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Contents

Articles

Commentary

Foreword

It is always exciting to see how engaged and enthusiastic students can become about linguistics during their course. Most students (and probably their parents) know little about linguistics when they arrive at university, and they decide to take the first year subject, the Secret Life of Language, for myriad reasons. Linguistics tends to be a subject you either love, or don't.

This volume, put together by the committee of the student Linguistics Society, reflects their excitement and interest in linguistics, but also demonstrates the broad array of linguistics topics that they have learned about during their time at the University of Melbourne. The volume is comprised of a series of the top essays, each of which achieved an H1, which the students wrote for a variety of classes in which they were enrolled in during their majors. The essays address a diverse range of research topics which include, among many others, ergativity in Australian Aboriginal languages, transfer in second language learning, and gendered language in online communication. There are also two short works which were not submitted for assessment, but instead are provided for general enjoyment. For example, one tells us that an analysis of the branding on potato chip packets suggests that the more expensive your chips, the more words will appear on the packet. There is no word, however, on whether this bears any relation the quality of what's inside the packet!

This is a great way to find out about linguistics, and the book is designed for any students with an interest in linguistics, and especially for those who are undertaking a major. We hope you enjoy it.

Professor Gillian Wigglesworth
Redmond Barry Distinguished Professor
Discipline Chair of Linguistics and Applied Linguistics

September 2019

Editors' Note

Nuanced Garbling provides an opportunity for students of linguistics at The University of Melbourne to share their achievements and inform other students. The written contributions in this publication add to the collective knowledge of the student body and brings to the fore the academic curiosity of our members.

From Australian Aboriginal languages to linguistic typology, to the philosophy of language, to sociolinguistics, there is something to be gleaned from every paper presented in the inaugural volume of *Nuanced Garbling*. They are detailed, well-researched and articulate discussions answering a series of fascinating linguistics questions. The wide array of presented works speaks to the academic strengths of linguistics students and their desire to contribute to the vibrant intellectual community that is the Faculty of Linguistics. These papers were all deemed worthy of First-Class Honours and have been further developed into the pieces presented here so as to be appreciated by all lovers of language.

There are a number of groups which are due recognition for their help in producing the 2019 edition of *Nuanced Garbling*. First gratitude must go to the LING committee, for it was through the society that this opportunity became available and their collective efforts have put together this journal before you today. Further, this journal would be nothing without the passion of our members for it is your interest in linguistics that provided the impetus for an educational resource such as this to be produced.

Special thanks must go to the authors and contributors Ziting Guo, Romi Hill, Evan Keith, Henry Leslie-O'Neill, Olivia Lin, Tiger Liu, Giovanni Ma, Annika Schimpff, and Catherine Wen. Your essays have formed the bulk of this publication and have been immensely enjoyable and enlightening to read. Your ideas, passion and incredible work ethic are admirable and an example for us to follow. It has been a pleasure working with each of you and you are a testament to the faculty.

Finally, to the readers, we hope that each of you learns something from these pages as these essays stimulate your thoughts and prompt new ideas and ways of thinking about language.

Michael Josefsson, Vincent Murphy and Kavin Nenh
Editors

September 2019

THE PAMA-NYUNGAN QUESTION: ARGUMENTS FROM THEORY AND METHODOLOGY

Michael W Josefsson*

Contents

I Introduction

Pama-Nyungan is the predominant language family in Australia, stretching from the Central Desert to Cape York and covering roughly seven-eighths of the Australian continent. First proposed by O'Grady, Voeglin, and Voeglin in 1966 (as cited in Evans, 2005), it has since been accepted by the majority of linguists working in the field, on the basis of a wealth of evidence drawing from nearly every aspect of comparative linguistics. The Australian linguistic situation does however present challenges that complicate the picture for comparative linguists. The phonologies of Australian languages are remarkably consistent throughout the continent, regardless of their genetic inheritance; it has also been claimed (Dixon, 1988, 2002) that rates of lexical borrowing are much higher in Australia than elsewhere, both of which render the comparative method harder to apply.

Although Pama-Nyungan has reached widespread acceptance, the prominent Australianist R.M.W. Dixon has persistently challenged its validity as a classification on a number of grounds, and specifically denies that any meaningful group called Pama-Nyungan can be said to exist (Dixon, 2002, p. 53). This paper is intended to rebut Dixon's arguments and contends that Pama-Nyungan is indeed a valid genetic classification. It will begin by setting out criteria for what constitutes a valid genetic group, and therefore rebutting Dixon's first (and less serious) claim that Pama-Nyungan has not met these criteria (2002, pp. 44-54). We will then consider Dixon's primary objection to the Pama-Nyungan family: that, because of the unique linguistic situation in Australia, the family tree model does not apply at all

* Originally submitted for the subject LING20009 Language in Aboriginal Australia in 2019.

(2002, pp. 44-54). It is beyond the scope of this paper to present the evidence for Pama-Nyungan directly; it will instead discuss the theoretical and methodological questions at the heart of the problem, and refer the reader to fuller data elsewhere.

II Criteria

First, before it can be judged whether Pama-Nyungan meets the criteria for what constitutes a valid genetic group, it is necessary to set out what those criteria are. Importantly, this paper will only consider whether Pama-Nyungan is a valid language family, not whether, as is often proposed, it constitutes a sub-group of a broader family descended from Proto-Australian (e.g. Bowern & Koch, 2004). Partly this is to do with space and the scope available for this piece, but more relevantly Dixon's arguments remain the same regardless of the level of classification at which they are aimed: Dixon disputes not just whether Pama-Nyungan is a valid family or sub-group, but whether the family tree model is applicable in Australia at all.

Consequently, this paper will argue that Pama-Nyungan can be justified as a language family using 'bottom-up' comparison of its proposed daughter languages, following the traditional comparative method; outlines of standard approaches can be found in Campbell (1998, pp. 108-148) and Bowern & Koch (2004). Languages are classified into families when it can be demonstrated their unique features are the result of innovations away from a common origin. More weight is usually assigned to shared grammatical features than common lexicons or phonology, as it is here. While there are grounds to dispute the scale of their obscuring impact, to better address Dixon's arguments this paper assumes he is at least partly justified in claiming Australian languages are unusually prone to lexical borrowing and share similar phonologies as an areal feature, though reconstructed wordlists remain of value in demonstrating family connections.

III Methodological Problems

Dixon's first and less serious objection to Pama-Nyungan is based on the method through which it was originally proposed. The original (1966) classification of Pama-Nyungan, rather than using the traditional comparative method, was based on lexicostatistics. This method works by assembling sample wordlists of perhaps 200 words of 'core vocabulary', which are then compared for the frequency of cognates they share. Lexicostatistics makes the problematic assumption, which Dixon (2002, p. 45) rightly disputes, that core vocabulary — intuitively taken to be words for body parts, flora and fauna, kinship terms, and so on — is borrowed at a far lower frequency than other items in the lexicon, and thus can be used as a rough

guide to approximate genetic groupings. In the original proposal, languages were included in Pama-Nyungan if they reached a certain threshold of shared vocabulary. Because this assumption has since been shown to be unfounded, lexicostatistics is now considered a doubtful or even suspect method of identifying language families (Campbell, 1998, pp. 177-186); Evans (2005) notably calls for the "heuristic and cautious reinstatement" of this "blunt but useful instrument", but only ever alongside more rigorous comparative data.

The crux of Dixon's argument is sound — the lexicostatistical method first used to identify Pama-Nyungan has been rightly discredited for relying on too many illicit assumptions about the frequency of borrowed core vocabulary, not to mention the subjectivity of identifying cognates without the rigour of regular sound correspondences to back them up. Dixon argues that the putative family has therefore not been demonstrated to the same criteria as other, indisputable language families like Indo-European or Austronesian (2002, pp. 45-54). His conclusion, however, is flawed.

Dixon himself concedes that families whose existence was originally hypothesised on the basis of lexicostatistical data, though there may have been errors in the original method, have gone on to be well established by the traditional techniques of the comparative method; note that Dixon, perhaps contradictorily, accepts the validity of the comparative method at least outside Australia (2002, p. 44). O'Grady and Hale call Dixon's claims "an insult to the eminently successful practitioners of Comparative Method Linguistics in Australia" (2004, p. 69). Since the original 1966 classification, comparative linguists have gone at Pama-Nyungan from every angle. O'Grady (1990a, 1990e), Alpher (1990, 2004), and O'Grady and Hale (2004) all represent rigorous and largely successful attempts to reconstruct sound changes, lexical items, and, critically, morphology inherited from Proto-Pama-Nyungan. There is no longer a need to turn to unreliable mass comparison, and it is curious that Dixon (2002) still relies on the work of O'Grady, Voeglin, and Voeglin (1966). Pama-Nyungan is now supported not only by lexicostatistics but by rigorous analysis of regular sound correspondences, shared morphology, and reams of reconstructed words in the best of the comparative tradition.

IV Theoretical Problems

As discussed above, Dixon initially rejects the classification of Pama-Nyungan because he is unconvinced it has been adequately demonstrated via the comparative method, a claim (2002, pp. 45-54) this paper has hopefully dispelled. Curiously, only then does he turn to what is surely his most significant point, which is ultimately at the root of his objection. Dixon makes the extraordinary statement, repeated throughout his works, that the family tree model itself "may well hold in

some parts of the world but it most emphatically does not apply in Australia" (Dixon, 2002, p. 47). He essentially argues that the features of Australian languages prefigured in the introduction — remarkably consistent phonologies and unusually high rates of lexical borrowing — present so great a challenge to the comparative method that the traditional family tree model of how languages evolve is simply inapplicable to Australia.

O'Grady and Hale (2004, p. 69) call this claim "extravagantly and spectacularly erroneous", and it is difficult to find grounds to disagree with this assessment. Enough evidence contrary to Dixon's claim has already been presented in this article, and more substantially elsewhere, to demonstrate that the family tree model, as uncovered by traditional comparative linguistics, is not only a useful, meaningful representation of Australia's linguistic prehistory, but that it may in fact be the only such tool with enough care and empirical support to do the task any justice. Flaws in the family tree model have long been recognised and alternatives proposed (see Campbell, 1998, pp. 188-198), but it is remarkable the extent to which the family tree model has withstood the test of time and scholarly challenges as new evidence has come to light; take for example the famous confirmation of Ferdinand de Saussure's laryngeal theory, hypothesised for Proto-Indo-European before being confirmed with the rediscovery of Hittite (Deutscher, 2005, pp. 103-110).

This notwithstanding, Dixon proposes an alternative to account for what he sees as the unique language situation of Australia. A detailed breakdown of his 'Punctuated Equilibrium' model (2002, pp. 31-35) is beyond the scope of this paper, but it will attempt to briefly survey some significant flaws. Firstly, the linguistic community is not necessarily averse to proposals for a new model: Dixon's punctuated equilibrium falls on the sword of evidence, not professional jealousy. He suggests that Australian languages naturally reach a level of 50% diffused vocabulary, and this stable linguistic environment is periodically broken by environmental or cultural events that punctuate established language borders and trigger the sort of family inheritance so prevalent in the rest of the world. The argument rests on the assertion that this lexical diffusion is so great that it obscures original genetic links. Even assuming this were true, it ignores the strong morphological evidence Dixon himself finds so persuasive (Dixon, 2002, pp. 44-54), evidence he sometimes seems willing to dismiss: he prefers to attribute the distribution of the first person dual inclusive pronoun *ŋali* to the 'simpler' explanation of lexical diffusion across much of the continent, rather than it being inherited in multiple languages from a single common origin.

