching.

7 New developments in redefining 'Native Speaker'

Since the concept 'Native Speaker' to some extent has been rejected, a series of new ideas to replace the term 'Native Speaker' have been innovated to avoid potential problems caused by the myth of NS. For instance, O'Rourke and Pujolar (2013) introduced a new term of 'new speaker' to represent those people outside the NS group through language revitalization perspectives. Dewaele (2018) came up with another idea called 'LX user', aiming at generalizing variations of language users. Through his explanation, 'LX' label presents a neutral value and could refer to any foreign language acquired by learners at any proficiency level and any stages of learning. Besides, 'user' is a general statement of including all types of people who utilize a language either with a specific skill or comprehensively. In my opinion, Dewaele's proposal is smart enough to make up the shortcomings of NS concepts, but still relies on people making a common agreement on the definition of 'X': some might rank based on the processes of language acquisition, while others might view the ranking as a proficiency scale.

Apart from new innovations, other existing terms have also been raised to deal with the issue of identifying all users of English, such as WEs (World Englishes) and ELF (English as a Lingua Franca) so as to prevent the elicitation of 'Native Speaker' in further rigid literatures (Llorca, 2016). WE refers to any English varieties and ELF stands for English communications existing between people who share English as their common language. These two concepts are established based on viewing English as a global language, which delegitimizes the status of standard English and views all variations of the English language equally. In that case, I suggest a formula of naming: nationality + target language + user'. For example, a Chinese person who learns English as their target language would be nominated as 'Chinese English user'.

8 Conclusion and further direction

This paper identified possible criteria established to define the concept of Native Speaker from different linguistic perspectives, addressed the core problem through the elaboration on two properties of NS (myth and reality), analyzed the current debates on NS relevant issues arising from realistic problems, and introduced new ideas proposed to replace the term of NS. Through all sections discussed above, it is essential to notice that whether or not NS concepts are myth or reality depends on the linguistic aspect through which it is viewed and the context in which it is placed to be discussed. Besides, there is no doubt that a series of potential problems such as class divisions and stereotypes arise from actual implementations of the ambiguous concept. In the future, it is more applicable to consider other solutions to fix the flaws of NS concepts instead of rejecting to use it, as it is hard to destroy its status over many years of its usage, and would discredit many linguistic innovations which have used this concept.

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The Extent of Humanness in “Human-like” Animal Communication

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1 Introduction

The ability to use language for communication is one of the defining features that distinguish human behaviour as exceptional from that of other organisms in the Animal Kingdom. However, although many researchers are far from fully comprehending the various forms of animal communication, they have found that due to the diversity of animal intelligence, plenty of animal communication can be human-like too. This blurs the lines between how humans and other animals communicate among themselves. I will review research done into the communication of two groups of animals; cetaceans and primates, to determine to what extent their communication is similar to humans and what features are lacking that prevent their forms of communication from being considered a human language. I will also address the issue of applying categorical differences to set human language and animal communication apart.

2 Hockett’s Design Features

Before looking into literature on whale and primate communication, I would like to clarify that there has been some research into differentiating human language and animal communication. One such research endeavour is Charles Hockett’s (Hockett, 1960, 1973) features of what human language and animal communication both have and do not in his investigation on the origin of language and linguistic universals. As part of a categorical approach, the features would be later known as Hockett’s design features. Hockett identified up to sixteen features in his initial writings and then noted the following seven features which unlike the previous ones, are mostly exclusive to human languages:

- displacement (communicating about something that cannot be sensed right now),
- productivity (constantly creating novel utterances spontaneously from an existing set of known utterances),
- duality (being able to combine smaller, usually meaningless units of language to form larger, more meaningful units),
- cultural transmission (language is not genetically acquired but has to be acquired and passed down from others),

- prevarication (using language as opposed to innate biological functions to deceive others),
- reflexiveness (using language to talk about language), and
- learnability (all human languages can be learned by any other human).

Despite this, the notion that virtually no animals have some of these features is challenged by later research on the communication systems of various animals and attempts to have primates acquire human sign language, since they do not have the biological capabilities for human-like speech.

3 Cetacean communication

As the largest known group of animals, the Cetacea family possess brains large enough for exceptional intelligence compared to other animals. While they are not as intelligent as humans, their intricate communication systems suggest a decent amount of intelligence by possessing (to some extent) several Hockett human-exclusive design features. To start off, Rendell and Whitehead (2005) identify communicative variation in sperm whales hailing from different parts of the world's oceans. They find that communicative variation not only comes from genetic variation and geographical adaptation, but also from cultural change and the need for recognition by other whales, reflecting different social structures. Thus sperm whales have what is known in human language as "dialects". The identification of whale "dialects" is strengthened by their stability over time. Right away, this implies that whale communication has the Hockett design feature of cultural transmission. Furthermore, it is even possible for humpback whales of different populations to exchange knowledge about their different vocalisations (Helweg et al., 1998).

If this is a sign that cetacean communication may have productivity, research by Filatova et al. (2016) indicate that killer whales are limited by physical constraints in their vocal production mechanisms, hampering their ability to produce completely random vocalisations. Even if there are seemingly random vocalisations, they happen to recur in completely different populations. Therefore, cetacean communication does not have full productivity. Research into the informational structure of humpback whale vocalisations conducted by Suzuki et al. (2006) confirms the hypothesis that vocalisations are made up of hierarchical units, paralleling the human language hierarchy of phonemes, morphemes, words and so on. The sequencing of the songs would form a rudimentary syntax. This implies that humpback whale communication not only has discreteness but also duality, the latter another allegedly human-exclusive language feature. However, the researchers note that there is a likelihood that the structure is meaningless based on the information in it. I believe this sets a good precedent for examining animal communication more thoroughly for any semblance of structure or syntax, which may be signs of the duality design feature.