However, there are strong grounds to doubt Dixon's 50% equilibrium claim. Evans (2005) refers to 'the myth of the 50% equilibrium level', and argues convincingly that the few examples that even come close to this figure are better explained

as language families, where shared vocabulary can be expected, rather than Dixon's idiosyncratic preference for linguistic areas. Evans further argues:

> the levels of borrowing one finds in Australia are in general no higher than in such familiar cases as French-English, so it is unclear why Australia needs to be treated as a "special case"; borrowing poses no greater problems... than it does in Indo-European or Austronesian... (Evans, 2005, p. 261)

It could reasonably be argued that Indo-European presents a different case to Pama-Nyungan because linguists have access to evidence from Old English and Latin as well as their modern descendants. O'Grady (1990a) neatly nips this in the bud by demonstrating, following similar work between German and Russian, that the Pama-Nyungan languages Wadjuk and Umpila can be shown to be related even without the profoundly clarifying evidence of the rest of their Pama-Nyungan siblings.

Finally, Evans points out that Dixon is yet to publish evidence for his long-standing claim. Dixon (2002) states that the evidence will be saved for a forthcoming volume, yet to appear. Linguists should be innately cautious about accepting a model that trumpets a globally unique role for Australian languages and yet provides no strong evidence to support its claim.

V Conclusion

This paper has been dedicated to defending the validity of the Pama-Nyungan language family as the pre-eminent family on the Australian continent. It has surveyed widely accepted criteria for what constitutes a genetically valid group and summarised the methodological and theoretical arguments against Dixon's (1988, 2002) claims, aimed not only at his objections to Pama-Nyungan in particular, but at the legitimacy of the family tree model of language evolution in Australia at all. Evans (2005, p. 247) states that "Australian languages are in no way beyond the reach of the comparative method", and the works and evidence cited in this paper represent a categorical denial that Australian languages are forever impervious to "sufficient care, patience, and judgement." On the basis of the evidence from all sides, there is at present no reason to believe otherwise. Since it was first identified in 1966, the care and attention of repeated comparative studies has demonstrated that Pama-Nyungan represents a valid language family, and furthermore that the family tree model that has explained and withstood so much holds just as true in Australia as it does elsewhere.

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LANGUAGES OF HYPER-PRESTIGE AND LEXICAL REFLECTIONS OF ONTOLOGY IN A NORTHERN AUSTRALIAN CONTEXT: NOTES ON *GURRAŊAY MATHA*

Evan Keith*

Contents

I Introduction

The presence of Yolŋu Matha, one of the strongest Australian languages by both number of speakers and level of institutionalisation, is one of the primary distinguishing features of the linguistic environment of the Australian Top End. Yolŋu Matha facilitates many interactions across linguistic and cultural barriers in the Top End, particularly in its more remote regions. This paper will argue that the current status of Yolŋu Matha as a *lingua franca* for Aboriginal peoples in the Top End, combined with the socioeconomic disadvantages faced by its speakers, has created a unique dynamic; whereby the prestige language of the region, English, is ascribed supernatural qualities by L1 speakers of Yolŋu Matha, above and beyond those typically ascribed to prestige languages.

* This article is a reworked version of a project I submitted as part of Research Project (SACE) in 2018. No standardised Latin orthography currently exists for writing Yolŋu Matha. This paper adheres to the typological practices present in the work of Trudgen and Zorc — although not in Devlin or Christie — as this seems to be the most widely accepted orthography in use.

II Background

A *The Nature and Current Status of Yolŋu Matha*

The term *Yolŋu Matha* refers to a broad grouping of languages, dialects, and clan tongues spoken by the Yolŋu people in Northeast Arnhem Land, and, increasingly, many other Aboriginal people in the Top End region of the Northern Territory (Wilkinson, 1991). The exact status of Yolŋu Matha, be it a dialect cluster, unified language, or language family, is hotly debated and subject to rapid shift, and the term is today used somewhat flexibly to refer to a group of closely related tongues (Devlin, 1985; Dixon, 2002).

The language is spoken by around 10,000-11,000 people, almost all of whom live in Arnhem Land (this comes from an estimate of 6,000 L1 speakers and 4,000-5,000 L2+ speakers, ARDS, 2015; Treloar, 2012). Accurate figures regarding total speakers of the language are hard to come by due to widespread illiteracy among L1 speakers, rapid language shift and evolution, difficulty in ascertaining the number of L2+ speakers, and the aforementioned issue of accurately determining which of the many smaller clan dialects may be included within the *Yolŋu Matha* grouping (Devlin, 1985; Wilkinson, 1991).

B *The Prevalence of the Djambarrpuyŋu Dialect*

The majority of the assertions in this paper are generalisations about the broader dialect grouping of Yolŋu Matha made based on evidence from the Djambarrpuyŋu dialect.[1] This dialect, which has modified its lexicon so greatly since the 1980s that it might reasonably be called a separate language to the 'old Djambarrpuyŋu' of most published dictionaries, is the dialect with the most L1 speakers among the Yolŋu languages. It also has the most L2+ speakers by a colossal margin, when creole and *koine* variants and are not accounted for (Gale, 2011; Treloar, 2012). It is the dialect that the vast majority of Yolŋu children are learning, and has influenced the development of other dialects in the Yolŋu group far more than it has been influenced by them (Hall, 2017). The Djambarrpuyŋu dialect is one of only a few Australian languages (other examples being Murrinh-Patha and Tiwi), which have become widely spoken outside their original tribal lands, and can genuinely be referred to as Aboriginal *lingua franca*s of the Top End (Abley, 2003; Lee, 1987).

Since many of the assertions contained within this paper refer specifically to Yolŋu Matha in the context of its current status as a moderately-sized *lingua franca* among the broader Aboriginal population of the Top End, it seems appropriate

[1]

that the most widely spoken dialect be studied. With that being said, this paper refers only to materials on the Djambarrpuyŋu dialect and observations made by speakers of this dialect, and therefore may be limited in its applications to the status of smaller clan dialects. (I use the term 'dialect' here for brevity. The correct Yolŋu word is *bäpurru*, which might also be translated as 'patrilect', 'family dialect', or 'language of descent'. Devlin (1985) explains the difference between *bäpurru* and *matha* in greater depth).

III Gurrañay Matha

A *The Emergence of Gurrañay Matha*

The movement of Aboriginal people from a wide variety of missions, townships, and traditional homelands to larger settlements, such as Darwin and Yirrkala, has resulted in a situation where Djambarrpuyŋu and the other new urban *lingua franca*s are spoken widely by a socially disadvantaged subsect of society, while English is spoken by the socioeconomic 'elite' (Devlin et al., 2017). In other words, the current state of linguistic diversity in the Top End presents the perfect scenario for the emergence of English as a prestige language across Aboriginal language groups. However, this paper contends that the unique geopolitics of the Top End have resulted in English occupying a role of 'hyper-prestige' language, best encapsulated by the Yolŋu idea of *gurrañay matha* (hidden language; Trudgen (2003) also uses the terms 'secret' and 'intellectual' language).

This term, thrust into English-language discourse with the publication of Richard Trudgen's work on Yolŋu political history *Why Warriors Lie Down and Die*, is used by Yolŋu Matha speakers to express the difficulty they experience interacting within an Anglophone cultural and linguistic environment, as well as to refer to the more obscure and abstract elements of their own languages' vocabulary. The term refers to words in any language that are given unique meaning by the ontology of that language, and hence cannot be properly understood by L2+ speakers of that language (Trugden, 2000, p. 127. I use the term 'ontology' on the recommendation of Michael Christie; Trudgen expresses this idea in different vocabulary). This idea, according to Trudgen, refers not to the mere difficulties L1 Yolŋu Matha speakers may find in mastering the nuanced lexicon of English, but to a more base, ontological confusion. According to Trudgen, an understanding of, as he puts it, the Yolŋu 'world view' is just as important as a semantic understanding of Yolŋu languages in facilitating communication. "Even if language is not a problem", he says, ontological differences present in the very fabric of Yolŋu Matha create problems for communication (Trugden, 2000, p. 111).

B *Gurraŋay Matha and Linguistic Determinism*

The idea that different languages correlate with different possible thought processes in their speakers may instinctively seem similar to the kind of linguistic determinism famously outlined by Whorf. However, several fundamental factors differentiate the phenomenon described by Trudgen from Whorfian determinism.

Foremost among these differences, the concept of *gurraŋay matha* is fundamentally different from mainstream ideas of linguistic determinism because it springs primarily from lexical, rather than syntactic, differences between languages. Trudgen draws particular emphasis to concepts that, while lexically present in Yolŋu Matha, lack precise cultural equivalents with their English counterparts. Some of these words, such as 'mortgage', are not translatable for obvious broader cultural reasons, but other lexical differences are more subtle (Trugden, 2000). The idea of 'value', used as a verb, has been cited as an instance of *gurraŋay matha* in English, for instance.

However, Trudgen also outlines how differences in Yolŋu ontology, or 'world view', are reflected in Yolŋu Matha in other ways. Returning to the example of 'value', Trudgen states that there is, in fact, a word equivalent to 'value' in Yolŋu Matha (*miŋurr*), but that subtle differences between its meaning and the English translation cause miscommunication, hence the English term being 'hidden' (Trugden, 2000). Yolŋu people are hindered in their perception of the English concept of 'value' because it does not have a precise equivalent in Yolŋu culture, not because it does not have an equivalent in Yolŋu language. Trudgen therefore presents a view that is 'culturally determinist' rather than 'linguistically determinist'. This is a vitally important distinction to make. By this analysis, rather than being constrained in their patterns of thought by the form of their language, Yolŋu people may possess a fundamentally different ontology through which they view the world, which is merely *reflected* in their languages (Christie, 1992). Whether or not the syntax of Yolŋu language imposes its forms on Yolŋu thought is therefore immaterial; the ontological disconnect between Yolŋu and *Balanda* forms of communication exists either way (The term *Balanda*, from the Malay *Belanda*, is used in Yolŋu Matha (and many other Australian languages) to describe Westerners).

C *English as a Language of 'Hyper-Prestige'*

In addition to the more culturally and ontologically specific terms in English, much of the vocabulary of western medical practice is often labelled *gurraŋay matha* by Yolŋu people. Since Yolŋu religious practice and ontology sees the world as constructed primarily of spirits and supernatural forces, the idea of medical procedures having specific physical effects is not widely understood (Trugden, 2000). Lacking a logical explanation for the *Balanda* ability to cure various illnesses with artificial

drugs and procedures, many Yolŋu view it simply as a magical ability, which springs from the *Balanda* language, English. This is not to say that the idea of cause and effect does not exist within this 'Yolŋu ontology', nor that medicine has not been a part of Yolŋu life for millennia. Trudgen merely suggests that the alienating terminology of Western medicine, combined with a lack of culturally-aware explanation to bridge ontological differences in language, leads to Yolŋu viewing it as 'magic' or, again, simply 'hidden', rather than looking for a more scientific explanation. This is therefore a more complex dynamic than is implied by the term 'prestige language' in its typical usage. Since fluent, L1 knowledge of English, *gurraŋay matha* and all, is associated with supernatural abilities to treat illnesses and to be understood in the Anglophone Australian world, it becomes viewed in a completely different light to most languages of social prestige around the globe.

D *The Phenomenology of Gurraŋay Matha*

In addition to the notes on cultural miscommunication stated by Trudgen, Michael Christie provides a more in-depth account of what he perceives to be the ontological differences between English- and Yolŋu Matha-speaking 'world views'; the term 'world view', as Christie has remarked, is problematic here because 'it requires both a world and a viewer', which may not be the case in the ontology Christie describes. In his view, the Yolŋu world view is not 'atomistic' like the Anglophone world view is. In the 'non-atomistic' ontology of Yolŋu people, the world and the individual exist as one, and there is less of a fundamental separation between the self, the group, and the world as is presumed in Western forms of ontology (Christie, 1992). Christie (1992) summarises that Yolŋu people, and also Yolŋu languages, "make sense of a situation through reference to relationships... rather than to the mechanics of entities within the real world". Presuming that Christie's analysis of linguistically-constituted Yolŋu ontology is accurate, this could offer an explanation as to the confusion described regarding Western medical practice, as discussed by Trudgen.

In this reading, whereby the Yolŋu languages are a cultural reflection of a non-atomistic ontology lacking the boundaries between real-world entities presumed in European languages, semantic analysis and lexical categorisation by English-speaking linguists is inherently problematised, since the lexical categories of English, especially nouns, are wholly reliant on the existence of 'real' entities in a separate world that is perceived by the speaker. *Gurraŋay matha* is therefore, in the last analysis, a phenomenon caused primarily by cultural and ontological elements which are merely *reflected* in language. Much like Trudgen's analysis of lexical issues in *gurraŋay matha*, Christie's analysis here is therefore determinist in a cultural, rather than linguistic sense, and should not be interpreted as a wholesale endorsement of

Whorfian ideas on linguistic determinism and its constraints on the ontology of speakers.

IV Conclusion

Many of the ideas central to the understanding of *gurrarjay matha* presented in this paper are grounded in philosophy rather than pure linguistics and are therefore subject to debate. Furthermore, since so few academics can be regarded as possessing a sufficient level of insight into Yolŋu philosophy, language, and ontology, scholarly debate on the issues presented here is necessarily limited to discourse between an extremely limited number of qualified individuals, among which I am certainly not a member.

At the end of the day, the term is used anecdotally to describe a deep, cultural frustration L1 Yolŋu Matha speakers have with the Anglophone world, rather than specific elements of Yolŋu syntax, phonology, etc. This obviously makes it hard to study from the perspective of linguistic academia. Furthermore, since the academic discourse on the subject is currently conducted exclusively in English, the discourse itself is plagued with many of the problems of implicit atomistic ontology, discussed by Christie.

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ON ERGATIVITY: EVIDENCE FROM AUSTRALIAN LANGUAGES

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Contents

I Introduction

This paper discusses ergativity in Australian languages. It aims at investigating how Australian languages display different varieties of ergativity. By doing this, I argue that ergativity is not as monolithic as the classic definition claims, in other words, in addition to the classic morphological ergativity, there are other varieties of ergativity. This variation makes ergativity a complex and interesting topic for linguistic research. The paper is presented as follows. To begin with, I will briefly define ergativity. I will then discuss the four types of ergativity by using several Australian languages as examples. The last section concludes the paper, offering some directions for future research.

II Background: What is Ergativity?

Contrary to the well-known case-marking pattern nominative-accusative as found in languages such as English and Italian, the ergative-absolutive pattern is relatively less frequent cross-linguistically (Nordlinger 2014, p. 218). According to Johns, Massam and Ndayiragije (2006, p. ix), "ergativity refers to a grammatical pattern in which the logical subject of intransitive clauses and the logical object of transitive clauses share some grammatical features, and in this respect differ from transitive subjects." Dixon (1994, p. 9) conceptualises this definition as the following image

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in which A is the transitive subject, O the transitive object and S the intransitive subject (cf. Comrie 1978, in which A, S and P were used):

Nominative	A	Ergative
	S	Absolutive
Accusative	O	

Dyirbal, a Pama-Nyungan language spoken in Northeast Queensland, was used by Dixon as an example to show what ergativity is (Dixon, 1994, p. 161):

(1)(a) yabu banaga-nyu
mother-ABS return-NFUT
'Mother returned.'

(1)(b) nguma yabu-*ŋgu* bura-n
father-ABS mother-ERG see-NFUT
'Mother saw father.'

From the examples above, we can observe that the case-marking on S and O is the same, that is, ABS. A, on the other hand, receives an ergative case, *-ŋgu.* In contrast, nominative-accusative languages, such as English and many European languages mark S and A alike, and O is marked differently. For example, in English:

(2)(a) He sees me.

(2)(b) He dies.

(2)(c) I eat.

He in (2)(a) and (2)(b) are A and S respectively and it is marked the same (i.e., both are *he*, rather than *he* and *him*). Whereas *I*, the S in (2)(c) and O in (2)(a) is marked differently as in *I* and *me*, where the former is marked as a nominative and the latter as an accusative.

III Ergativity as Occurs in Australian Languages

Ergativity is prevalent in Australian languages (Blake, 1976). Substantial amount of research on ergativity has been carried out since Dixon's (1972) study of Dyirbal (Johns, Massam & Ndayiragije, 2006, p. ix). Apart from Dixon (1972), examples

include Aldridge (2008), Gaby (2010), Silverstein (1976), Verstraete (2010), among others.

Dixon (1987, p. 3-7) divided ergativity into three varieties, namely morphological ergativity, syntactic ergativity and discourse ergativity. Recently, researchers have also focused on optional ergativity (e.g., Ramsey, 2010; Meakins and O'Shannessy, 2010; McGregor, 2010). The rest of the paper will discuss these varieties of ergativity.

A *Morphological Ergativity*

Morphological ergativity is a widespread phenomenon in Australian languages, as reflected in ergative case-marking (Blake, 1987, p. 170). This variety of ergativity is the first variety discovered by linguists. Apart from the Dyirbal example given above, Bidjara, a Pama-Nyungan language spoken in central Queensland, also shows morphological ergativity (Blake, 1976, p. 282):[1]

(3)(a) ŋura wanguli-la
dog bark-NFUT
'A dog barked'

(3)(b) ŋura-ŋu munda bada-la
dog-ERG snake bite-NFUT
'A dog bit a snake'

There are several sub-types within morphological ergativity. Nordlinger (2014, p. 219) points out that the common sub-type of morphological ergativity is that S and O "are treated alike morphologically—usually appearing in the unmarked 'absolutive' case," which is shown in (1)(a) and (1)(b), (3)(a) and (3)(b). In (1)(a) and (1)(b), the S *yabu* and O *nguma* are marked alike, both with an "unmarked absolutive case". By the same token, in (3)(a) and (3)(b), the S *ŋura* and the O *munda* are also marked alike, both with an "absolutive" case.

Additionally, there is a phenomenon called "split" ergativity. A language is said to has "split" ergativity if "some classes of nominals are marked according to an ergative-absolutive pattern, while others are marked with a nominative-accusative pattern" (Nordlinger, 2014, p. 224). Austin (1981) argued that Diyari is a language that has a split-ergative system, as shown in Table 1:

[1] I have changed the gloss 'PAST' to 'NFUT' to keep the gloss consistent throughout the paper.

Table 1 (Adopted from Nordlinger, 2014, p. 224)

	1 & 2 non-singular pronouns	Other pro-nouns	Non-singular common nouns	Female personal names	Male personal names	Singular common nouns
A S P	nominative nominative accusative		ergative nominative accusative		ergative absolutive absolutive	

As shown in Table 1, depending on the type of the nominal, three different case-marking patterns will be used accordingly. For example, if the nominal is a first or second singular pronoun, a nominative-accusative case-marking pattern will be used. If it is a non-singular common noun, an ergative-absolutive case-marking pattern will be used instead.

Nordlinger (2014, p. 219) points out an interesting point that even if the A in the majority of Australian languages is marked by ergative case, it in fact behaves identically to an S in terms of grammatical relations. Therefore, S and A can be grouped into the role of subject, as in other more familiar languages such as English and Italian. Warlpiri, a Pama-Nyungan language spoken in North Territory, provides evidence to support this claim (Simpson, 1991, p. 155):

(4)(a) ngaju kar-rna parnka-mi
1SG(ABS) PRS-1SG.SBJ run-NPST
'I am running.'

(4)(b) ngajulu-rlu kar-rna ngarrka nya-nyi
1SG-ERG PRS-1SG.SBJ man(ABS) see-NPST
'I see the man.'

(4)(c) ngarrka-ngku ka-Ø-ju ngaju nya-nyi
man-ERG PRS-3SG.SBJ-1SG.OBJ 1SG(ABS) see-NPST
'The man sees me.'

Nordlinger (2014, p. 220-221) points out that although the pronoun *ngaju* in (4)(a) is marked with an absolutive case, and the pronoun *ngajulu-rlu* in (4)(b) with an ergative case *-rlu*, the first singular subject *kar* is cross-referenced with the same form *-rna*. On the other hand, in (4)(c), the first singular object (O) *ka-Ø* is cross-referenced with another form *-ju*. Hence, "while the large majority of Australian

languages are morphologically ergative, they can generally be considered to have accusative syntax."

B *Syntactic Ergativity*

In spite of the pervasiveness of morphological ergativity in Australian languages, there are other types of ergativity. One of them coming to researchers' attention was syntactic ergativity, which was first discussed by Dixon (1972). Consider the following English and Dyirbal examples (Nordlinger, 2014, p. 221 and Dixon, 1994, pp. 12-13):

(5)(a) Mother (A) saw father (O) and _ (S) returned. (=mother returns)

(5)(b)

ŋuma	yabu-ŋgu	bura-n	banaga-nyu
father(ABS)	mother-ERG	see-NFUT	return-NFUT

Mother (A) saw father (O) and _ (S) returned' (=father returns)

In (5)(a) and (5)(b), the coreferential nominals in coordinate clauses are omitted, as indicated by the notation _. In (5)(a), the omitted S argument of the clause "_ (S) returned" refers to *mother* (A) because English groups A and S together syntactically, or, following Dixon (1994), has an A/S pivot. Whereas in Dyirbal, the omitted S argument does not refer to *yabu-ŋgu* (A), but *ŋuma* (O). Therefore, Dyirbal groups A and O syntactically and is said to have S/O pivot.

C *Optional Ergativity*

The third type of ergativity is optional ergativity. McGregor (2010, p. 1610) defines optional ergativity as "the situation in which, in specifiable lexical or grammatical environments, a case marking morpheme...may be either present or absent from an NP of a specifiable type without affecting the grammatical role borne by that NP. " Nordlinger (2014, p. 227) argues that the presence or absence of ergative marking depends on some conditions that vary from language to language.

There are a number of Australian languages displaying optional ergativity. For example, Verstraete (2010) argues that in Umpithamu, a Pama-Nyungan language spoken in Cape York Peninsula, the presence or absence of ergative marking depends on animacy, i.e., whether the A is animate or inanimate. If the A is animate, it is optional for Umpithamu speakers to use the ergative marker. However, if the A is inanimate, the ergative marker is obligatory. It is noteworthy that whether the object is animate or inanimate does not affect this optionality. Consider the following Umpithamu examples (Verstraete, 2010, p. 1641):

(6)(a) ngoki-mpal ungka-n=antyangana
water-ERG wet-PST=1PLEXCL.GEN
'The water made us wet.'

(6)(b) yuma-mpal anthi-ku=ingkuna
fire- ERG burn-POT=2SG.GEN
'The fire will burn you.'

(6)(c) manta eetinti-mpal watyu-n=iluwa
child small-ERG spear-PST=3SG.NOM
'The child speared it.'

(6)(d) manta eetinti kali-n=iluwa
child small carry-PST=3SG.NOM
'The child carried it.'

In (6)(a) and (b), the transitive subjects, *water* and *fire*, are inanimate. The ergative marker *-mpal* therefore has to be used. In (6)(c) and (6)(d), on the other hand, the A, *child*, is animate and therefore it is optional for the speakers to use the ergative marker ((6)(c) contains the ergative marker *-mpal*, whereas (6)(d) does not).

Apart from animacy, there are other factors that determine whether the ergative case is optional or not. For example, McGregor (2010) and Gaby (2008b) argue that optional ergativity could be driven by semantic and/or discourse pragmatic factors. Gaby (2008a, p. 220) points out that under certain pragmatic contexts, a noun phrase (NP) that functions as an A may lack ergative inflection, although in terms of morphosyntax, this kind of NP usually triggers ergative inflection. For example, Kuuk Thaayorre, a Southwest Paman language (Alpher, 1972), has irregular ergative inflection, as shown in the examples below (Gaby, 2010, p. 1682):

(7)(a) kutaku nhul glass nhaa~nha~m
dog-ERG 3SG glass look.at~RDP:NPST
'The dog is looking at the jar.'