Although it is clear that cetacean communication possesses plenty of features that are supposedly exclusive to human language, one feature I am yet to find researched is prevarication and displacement, i.e. whether whale songs can be used for deception and informing of objects

that whales cannot sense. Fully understanding whale communication is the limit at this point, with Rendell admitting himself in an interview that “a single marine mammal communication call where its function has been unambiguously decoded” (quoted in Fearon (2018)) would be impossible. This is crucial in pointing out that researchers of whale communication have yet to confirm whether it possesses the features of reflexiveness and learnability. They go hand-in-hand: we are far from understanding if whales can use whale songs to talk about whale songs since we cannot fully decipher and acquire whale communication. Doing so could help us to understand if whales are capable of prevarication too.

4 Primate Communication

Research interest in primate communication in relation to human language has been high given how evolutionarily related primates are to humans. Of particular note are the numerous attempts to train primates to acquire human sign languages or symbols since the hand-related faculties of primates exceed their speech faculties in communicative potential. For example, Premack and Premack (1983) taught chimpanzees how to communicate with plastic pieces standing in for English words. One of the subjects, ‘Sarah’ was able to access the features of duality and displacement through the tokens, by stringing simple sentences and conditional statements from them to ask for fruit which was not in front of her. Another famous example of a primate learning sign language is Koko the gorilla. She was able to demonstrate prevarication by falsely claiming her pet kitten destroyed a sink in her enclosure through sign language (Brooks, 2018). Natural prevarication is possible with chimpanzees too when they are forced to behave competitively, as discovered by (Woodruff & Premack, 1979). Analysing the vocalisations of other primates also proves that they have some duality. Putty-nosed monkeys and Campbell’s monkeys for example construct structured calls based on predators they spot, the former sequencing their calls and the latter affixing calls based on the predators they spot (Arnold & Zuberbühler, 2006; Ouattara et al., 2009). Once again, this is another case of animal communication exhibiting design features allegedly reserved for human language.

Sign language may be a breakthrough in primate language cognition yet realising the feature of productivity – even with sign language – is much debated. To educate primates about the limitless possibilities of syntactic permutations, – this crucial sign of productivity turned out to be a bust as the increased hierarchical logic escaped cotton-top tamarins tested by Fitch (2004). If monkeys cannot understand grammar that arises from very sophisticated syntax, then it is no wonder there has yet to be a breakthrough with sign language. Monkeys are highly unlikely to fully utilise human sign language taught by their trainers, let alone develop a rich gesturing system on their own as humans do. Take for example the rapid, spontaneous development of Nicaraguan Sign Language in the Nicaraguan Deaf community, derived from existing sign languages and home signs.

While unsuccessful in producing primates capable of mastering human language, there is some merit in studying how they acquire human sign language since the evolution of human language is theorised to have started from gestures (Cooperrider, 2020). It could thus provide some insights into the beginnings of how humans came to acquire language as we know it.

5 Limitations of Hockett's Design Features and a Modern Alternative

After looking into the examples of cetacean and primate communication, the shortcomings of Hockett's design features become evident: cetaceans and primates could exhibit features claimed to be exclusive to humans to varying extents. Although they set a decent benchmark for its time for classifying human language, research after that conveys the datedness of Hockett's categorical approach. Wacewicz and Żywiczyński (2014) challenge Hockett in two ways: Hockett has overfocused on both communication being oral and messages as being transmitted by codes rather than recognising the role that cognition plays in such communications. While not directly related to the categorical problem, these issues the two researchers bring up compound the problem in animal communication since animals are claimed to have limited cognitive capabilities based on their means and codes of communication. In my opinion, to say that animal communication is limited by lacking several human language features ironically hampers our understanding of animals and exactly how they communicate and makes it difficult to figure out the threshold for making human language special.

Decades after Hockett first laid out his design features, Hauser (2002) argued for a broad and narrow sense approach to human language; the broad sense encapsulates various cognitive systems required for language and the narrow sense represents the sole capability of recursion. Among several hypotheses, they believe recursion is the only exclusive to humans and acknowledge a continuity in differences between animal communication and human language in the broad sense. This shows, moving forward, that it is important to consider animal cognition while researching how they communicate and linking it to the evolution of communication systems.

6 Conclusion

I have explained and analysed the human-like features of cetacean and primate communication in terms of Hockett's design features and I believe the most important takeaway is that cetaceans and primates are still not found to have certain key features like productivity and learnability. Furthermore, we are yet to have a perfect understanding of any animal communication system. Despite this, research into advanced systems has implications on piecing together the evolution of animal communication into human language. That is why I chose to review research on such advanced mammal communication. As fellow mammals, they could be bridging the gap between our biological predecessors' way of communication and our faculty of language. I do not agree with the categorical approach defining what sets human language apart from animal communication after considering that this strict interpretation of the design features becomes unsound towards some animals' ways of communication. I argue that considering what makes animals and humans different should be more on a continuum than categories. Acknowledging that animals can have complex communication systems that are close to the threshold of human language will help humans to understand animals better as researchers inch closer to figuring out how exactly we can talk to them (Wolchover, 2012).

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