(7)(b) minh patp piinth.kat waa~wa~th~Ø
MEAT hawk scrap search~RDP~NPST
'Hawks fossick for scraps'

(7)(c)	parran	pul	kutaku	ngokeln	wont-r
	child-ERG	3DU	dog-ERG	water-DAT	fall-NPST
	The child and the dog fall into the water [together]'				

In (7)(a), the transitive subject, *dog*, is in its ergative form *kutaku* (cf. *kuta*, the ABS form for *dog*). This follows the common ergative-absolutive pattern. However, in (7)(b), the transitive subject, *minh*, is unexpectedly ergative-unmarked, which seems to violate the rule. In (7)(c), the intransitive subjects, *parren* and *kutaku*, are unexpectedly ergative-marked. Gaby (2010, p. 1682) argues that pragmatic factors determine the distribution of ergative case-marking in such clauses. More specifically:

> Where the preceding discourse and/or interlocutors' world knowledge converge upon one participant being the obvious and unambiguous Actor of the event—and this is reflected in that participant's being encoded as subject—this Actor/subject need not be ergative-marked. The semantic cline of 'animacy' is subsumed under 'world knowledge' for present purposes.

That means, if there are two NPS, one animate and one inanimate, in one clause, such as (7)(b), based on our real-world experience, we would know it is the hawks fossicking for the scraps and not the scraps fossicking for the hawks. An inanimate object cannot act upon an animate object except, say, in a metaphorical or fictional context. Besides, the hawk is the actor in the preceding discourse (Gaby, 2008a, p. 122). Hence, there will be no need to specify the actor by marking it with an ergative marker because the reader/hearer has already known it.

In fact, (7)(a) is taken from a narrative story called the Frog Story. The excerpt is shown below (Gaby, 2008b, p. 124):

(8)(a)	parr_r	nhul	thamr
	child(#ERG)	3SG(ERG)	foot
	puut	nhaanham	
	boot(ACC)	look:RDP:NPST	
	'the boy looks in the boot'		

(8)(b)	'thatr	wanthan	yat?'
	frog(NOM)	to.where	go:P. PFV
	'[he thinks] 'where has the frog gone?'		

(8)(c)	nhul	thatr	ngaathirr	waawath-r
	3SG	frog(ACC)	still	search:RDP-NPST
	'he's still looking for the frog'			

(8)(d)	kutaku	nhul	glass	nhaa~nha~m
	dog-ERG	3SG	glass	look.at~RDP:NPST
	'The dog is looking at the jar.'			

In the first three sentences, i.e., (8)(a) to (8)(c), the narrative focus was *parr_r*, the boy. Since the boy had been introduced in the preceding text, and it was apparent that an animate subject acted on an inanimate object (*puut,* the boot), then, according to Gaby's argument mentioned before, the ergative-marking can be omitted. In (8)(d), the protagonist is shifted from the boy to *kutaku*, the dog. This shift causes a change from a "familiar" subject to an "unexpected" subject. The ergative case is therefore required to specify the grammatical relation.

Gaby (2008, p. 127) argues that Du Bois's (1987) "preferred argument structure" explains why the majority of lexical agents — that is, transitive subjects — are ergative-marked. Du Bois proposes two constraints in discourse, namely the "quantity constraint" and the "non-lexical A constraint". The former requires "avoid[ing] more than one lexical core argument per clause", and the latter "avoid[ing] lexical A, that is, expressing the A function through a lexical NP" (Haig & Schnell, 2016, p. 594). According to these two constraints, speakers tend to avoid using lexical items to represent agents and not introducing new participants as agents in the discourse. Hence, ergative-marking is needed for pragmatic reasons, and not only for its grammatical function (Gaby, 2008, p. 127). As a result, *kutaku* is marked in (8)(d) to let the reader/hearer know the pragmatic relationship within the discourse/text.

IV Conclusion

This paper has shown that ergativity is not monolithic. Rather, it is a complex linguistic issue that involves different variations, including morphological, syntactic and even semantic/pragmatic. A variety of Australian languages has been used as examples to demonstrate the richness of ergativity, but there still remains many issues which call for future research. For instance, Haig and Schnell (2016) argue against Du Bois's (1987) claim mentioned above, by examining nineteen languages. However, as shown in this paper, it seems correct at least in the case of Kuuk Thayyore. Thus, further research based on a larger corpus is needed. As Dixon (1987, p. 5) argued, "the study of discourse organisation involves much counting, averaging, and comparing percentages" — a larger corpus would yield more reliable and valid results. Another issue where attention should be paid attention is the

interaction between prosody, discourse and syntactic structure (Nordlinger, 2014, p. 252). Having written this paper, I surmised that phonetic study such as prosody would be helpful in tracing the relationship between pragmatics and ergativity. For instance, it would be helpful to answer the question: would there be any distinct intonation, tone, stress and/or rhythm associated with the ergative case/inflection in a certain language?

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LANGUAGE AND THE KURA-ARAXES: THE VALUE OF HISTORICAL LINGUISTICS IN ARCHAEOLOGY

Michael W Josefsson*

Contents

I Introduction

The Kura-Araxes people are an Early Bronze Age culture of the southern Caucasus, dating to c. 3500-2400 BC (Sagona, 2018, p. 213). They lie nestled in the mountains and valleys between two great waterways of prehistoric Eurasia, the Kura river in modern Georgia and the Araxes in what is now Turkey, Armenia and Azerbaijan. Known only from the archaeological record, they represent a "cultural-historical community" (Kohl, 2007, p. x) of unknown origins. This essay attempts to marry Caucasian archaeology with the tools of historical linguistics, in an effort to explore its possible insights into the Kura-Araxes' place in Bronze Age Eurasia.

This essay has three aims. Firstly, it examines whether linguistic data is reliable enough for archaeology. Secondly, using the example of Proto-Indo-European, it establishes the value historical linguistics holds for archaeologists. Finally, it explores the relevance of historical linguistics to the case of the Kura-Araxes, in an attempt to see how the ephemeral data of linguistics can shed light on the material record and cultural beliefs of an illiterate, prehistoric people.

II The Reliability of Historical Linguistics

It is an unfortunate but understandable fact that archaeologists and linguists do not always recognise the value in each other's work. There is a tendency in archaeology to dismiss the work of historical linguists as little more than bookish speculation or an etymological parlour trick, thus impoverishing the efforts of both fields and

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becoming a self-fulfilling prophecy: historical linguistics has little value to the world at large if archaeologists fail to listen to its conclusions. This is of significant and unnecessary detriment to our understanding of the past, and so before proceeding any further it is worth examining why this is and shouldn't be the case.

Firstly, much of the archaeological reluctance to engage with linguistic data stems from a misunderstanding of its reliability. As in archaeology, nothing in historical linguistics is ever certain, but its methods and conclusions are vastly surer than they are sometimes taken to be. The goal of historical linguistics is to group languages together into families of common origin, reconstructing an original proto-language from the evolution of its modern descendants. This is achieved through the comparative method, which has withstood generations of scholarly assault since its development in the late 19th century. Comparative linguistics' reliability comes from the principle that "sound laws suffer no exception" (Deutscher, 2005). Overviews of the method can be found in Campbell (1998) and Bowern and Koch (2004); Szemerényi (1996) is a systematic demonstration. In brief, words and paradigms from daughter languages are compared to reveal regular, systematic changes from a common ancestor. It is this regularity that allows for their common parent to be reconstructed with a significant degree of surety. Historical linguistics is only useful to archaeology because of this fact: the regularity of language change means that, from modern sources, we can confidently reconstruct ancient parents.

Serendipitously, other sources provide unequivocal external confirmation of the method's validity. Modern Finnish, unrelated to the Indo-European languages of the rest of Europe, at some point in its history borrowed words from its neighbour across the Baltic at a time when Proto-Germanic had yet to split into the modern languages of western Europe. Proto-Germanic (PGmc), the common origin of languages such as German, English, Dutch and the languages of Scandinavia, is believed to have been spoken in unified form around 500 BC (Ringe, 2006, p. 67). These loanwords directly reflect the reconstructed forms of Proto-Germanic that have been obscured in the modern Germanic daughter languages. Finnish *kuningas* 'king' reflects PGmc **kuningaz* (Campbell, 1998, p. 61). *Patja* 'mattress' preserves the vowel of **badja* 'bed', which is no longer clear in English *bed* and German *Bett*. The Finnish word *airo* 'oar' is particularly instructive because it preserves the original PGmc feminine ending **-ō*, otherwise highly doubtful (Campbell, 1998, p. 70). Finnish also preserves the Proto-Germanic word for 'beautiful', Finnish *kaunis*, PGmc **skauniz*, the origin of German *schön* (Kroonen, 2013).

A different form of confirmation comes from the reconstruction of Latin from the Romance family, where reconstruction from the surviving daughter languages has succeeded in producing a "Proto-Romance" — Vulgar Latin — that is otherwise directly attested (Campbell, 1998). The examples of Finnish and the Romance languages demonstrate that comparative linguistics is far from barking up the

wrong tree: the comparative method is reliable, verifiable, and a solid basis for archaeology.

III Archaeological Value

The value of historical linguistics to archaeology lies in one key fact: linguistic reconstruction uncovers cultural information about a family's ancestral speakers that cannot be recovered by archaeology alone. This manifests itself in two ways: specific historical and cultural facts about an individual group of speakers, and their connection to other groups in the broader archaeological sphere.

Firstly, the lexicon of any language, including a reconstructed proto-language, necessarily encodes information about the world of its speakers. Over the course of history languages accumulate new words (or extend old ones) to describe new concepts, and the vocabulary of any language needs to pattern with the world its speakers experience. This information is valuable to archaeology in two respects: either it confirms archaeological data, for instance, in geography; or, crucially, it captures an aspect of human experience that material culture cannot, or does so only imperfectly — ritual and belief. This is crystallised in the example of Proto-Indo-European (PIE), the source of most of the modern languages of Europe and India, and by far the most well-reconstructed proto-language. The PIE example is relevant because it reveals the types of information linguistic evidence can supply, and how this would be useful in the case of the Kura-Araxes.

PIE vocabulary is crucial to matching the Proto-Indo-Europeans to the archaeological record: it acts as a linguistic window into the historical world. Firstly, inherited words reveal important information about the homeland (*urheimat*) of its original speakers. The root 'sea' in the Celtic, Italic, and Slavic branches means 'lake' in Germanic: compare Latin *mare* and English *mere* (Mallory & Adams, 2006, p. 127). The Germanic, Greek, and Indic branches all borrowed words for 'sea' from elsewhere, while it is clear PIE had multiple words for 'rain', 'snow', and 'ice'; all this suggests a cold, inland origin for its speakers, which is clearly valuable to archaeologists tackling the problem of Indo-European origins (e.g. Anthony, 2007, from whom many of these ideas are drawn).

Secondly, the PIE lexicon provides information about its speakers' technology. The word for 'silver', **silVbVr-* (where *V* represents an indeterminate vowel) is non-Indo-European in form and varies between branches, suggesting a loanword from a non-IE source (Mallory & Adams, 2006, p. 242): the Indo-Europeans probably learnt of silver through trade from another, silver-mining people. Famously, specialist texts from the Near Eastern city of Mitanni in Hurrian, unrelated to Indo-European, contain technical words borrowed from IE relating to horseracing, e.g. *aika vartanna* 'one turn' (Drews, 1988, p. 141), evidence for the Indo-Europeans'

regional dominance in the field. The local ruling class also often had names ending in *-ashwa* and *-rata* (Drews, 1988, p. 154) — compare Sanskrit *aśvaḥ* 'horse' and *rathaḥ* 'chariot' — suggesting the role horsemanship played in Indo-European society.

Crucially, however, the PIE lexicon also reveals information that archaeology cannot: the belief systems and mythologies of its original speakers. Words for 'wolf' and 'bear' reflect the awe and religious dread in which the Proto-Indo-Europeans held these animals. **Wl̥kʷos* 'wolf' is literally 'dangerous one', while **h₂r̥tkos* 'bear' comes from a root meaning 'destroy' (Mallory & Adams, 2006, pp. 88-89). 'Bear' in particular has clear religious connotations. The Hittite word *hart(ag)ga* 'cultic official' is literally 'bear-man' (Mallory & Adams, 2006, p. 138), while other branches called the bear 'eater of honey' (Slavic), 'brown one' (Germanic) and possibly 'bee-thief' (Baltic), which strongly suggest replacement because of a religious taboo (Blažek, 2017). This information cannot be gleaned any other way: archaeological speculation about the function of ritual artefacts can only go so far. Belief and ritual are the two areas in which historical linguistics can be most helpful, by condensing and informing the interpretation of artefacts from the material record.

The PIE example demonstrates the geographic, cultural, and religious information that historical linguistics can provide to the archaeological discussion. Identifying the language group of the Kura-Araxes would allow us to apply the equivalent linguistic evidence to their situation, a major boon to Caucasian archaeology and Eurasian prehistory.

IV The Case of the Kura-Araxes

Having established the reliability of historical linguistics, and the contributions it can make to archaeology through the example of Proto-Indo-European, how is this relevant to the Kura-Araxes? Firstly, how can we identify the language of an illiterate culture for whom we have no written records? This question will be addressed momentarily. In the meantime, there is another factor, apart from its general value to archaeology, that makes language data especially relevant for the Kura-Araxes.

Sagona (2018, p. 213) makes the point that the Kura-Araxes apparently burst onto the scene c. 3500 BC, with no clear origin or connection to surrounding peoples. Linguistic data is not only about identifying specific features of an individual culture: groups that speak related languages must be related as peoples as well, though with significant caveats that make this a problematic statement taken on its own. The genes of the modern-day peoples of the region are not sufficient to identify clear links outside the Caucasus, though a relationship with Europe and the Near East seems likely (Sagona, 2018, pp. 29-33). Sagona (2018) also points out that the notion of clearly defined 'races', with each ethnic group divided from another

by its own language, is fraught with overtones of European and Soviet nationalism. At the very least, however, languages shared between peoples can be treated like pottery styles or trade goods: they are clear proof of contact, if not necessarily (though often) a common origin. Identifying the language family of the Kura-Araxes would make significant inroads into solving the problem of their origins, not only providing the specific data canvassed above, but placing the Kura-Araxes within the broader frame of the Early Bronze Age in Eurasia.

How, then, can we identify the language family of the Kura-Araxes? In essence, by matching archaeology with linguistic data. As the PIE examples show, languages encode quite specific information about their speakers, some of which — geography, cultural products, technology — is preserved in the archaeological record. Diagnostic features of the Kura-Araxes culture lifted from archaeology can be matched to the linguistic data of nearby families. This is a complex and time-consuming task, and requires a picture of both their material remains and the surrounding proto-languages clear enough to make the effort worthwhile. In many respects this is a long-shot approach: it is doubtful that either the archaeological or linguistic legwork is in place to allow this to proceed any time soon. Some possible candidates are presented below.

The Caucasus is famous for linguistic diversity. Like Papua New Guinea and the dialects of Ancient Greece, the broken landscape encourages linguistic divergence. There are three primary families in the region, which we will consider in turn: Turkic, Indo-European, and Caucasian.

Turkic, spoken in modern Turkey and Central Asia, including Azerbaijan, is a comparatively recent arrival from the Mongolian steppe, reaching its present range in the 11th century AD (Sagona, 2018, pp. 19-33; Matthews, 1951/2013); it is therefore unlikely to be the language of a people in the region thousands of years before.

Indo-European, including modern Armenian, is a temporal neighbour of the Kura-Araxes but at the time was likely confined to the Pontic Steppe to the north. The Soviet scholars Gamkrelidze and Ivanov (cited in Drews, 1988, pp. 32-35), however, placed the Indo-European homeland in modern Armenia, occupying a similar space and time to the Kura-Araxes. If this is the case, Indo-European is the obvious candidate; however, it is far from the majority view, and Anthony (2007) presents an authoritative case against it.

Finally, the Caucasian family — modern Georgian — is generally taken as the autochthonous family of the region, with a larger original range encroached by later arrivals (Matthews, 1951/2013). On inspection, this presents the most likely candidate, but even tentative identification awaits future scholarship.

Although the examples above demonstrate the reliability of linguistic reconstruction and the cultural data it can provide, this is only the case when enough effort has been expended to reconstruct the language in question. The

reconstruction of Indo-European arguably began modern linguistics, and has attracted the attention of thousands of scholars over the past century and a half. Should the Kura-Araxes prove to be Indo-European, as the tantalising thesis of Gamkrelidze and Ivanov suggests, the cultural data with archaeological relevance would be significantly greater than if their origin were Caucasian, where comparatively little historical work has been done, and much of it cut off from global scholarship under the Soviet Union only complicating the picture. It should also be pointed out — not to be defeatist — that, after five thousand years, the language family of the Kura-Araxes may no longer exist, rendering the exercise impossible.

V Conclusion

Virgil writes in Book VIII of the Aeneid of the "*pontem indignatus Araxes*", "the Araxes resentful of its bridge" (8.728). The historical silence of the Kura-Araxes people makes this description all the more apt, unwilling to let their culture pass across the river and into the history books at the archaeologists' trowels alone. What this essay has shown is that historical linguistics may help provide the answer. It set out to answer three questions. One, is historical linguistics reliable enough for archaeology? Two, does linguistic data hold value for archaeologists? And three, is it valuable even for the illiterate, prehistoric people of the Kura-Araxes? The answer to all three is yes. The reconstructions of historical linguists contain cultural information that both informs and adds to the historical record, in a way archaeology cannot achieve alone. Language offers a tantalising glimpse across the water, to peer back into the mists of an enigmatically silent culture, and guide modern archaeologists to the point where that bridge could perhaps one day be re-laid.

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GENDERED LANGUAGE USE IN ONLINE COMMUNICATION CONTEXTS AND GENDERED IDENTITIES

Sohee Kwon*

Contents

I Introduction

Individuals have complex, dynamic, and plural identities that express the multidimensional nature of human beings as we embody various physical, social, and cultural self-concepts, like gender, class, and ethnicity (Jackson, 2014). Gender is a social and cultural identity category in the field of sociolinguistics that is constructed or acquired through cultural and societal norms or proscriptions and human relationships (Meyerhoff, 2011). Unlike sexual identity, which is defined by biological sex, gender identity involves the meanings and interpretations of individually and socially constructed images of femaleness, maleness or other gendered identities (Ting-Toomey and Chung, 2012; Jackson, 2014). Gender emerges from linguistic practice and performance as degrees of gendered identity are performed, communicated, and embodied in various cultural contexts (Butler, 2006; Jackson, 2014). The advent of technology and increasing reliance of the internet in the twenty-first century has provided individuals with easy access to information and platforms for the articulation and expression of gendered identity in digital spaces.

This participation is especially pronounced for those who were brought up in contexts in which digital communication platforms and technologies were ubiquitous, or people known as "digital natives" (Dingli and Seychell, 2015). As a result,

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these individuals experience an "overload" or overabundance of data and thus increasingly participate in situations wherein messages are simpler and succinct (Palfrey and Gasser, 2008; Piwek and Joinson, 2016). Their active engagement in situations with no "overload" is evident in instant messaging (IM), a form of online communication widely used by digital natives that includes chat integrated in social-network platforms, such as Facebook Messenger (Dolev-Cohen and Barak, 2013). The digital age, therefore, creates possibilities for digital natives to present, express, and reveal their social identities (Dingli and Seychell, 2015). For digital natives, online spaces provide opportunity for free exploration and play with gendered identity, but also at times can involve the strict and sometimes threatening regulation of identities of many kinds, but particularly involving gender (Beard, 2017).

The objective of this study is to explore the relationship between linguistic categories and gender by investigating how language use in online written communication reflects gender identities among digital natives. The participants' multifaceted gender identities are examined in relation to previous studies on masculine and feminine linguistic categories to analyse the complexity of gender identities in the context of the increasingly interconnected world, wherein ubiquitous communication and transmission of data across large distances are occurring rapidly and in real-time. Patterns of gendered language use in online communication contexts illuminate the existing assumption of a gender binary of male and female in various sociolinguistic research and highlight the complexity of gendered identities as individuals have varying degrees of masculinity and femininity.

II Background

Prior research on gender in sociolinguistics portrayed characteristics of distinctly "male" and "female" language from text samples across a range of communication mediums and time frames. Bamman, Einstein, and Schnoebelen (2014) investigated the impact of gender on lexical choices and explored the relationship between gender, linguistic style, and social networks through a large-scale quantitative, computational social media analysis of over nine million tweets in the United States of America. They revealed that the primary female markers were word classes, such as pronouns, emotion terms, emoticons, abbreviations, assent terms, and negation terms, whereas the general male markers were swear words and taboo words, technology words, and numbers on the social media site Twitter. These findings were largely supported by other research that investigated "male" and "female" language in other digital communication mediums, like text messaging. Ogletree, Fancher, and Gill (2014), for instance, revealed that femininity was positively linked with emotions, while masculinity was linked with sexually explicit texts and message length.

However, unlike these two studies, Newman, Groom, Handelman, and Pennebaker (2008) presented gender differences in language that is not limited to written language in the digital sphere. "Gender differences in language use: an analysis of 14,000 text samples" examined over 14,000 written and speech text files by university-aged participants from 70 studies. The samples, which were collected over twenty two years, are fiction and nonfiction texts from the seventeenth century onwards and were obtained from the United States, England, and New Zealand. This study showed that "female" language included more pronouns and verbs. On the other hand, "male" language use had more swear words, numbers, and word length.

Although these studies effectively distinguished distinctly feminine and masculine linguistic categories based on how often female and male participants used the specific categories, all three research projects did not investigate the fluidity of gender as a social construct that is influenced by the cultural context in which individuals are situated (Butler, 2006). Furthermore, they did not acknowledge gender as an identity that is constructed within discourse and language and is actively performed (Butler, 2006). These studies primarily adopted the masculine and feminine gender binary as the exclusive heteronormative framework in which sociolinguistic analysis is conducted (Butler, 2006). Judith Butler's concept of performativity in the realm of gender studies applies to online contexts, in which language can be scrutinised and reveals gender identities. This study hopes to address this gap in existing research into how gender operates in language and its role in language.

III Method

A *Aim and Participants*

This study on gender and language use aims to explore gender identity, including ambiguous or fluid identifications, within text communication in message samples from Facebook Messenger, an instant messaging platform used most commonly by participants of this study. The participants are ten undergraduate students living in a residential college of the University of Melbourne, Australia. They include females and males between the ages of eighteen to twenty who are from diverse ethnic backgrounds. All participants frequently use online communication platforms, such as instant messaging apps, social media, and email, for at least two hours every day to communicate with friends, family, and university staff. They are digital natives as they not only have been exposed to the digital realm from an early age, but they also skilfully use the internet and regularly communicate online.

B *Data Collection*

The data collection involved the participants completing a survey in a shared, open space in the selected college. The study was initially described as a social science and linguistics research project. A broad explanation of this assignment was used instead of a detailed one as an awareness of the research aims and hypotheses may affect the participants' language as they may try to assert certain gender identities.

The first section of the survey had four prompts that required participants to elicit detailed descriptions or narratives:

1 What were your impressions of university before starting and how did it change once you began your studies?

2 Tell me a memorable story from your past.

3 Describe a typical day in your life or an ideal day for you.

4 Describe a moment when you were very happy or angry and outline the details why you felt that way or choose a topic that you are passionate about and explain why you think it is important.

To ensure sufficient data was collected for analysis, each of the four prompts required participants to engage in the act of storytelling via Facebook Messenger for three minutes. Participants were asked to respond using a style and with the level of informality they normally employ when chatting with a close friend. This aspect of the methodology ensures low attention to speech, which is characteristic of instant messaging, and limits the effect of audience design, a feature of accommodation theory that proposes the existence of intraspeaker variation resulting from an individual paying close attention to the people involved in an interaction and people in the immediate surroundings (Meyerhoff, 2011).

The second component involved questions about identity categories that directly followed the prompts, so that the categories of age, gender, sexuality, social class, and ethnicity did not hint at what the study was analysing and affect the responses to the prompts. Disclosure of their sexuality was optional. Also, it had a question about the frequency at which they use online written communication platforms. The participants sent the answers to these questions via the same chatroom they used for responding to the prompts.

C *Data Analysis*

Six linguistic categories known to be markers of gender were analysed: pronouns, abbreviations, emoticons or emojis, swear words, numbers, and articles. The first three have been shown to be predominantly used by females, whereas the later three

are used more often by males. The frequencies of each linguistic category were calculated after data collection by counting the total number of instances a specific linguistic category was used by a participant, dividing it by the total word count of all messages sent by that particular participant, and multiplying it by 100 (to reach a percentage figure). Total percentages were also summed.

IV Results

Identity categories of age, gender, sexuality and ethnicity/race of the ten participants are displayed in Table 1. "NA" is used in cases wherein the participant chose not to disclose their sexuality. The information in Table 1 were self-reported by the participants. The frequency of linguistic categories (including pronouns, abbreviations, emoticons or emojis, swear words, numbers, and articles) were recorded in Table 2.

Table 1 'Relative Status of Participants'

Participants	Age	Gender	Sexuality	Ethnicity/Race
A	19	F	NA	Caucasian, European, Australian
B	20	F	NA	Sri Lankan, Brown
C	20	F	Straight	Mauritian, Indian, Brown
D	20	F	Straight	Japanese / American-Chinese
E	18	F	Straight	Indian, Brown
F	19	M	NA	Indian, Brown
G	20	M	Straight	Australian, Caucasian
H	20	M	Gay	American, White
I	20	M	NA	Singaporean Chinese, Chinese
J	20	M	Straight	Scottish Australian

Table 2 'Frequency of Linguistic Categories by Gender'

Linguistic Categories	Female	Male
Pronouns	A = 16.15%	F = 14.80%
	B = 14.74%	G = 14.62%
	C = 9.55%	H = 12.24%
	D = 11.70%	I = 18.57%
	E = 12.07%	J = 11.34%
	Average Female=12.69%	Average Male=14.79%

Abbreviations	A = 4.47%	F = 7.22%
	B = 5.13%	G = 2.37%
	C = 1.82%	H = 2.80%
	D = 2.11%	I = 1.43%
	E = 3.87%	J = 2.52%
	Average Female = 3.37%	Average Male = 3.34%
Emoticons or emojis	A = 0%	F = 2.17%
	B = 0%	G = 0.22%
	C = 0%	H = 0.35%
	D = 0.27%	I = 0%
	E = 0%	J = 0.42%
	Average Female = 0.07%	Average Male = 0.064%
Swear words	A = 2.06%	F = 0%
	B = 0%	G = 0.22%
	C = 0%	H = 0.35%
	D = 0%	I = 0%
	E = 0.68%	J = 1.68%
	Average Female = 2.74%	Average Male = 2.25%
Numbers	A = 1.37%	F = 0.72%
	B = 2.56%	G = 0.86%
	C = 1.36%	H = 1.75%
	D = 1.60%	I = 0.71%
	E = 0.46%	J = 1.26%
	Average Female = 1.28%	Average Male = 1.07%
Articles	A = 6.19%	F = 2.89%
	B = 3.21%	G = 5.38%
	C = 5.45%	H = 8.04%
	D = 7.45%	I = 4.29%
	E = 7.29%	J = 5.46%
	Average Female = 6.41%	Average Male = 5.33%

The data in Table 2 supports previous studies' conclusions on abbreviations as making up 3.37% of the messages sent by females and 3.34% of the messages sent by males are made up of abbreviations. While the respective cumulative percentages are similar, with only a difference of 0.03%, this low-scale study nonetheless shows that females in this study use abbreviations more than males. For the other linguistic categories, such as pronouns, emoticons and emojis, swear words, numbers, and articles, the data contradicts the findings of previous studies. Linguistic categories, like pronouns and emoticons or emojis, that previous studies claimed are used by more females, were actually used by more males, whereas other categories, like swear

words, numbers, and articles, which previous studies claimed to be used by males, were used by more females in this study. Furthermore, each participant used distinctly different levels of masculine and feminine word classes. Both females and males in this study did not necessarily express all of the "female" or "male" linguistic categories. Rather, individual participants showed a lack of certain gendered word classes or the presence of classes that are more typical of the other gender.

Among the group of five female participants, A and E diverged from the others in that A portrayed the distinctly feminine linguistic category of pronouns and the masculine category of swear words and articles, while E also used a high frequency of articles. The language of B, C, and E, on the other hand, did not have specific feminine or masculine categories, but showed a lack of both feminine and masculine classes, like emoticons, swear words, and articles. The group of five male participants had more variation in the frequencies of word classes. While H used an average amount of all linguistic categories, G used a high frequency of pronouns, a feminine word class, and J used a high frequency of swear words, a masculine category. Both F and I had a very low frequency of the masculine categories of swear words and articles. F, on the other hand, had a high frequency of abbreviations and emoticons (markers of "female" language) and I had a high frequency of abbreviations and did not have emoticons (both of which are feminine categories).

V Discussion

While the data supports abbreviations as a category used by more females than males, it contradicts previous studies on the other five linguistic categories. This may be due to the differences among the participants. Previous studies collected data from both digital natives and digital immigrants, whereas this study exclusively collected data from digital natives; therefore, the data analysis and conclusions of this study may only pertain to a specific generation of digital natives born between 1998 and 2000. Hence, this study may only be relevant to one specific generation, the individuals in the sample, and their language identity, which refers to the relationship between individuals' sense of self and language, dialect, or sociolect (Jackson, 2014).

Furthermore, a closer analysis of specific individuals' language use shows their different degrees of femininity and masculinity, suggesting the participants do not have singular gendered identities. The complexity in gendered identities is elaborated through queer theory, which discusses the unstable and indeterminate nature of sexed and gendered identities, noting the misconception of gender as purely singular, unchanging, and straightforward (Salih, 2002). There is no necessary relationship between an individual's body and gender; however, gender is constituted in various historical, political, and cultural contexts as it intersects with other

discursively constituted identities, like racial, class, sexual, and ethnic identities (Butler, 2006; Salih, 2002). Some feminist theories even claim that gender is not an attribute, but it is a relation formed at the point of convergence among various culturally and historically specific set of relations (Butler, 2006). Gender is performative and does not have a pre-existing subject or gender identity that precedes language, which is the expression of gender as gender itself is a signifying practice (Butler, 2006; Salih, 2002). As the results show varying levels of femininity and masculinity in each individual, which cannot be specifically and accurately determined or quantified, the study highlights the impossibility of categorising people who identify as one gender as purely feminine or masculine.

As language used in Facebook Messenger is primarily analysed to examine gendered identities, the self-identified and self-reported social identities of sexuality, ethnicity, and race are also related to and contribute to individuals' gender. The queer theoretical framework encompasses gender, ethnicity, and race, factors that help determine sexed and gendered identities in relation to themes of history, marginalisation, and political agency (Massaquoi, 2015). Like gender, ethnicity is a social construct, but it has a broader description than the biological inflected notions of race as it refers to the common culture of a specific group that has been passed on through generations of people of the same cultural heritage and descent (Jackson, 2014). As the scale of this particular study is small, conclusions on the relationship between gender and ethnicity cannot be derived. However, this could be analysed further in future research as there is also no specific emphasis on diversity in ethnicity in studies on gender and language use.

As this study is a low-scale research project for an undergraduate assignment, it has limitations, including the lack of a sophisticated computational data analysis that prior studies have. All studies also identified as either female or male, so this study does not investigate the language of non-binary people. The generational difference of the participants is another factor that must be considered as this study has a small sample size of ten people, who are all digital natives between the ages of 18 and 20. The corpus collected in previous studies, on the other hand, did not limit its participants to digital natives. The diversity in different identity categories besides gender, like ethnicity, has been a key factor in this study to ensure a representation of many cultures, whereas previous research did not place an emphasis on the diversity of other social identities. All studies, however, study participants of a similar age group.

VI Conclusion

Patterns of gendered language use in online communication contexts reveal the gender binary that sociolinguistics research have shown to abide to and the fluidity of

gendered identities. Gender is not a singular identity category. Rather, it is dynamic and individuals can perform gender through language that shows varying degrees of masculinity and femininity, regardless of the gender they believe they embody. Future research could explore social identities, like ethnicity, race, and sexuality, and how they influence gendered identities through a large-scale statistical analysis of online text samples.

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A PRELIMINARY STUDY OF KONGISH INFIXATION AND REDUPLICATION

Giovanni C L Ma*

Contents

I Introduction

Despite a comparatively limited amount of research, Hong Kong English (HKE) is nevertheless one of the researchers' foci in the subject World Englishes. In his pioneering studies on Postcolonial Englishes, Schneider (2007) categorises HKE as a Postcolonial English variety that was in Phase 3 of his 'Dynamic Model'. Recently, there is a new emerging English variety in Hong Kong that is radically different to HKE. Therefore, it is time to re-examine what the categorisation of the local Hong Kong English variety, this time, Kongish, should be. This essay examines two

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morphological processes used in Kongish, namely, infixation and reduplication. The result shows that Kongish undergoes a different morphological process as opposed to other varieties of Englishes such as Pakistani English. In addition, I argue that the English variety in Hong Kong has been evolved from Phase 3 to Phase 4 of Schneider's 'Dynamic Model', as evidenced by Kongish. The essay is presented as follows. Section 2 provides the sociolinguistic and political setting for two different English varieties found in Hong Kong, namely, HKE and Kongish, as well as a brief literature review on related topics. Section 3 states the methodology, including an introduction of Kongish Daily; a Facebook page used as the source of data for this essay, the data selection procedure and research questions. Section 4 briefly outlines infixation and reduplication in other varieties of English. Section 5 examines infixation and reduplication in Kongish. Section 6 discusses the classification of Kongish of Schneider's Dynamic Model. The essay concludes with further directions for research and conclusion.

II Literature Review

A *Sociopolitical Setting*

Historical and geographical factors play crucial roles in the establishment of the local varieties of English in Hong Kong. Hong Kong is "an entry port to greater China" (Setter, Wong and Chan 2010, p.1). Therefore, Hong Kong was chosen as a colony by Britain in 1842 under the Treaty of Nanking and its colonial history lasted over one hundred years until 1997. Hence, English has been the official language in Hong Kong since the establishment of the colony. Even after the handover in 1997, English is still one of the co-official languages, alongside Chinese. As a result, English is widely used in Hong Kong (Sung 2015, p. 256). Bolton (2000, p.269) points out that English knowledge was spreading throughout the population at an unprecedented rate in the late colonial era. Evans and Green (2003, cited in Sung 2005) state: "It [English] now plays a vital role in different sectors in Hong Kong society, including the government, business, higher education and profession workplace." Having said that, the importance of Cantonese in Hong Kong cannot be underestimated. The official statistics (available at www.gov.hk/en/about/abouthk/facts.htm) from 2016 showed that Cantonese was the mother tongue for 89.1% of population in Hong Kong. Consequently, "the average Hongkonger is mostly bilingual" (Setter, Wong & Chan 2010, p.5).

B *Hong Kong English (HKE)*

Bolton (2002) and Setter, Wong and Chan (2010) offer two detailed surveys of the history of HKE that can be traced back to the mid-seventeenth century, in which there was a considerable amount of trade between the British and Chinese in places including Hong Kong. Pidgin English was therefore established for the sake of communication between these people. Hong Kong, as a British colony, was established in 1843 and English was established as the official language, spreading throughout the population. The influence of English in Hong Kong became even more prominent in 1970s and 1980s as "the Hong Kong education system moved from an elitist one to a mass education system" (Setter, Wong & Chan 2010, p.105).

C *Motivation and Previous Work on HKE and Kongish*

The reason why this essay focuses on Kongish, specifically its use of two distinct morphological processes, infixation and reduplication, is because of the lack of related research. The essay is also motivated by my experience of using Kongish in communication with fellow Hongkongers.

As mentioned, the numbers of studies in Englishes in Hong Kong are limited, especially on HKE's linguistic features. As noted by Setter, Chan and Wong (2010, p.103): "there have been few studies which describe the formal linguistic properties of Hong Kong English in great detail." Since the notion of Postcolonial Englishes was proposed, a plethora of literature in the area has been generated. Among those studies, certain varieties such as Singapore English and Indian English have received the most attention (e.g. Bao 2005, 2010; Deterding 2007; Lim 2004 for Singapore English. Mukherjee 2007; Sailaja 2009; Lambert 2012 for Indian English, inter alia). While there are indeed some studies on HKE, very few of them describe the formal linguistic properties especially in comparison with other varieties of English in Asia such as Singapore English (Setter, Wong & Chan 2010, p.103). The research on Kongish is even less. To my knowledge, so far there is only one scholarly article on Kongish, namely, Sewell and Chan (2016). Although this article was groundbreaking, Sewell and Chan only provide a very brief description of the linguistic features of Kongish, as their purpose was not "to provide a detailed description of Kongish' (p. 2). Nevertheless, this article provided us the first systematic and scholarly study on Kongish. For this reason, the present essay is built on this article.

D *Kongish*

As outlined by Sewell and Chan (2016, p. 2), Kongish "is the name that has been given to certain language phenomena in online communication in Hong Kong.' One of the fora in which Kongish is a dominant language is a Facebook page called

Kongish Daily (see section 3.1). Having said that, it does not mean that Kongish Daily is the only place for Kongish. As far as I know, teenagers in Hong Kong often use Kongish in instant messengers such as WhatsApp and Line. Linguistically speaking, "Kongish is a blend of English and Cantonese that is characterised by the use of Cantonese words and expressions in romanised form" (Sewell & Chan 2016, p. 3). The later part of the essay supports this claim and from which we can see that the way that Kongish blends English and Cantonese.

Kongish might be thought as same as Chinglish (e.g. Hong Kong Free Press 2015). In the introduction on 'Kongish Daily', however, the creators of the page explicitly state that "Kongish *ng hai exac7ly* Chinglish.' (*Kongish* is not exactly Chinglish.) And "actcholly, *Kongish* hai more creative, more flexible, and more functional ge variety." (Actually, *Kongish* is a variety that is more creative, more flexible, and more functional.) (Kongish Daily, n.d.). This suggests that Kongish and Chinglish are different varieties of English.

E *Difference between HKE and Kongish*

Despite Kongish Daily stating that the use of the two names are interchangeable, in this essay, after Sewell and Chan (2016), I treat HKE and Kongish as two closely related languages. Specifically, HKE has evolved into Kongish. The reason for this claim is that both languages contain many Cantonese traces, yet Kongish demonstrates a higher degree of indigenisation. Compared to HKE, Kongish displays more Cantonese features, as shown below. Also, this claim sets the cornerstone of the discussion of the classification of Kongish in Schneider's Dynamic Model in section 6.

III Methodology

A *'Kongish Daily'*

Kongish Daily was established in 2015 by a group of young Kongish users who have a background in linguistics. As described by itself, it is 'a local site sharing news in Hong Kong English (Kongish)' (Sewell & Chan 2016, p.2). At the time of writing, the page has over 45,000 likes.

B *Selection Procedure*

The data used in this essay is taken from the posts of 'Kongish Daily', where the corresponding morphological processes were used. Since 'Kongish Daily', as

suggested by its name, is updated every day. Therefore, in order to limit the scope of data, only the posts within September and October of 2017 will be chosen.

The reason why Kongish Daily is chosen as the source of data for the present essay is that it was one of the initiators and promoters of Kongish. It is the birthplace of Kongish (Sewell & Chan 2016, p. 2). Its influence can also be seen from the fact that it has been reported on in news outlets, such as on The Straits Times (2015), Hong Kong Free Press (2015) and South China Morning Post (2016).

C *Research Questions*

The two overarching research questions in this essay are:

1 What are the morphological processes used in Kongish?

2 What phase, according to Schneider's Dynamic Model, should Kongish be classified in?

IV Infixation and Reduplication in Englishes

A *Infixation*

An infix is "a bound morpheme whose phonological form consists minimally of a single segment, is preceded and followed in at least some word-types by non-null segmental strings" (Blevins 2014, p. 136). In general, infixes are rare compared to other affixes (Yu 2007, p.2). 'Standard' English only has a very limited amount of infixation. Christison and Murray (2014, p. 98) even assert, "English does not have infixes." This is surely not the case. For example, English has the expletive infix, -bloody-, to form deprecatives such as *abso-bloody-lutely* (Mattiello 2013, p.56). Nevertheless, infixation is not as common as prefixation and suffixation. In other English varieties, infixation is also not a common feature (see Hickey 2005, p.600-606). Hence, the examples found in Kongish could bring us some new insight into this aspect.

B *Reduplication*

Rubino (2005, p.11) defines reduplication as "the systematic repetition of phonological material within a word for semantic or grammatical purposes." Minkova (2002, p. 135) states "reduplicative words have two parts: a base, and full or partial copy of the base, known as the reduplicant." Reduplication is comparatively common in English than infixation. In Old English, there were some reduplicative words such as *ha-ha* and *wezla wez*. (Minkova 2002, p.133). The estimated range

of reduplicative words in Modern English varies, from 500 to 1,800 (Thun 1963, ix). Moreover, reduplication is also a common morphological process used in different Englishes in the world. For instance, Singapore English reduplicates nominal modifiers (Wong 2004). Reduplication can also be found in Limonese Creole English from calques and retentions (Winkler & Obeng 2000).

V Infixation and Reduplication in Kongish

A *Infixation*

Similar to the expletive infix *-bloody-* and *-fucking-* as in *fan-bloody-tastic* and *abso-fucking-lutely* in 'Standard' English, Kongish also has an expletive infix, '*-9-*', and it can be found in adjectives, such as *sorry* and *crazy*.

1 *'9'*

This infix is a phonological translation of the Cantonese profanity word '鳩' (gau1. Chinese Character Database). It means male genitalia in Hong Kong Cantonese.

The word has two meanings. The first one is the literal meaning: 'dick' (note that it is not equal to penis). Second, it functions as an intensifier. The latter is similar to *bloody* in English, as in "The assignment is *bloody* challenging."

(a) Sor9ly

Sor9ly is composed by the base *sorry* and the infix '*-9-*'. It was used in the following sentence (Kongish Daily, 18th Sep 2017):

(1) *Sor9ly* we dun have time to join, and will donate $0 for support.

'Sorry... but we don't have time to join [the anniversary ceremony]. And we will donate nothing for support.

This post talked about a famous private primary school in Hong Kong organising its 200th anniversary ceremony, in which one of the activities was a relay race. The school asked the parents to join the relay race, of which the cost was HKD $20,000 (AUD $4500 approximately). Many people in Hong Kong would think that it was expensive for a relay race. Therefore, the administrator re-posted the news and put (1) in the post. Although *sor9ly* seems an apology, the administrator was not, in fact, apologising. Instead, it was sarcasm. The second part of (1), "will donate $0 for support", also supports this claim. In 'Standard English', the same kind of meaning is usually expressed by extralinguistic clues such as tone and facial expressions, such as a rise tone in the word *sorry*.

(b) Cra9zy

Cra9zy consists of the base *crazy* and the infix '*-9-*'. It was used in the following sentence (Kongish Daily, 16th Oct 2017):

(2) This game ho *cra9zy*...but ho seung play

'This game is *bloody crazy*...But I really want to play it.'

Kongish Daily re-posted a video made by another Facebook page, '不設計 | Bug Design'. The video introduced a new role-playing game in which players assume a goose. The administrator then re-posted this video with sentence (2). In this post, the infix functions as an intensifier, the same as *bloody* in 'Standard' English.

The discussion above shows that infixation in Kongish is different to that in other varieties of English. For example, Pakistani English's infixation involves combining "English affixes with the bases of both English and Urdu origin" (Baumgardner 2006, p. 247). In Kongish, however, it is Chinese affix, instead of English affix, that is added to English bases, as shown in the previous examples.

B *Reduplication*

Although reduplication is not uncommon in English, it is not the most common morphological process. Conversely, it is commonly found in Cantonese (Matthews & Yip 2011, p. 38). As a result, Kongish speakers adopt this strategy whilst using English lexical items. According to Minkova's (2002) definition, the examples shown below are full reduplication.

1 *Try Try*

The way of turning a declarative sentence to an interrogative sentence in 'Standard English' is inserting a 'dummy' do, which is called *do-support* by syntacticians. For example:

(3) You want to try the coffee.

(4) *Do* you want to try the coffee?

Kongish, however, use (5) instead of (4) when they want to ask question:

(5) You want to try try the coffee?

(4) and (5) are basically the same. Both of them are yes/no questions. The addresser wants to know whether the addressee wants to try the coffee. However, there are some subtle pragmatic differences between these two sentences. First, in general, the intended message of (5), in addition to a yes/no question, is that of convincing

the addressee to drink the coffee. This can be seen in the sentence below (Kongish Daily, 21st Sep 2017):

(6) Wanna *try try* Siu-Keung coffee? Little editor think it's fat du du and very cute.

'Do you wanna try cockroach coffee? I think it's chubby and very cute.'

The administrator re-posted a post that introduced coffee with latte art in a shape of a cockroach. *Siu-Keung*, 小強, is a nickname for cockroach in Hong Kong Cantonese (See another post on Kongish Daily which talked about *Siu-Keung*: Kongish Daily, 26th Sep 2017).

The second difference can be seen in the following sentence (Kongish Daily, 22nd Sep 2017):

(7) Wanna *try try* China hospital ge dental robot? His/Her name is Dr. 'Drill'. Chill ng chill sin? 😏😏

'Do you wanna try the robot dentist in China's dental clinics? The robot's name is Dr. 'Drill'. Is it really chill?' 😏😏

The post talked about the news that a dental clinic in China started using a robot dentist to carry out dental implants. The administrator asked whether the followers "wanna *try try*" the robot. He did not really intend to ask whether the followers want to try the robot dentist. In other words, he did not want to know a yes/no answer. Instead, he just wanted to show his sarcasm. This can also be seen by the emoji, a cheeky smile 😏, at the end of (7). This is because the label 'made in China' is infamous in Hong Kong. Hence, the administrator used *try try* to form an interrogative sentence for making fun of, as well as expressing his distrust of China's products.

2 *Day Day*

This example shows how Kongish adopts Cantonese morphological process on English lexical item. In Cantonese, there are some nouns that could be reduplicated to produce forms with the meaning 'every'. For example (Matthews & Yip 2010, p.39):

(8) 人 'person', 人人 *person person* 'everyone'

The Kongish word *day day* was coined on this basis. It was used in the flowing sentence (20th Oct 2017):

(9) Mid-term...OT work... *Day day* dou hai walking dead...

'Mid-term tests...Overtime work...Everyday we are like a 'walking corpse'.

The administrator re-posted a video entitled 'Sliding through the week like...' in which a kid slides around a carousel helplessly. The administrator compared people in Hong Kong with this kid, and said that they were as tired and helpless as the kid. The word *day day* replaces the 'Standard' English equivalence *everyday*.

VI The Classification of Kongish in Schneider's Dynamic Model

In his pioneering works, Schneider (2003 & 2007) develops an innovative theoretical framework for explaining the evolution of Postcolonial Englishes in which they undergo five phases: Foundation, Exonormative Stabilisation, Nativisation, Endonormative Stabilisation and Differentiation. In a case study conducted by Schneider (2003 & 2007), he argued that HKE was currently in Phase 3 of his Dynamic Model. He demarcated the evolution of HKE as follows: (1) Foundation (1841-98), (2) Exonormative Stabilisation (1898-1960s), and (3) Nativsation (1960s to present) (Evans 2016, p.7).

Scheineder (2007, p.50) argues the English variety in China was evolving from Phase 3, Nativisation, to Phase 4, Endonormative Stabilisation, as supported by the widespread use of the name 'China English' rather than 'English in China'. Xu and Deterding (2017, p. 118) further the discussion by stating "the adoption of an established name such as Chinglish to refer to the colloquial variety may be part of this evolution." The same argument applies to other English varieties such as Taglish, Manglish and Japlish. By the same token, then, the name of Kongish also suggests its evolution from Phase 3 to Phase 4.

Schneider (2003, p. 250) argues Phase 4 "typically follows and presupposes political independence." Despite the fact that Hong Kong is a part of China under the constitutional principle 'One Country, Two Systems' and hence it, so far, is not politically independent, Hong Kong is very different to China in many aspects, especially in terms of culture and language. It is interesting that Schneider (2003, p. 250) mentions: "it is possible that the transition between 3 and 4 is caused by some exceptional, quasi-catastrophic political event which ultimately causes the identity alignment of STL-strand speakers to switch from a self-association with the former mother country, however distinct, to a truly independent identity." In Hong Kong, we happened to undergo such a political event in 2014, one year before the term Kongish was established. This was the *Umbrella Movement*, in which hundreds and thousands of students in Hong Kong went on strike for our right to select the Chief Executive of Hong Kong. The other aim of the movement was to fight for autonomy of Hong Kong from Mainland China (Rühlig 2015, p. 1). Halmai (2015, p. 45) describes the *Umbrella Movement* as "the biggest-scale democratisation movement since the 1989 Tiananmen Square massacre." He also pointed out

that nowadays Hongkongers' identity "has remained distinct and opposed to Chinese identity" (p. 12). All this suggests that Kongish was born in an environment in which Hongkongers, or more specifically, Kongish speakers want to show a different identity and demonstrate political dependence from China. This claim can be supported by the introduction of Kongish Daily, quoted in section 3.1, given the administrators of the page wanted to show Kongish is different to Chinglish. It seems reasonable, therefore, to claim that Kongish is actually in Phase 4 based on Schneider's idea of 'political independence'.

VII Directions for Future Studies

Further research is still needed on Kongish regarding several aspects. First, the speakers' — both Kongish and other varieties of Englishes — attitudes towards Kongish could be a potential direction. Second, due to the word limit of this essay, there are still numerous questions in theoretical linguistics on Kongish that remain unsolved. For instance, Kongish's phonology would be an interesting area to explore. In two posts on Kongish Daily (12th Sep and 18th Oct 2017) in which the English word *girl* was spelled *gurlo*. The same phonological phenomenon, i.e. the alveolar approximant /ɹ/ was replaced by a lateral approximant /l/ happened with *sor9ly*. This is because the former does not exist in Cantonese (Matthews & Yip 2011, p. 18-22), the mother tongue for most Kongish users. The phonological change in turn affects the Kongish orthography. But not every /ɹ/ becomes /l/ in Kongish. For instance, we still use the word *friendship* instead of *fliendship* (Kongish Daily, 30th Oct 2017).

VIII Conclusion

Seven years ago, Setter, Wong and Chan (2010, p. 116) suggested, "Hong Kong English will eventually be pushed more firmly towards Schneider's phase 4." The emergence of Kongish seems to fulfil the prediction. This essay examines two morphological processes used in Kongish, namely, infixation and reduplication. The results of the essay show that Kongish has two special kinds of morphological processes, namely, infixation and reduplication. I also argue that the variety of English in Hong Kong, as exemplified by Kongish, has evolved into Phase 4 in Schneider's Dynamic Model. This essay has several implications. First, it provides a description of formal linguistic features of Kongish, which adds to the literature regarding World Englishes in general and Kongish in specific. Second, it attempts to solve the question on the classification of Kongish in Schneider's Dynamic Model, which also contributes to the existing World Englishes literature. As suggested in the last section, there are yet many aspects to be explored regarding Kongish.

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MEDITATION VOICE: STYLISTIC VARIABLES FOUND IN GUIDED MEDITATION AND THEIR IMPACT ON IDENTITY

Annika Schimpff*

Contents

I Introduction

In this essay I examine the stylistic variables found in the language used for guided meditations. This is an area of study that has not yet been researched, yet the linguistic variables that I will explore have been discussed in various studies. I will look at three main linguistic features: slow rate of speech and lengthening of syllables, breathy and whispery voice, and smiling voice. My data for this essay is based on a YouTube video entitled *Meditation for Inner Peace: Yoga with Adriene* (Mishler, 2017) and has a duration of approximately 11 minutes. I chose this specific video due to its relatively short length when compared with other guided meditation videos and due to the distinctive stylistic features found in the voice of Adriene, the speaker. Style in speech can be defined as different ways of speaking and may be significant in understanding social processes (Coupland, 2007). The theoretical approach used in this paper is based on the idea of language as a stylistic choice stemming from the third-wave of sociolinguistics. This approach proposes that speakers' linguistic variables are indexical, suggesting that stylistic features are situated within a constellation of potential meanings (Eckert, 2008). As such, variables may carry social meaning and ideologies and different meanings can be activated within social contexts (Eckert, 2008). These variables may then reflect upon the speakers' persona, which can be defined as an individual's socially perceived role or character (Eckert, 2008).

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II Indexicality of Linguistic Styles in Guided Meditation

The linguistic styles I have identified have been well-documented in literature, yet not in relation to my data. I therefore discuss what these styles have signified in previous studies and what meaning they may denote in the context of my own data. Hence, I consider the indexicality of the language used in guided meditation practices. Indexicality is a phenomenon linking linguistic styles and social meanings with respect to particular interactions (Eckert, 2008).

A *Rate of Speech and Lengthening*

The most striking linguistic features in the video may be the lengthening of one syllable words and final syllables as well as the slower rate of speech across the entire video.

Table 1 'Examples of Lengthening'

One-syllable words	Word-final lengthening
"breath" (00:01:12)	"dis*solve*" (00:01:04)
"choose" (00:01:50)	"con*nect*" (00:04:32)
"please" (00:03:55)	"in*hale*" (00:06.05)
"groove" (00:06:54)	"contin*ue*" (00:07:02)

Both linguistic variables have been closely associated with infant-directed speech (IDS) in literature (Church, Bernhardt, Pichora-Fuller & Shi, 2005). Yet, the lengthening of one-word syllables and final syllables has been found to be also prevalent when reading to children, whereas slower speech has been reported generally occur in IDS (Church et al., 2005). Overall, a slow rate of speech and syllable lengthening capture individual attention and provide the opportunity to process information (Church et al., 2005). How may these findings then be relevant in the indexical field of guided meditation? Arguably, meditation resembles a sort of storytelling, since participants are invited to imagine scenarios related to their body and mind. A slow speech rate and syllable lengthening assist individuals in reducing stress, finding relaxation in the mind and body, and clearing any distracting thoughts. Meditation brings a fuller awareness to the present moment and slow speech and syllable stress can further help create this effect.

B *Breathy and Whispery Voice*

The second feature I will discuss in relation to my data is voice quality. Both breathy voice and whispery voice are marked by audible friction and appear to be significant

in the context of guided meditation. The difference between whispery and breathy voice lies in the voicing — breathy voice is voiced, whereas whispery voice is voiceless (Podesva, 2011). In my data, breathy voice and whispery voice are overlapping, as illustrated in the following extracts:

> ... and then it crests and it falls (00:04:47)
>
> ... practice just really being present with what is (00:04:54)
>
> ... you have the option of returning (*inhales*) back to that ocean sound, that ocean breath, finding that connection of the inhale" (05:00:55)
>
> ... one more minute (00:08:59)

Some recent phonetic studies suggest that breathy voice correlates with femininity and is used to familiarise with an unknown audience (Hall, 1995; Podesva & Callier, 2015). In Hall's (1995) study on American fantasy lines, he illustrates the strong link of breathy voice and feminine sexuality. He describes the voices employed by women on such fantasy lines as "sweet talk". Hall (1995) explores how voice quality is actively modified in order to navigate a sense of closeness and intimacy through the use of breathy voice. This may be directly linked to meditation, since meditation teachers aim to create an intimate and inclusive atmosphere with all of their students. A recent study conducted by Starr (2015) explores a certain voice quality used by Japanese women in a professional acting context. Starr (2015) describes this voice quality as "sweet voice", referring to a distinctive voice style that she defines as a breathy singing voice. This specific phonation is used to establish authenticity and requires speakers of sweet voice to practise to achieve such voice quality. Again, in the context of meditation, the use of breathy and whispery voice appears to be deliberate. The voice quality may be manipulated to give comfort and gain students' trust to share the personal experience of meditation.

C *Smiling Voice*

The final stylistic feature I want to draw attention to is the phenomenon of speech accompanied by smiling. I will refer to this stylistic feature as "smiling voice" (Torre, 2014). Throughout the majority of the video, Adriene seems to be deliberately smiling when speaking and pausing. Examples of this are found at 00:05:10 (example (a)), 00:05:44 (example (b)) and 00:09:25 (example (c)).

On one hand, smiling has been defined as a facial gesture and therefore a nonverbal cue (Chen, 2016). On the other hand, studies have found that smiling voice impacts and increases formant frequencies as well as the duration of utterances and is thus audible (Torre, 2014).

At 00:05:09, Adriene says "that does exist". One can hear a higher frequency as well as the stretching of utterance duration. Preceding (b), Adriene utters "so we're giving ourselves this opportunity to practise doing absolutely nothing" (00:05:37). Again, I would argue that a raised frequency is audible in this extract of smiling voice. In (c), Adriene is displaying a smile while pausing.

Specifically, deliberate smiling has been found to denote social strategies such as marking positivity or irony (Chen, 2016). In guided meditation, participants are encouraged to close their eyes and thus smiling voice may be employed for mostly auditory purposes. As such, participants may associate audible aspects of smiling voice as a pleasant feature of the meditation teacher's voice.

III Linguistic Styles and Identity

Third-wave sociolinguistics regard identity as an ever-changing and multi-layered concept, which is constructed and reconstructed in discourse (Bucholtz & Hall, 2005; Drummond & Schleef, 2016). In relation to stylistic variation and identity, this approach takes a holistic view, arguing that a combination of linguistic features needs to be considered as opposed to single variables (Drummond & Schleef, 2016). These may then be significant with respect to the speaker's social role of interaction (Bucholtz & Hall, 2005). To illustrate, in the context of meditation, breathy and whispery voice may socially signify calmness and familiarity. Ahlin & Kjellgren (2016) highlight the importance of the way in which meditation teachers speak and act, contending that teachers should embody positivity and peace to support students in their meditation practices (Ahlin & Kjellgren, 2016). A qualitative study focusing on what students or participants expect from their meditation teachers demonstrates the importance of both the quality of voice and the way in which language is used (van Aalderen, Breukers, Reuzel & Speckens, 2014). Participants claimed that they preferred certain voices over others and described their teachers' voices as "quiet, soft, gentle, somewhat slow and friendly" (van Aalderen et. al., 2014, p. 174). Specifically, breathy and whispery voices have been defined as soothing (Podesva, 2011). In discourse, meditation teachers are often compared to healers or therapists, yet they have their own distinct role (van Aalderen et. al., 2014). Aalderen et. al.'s (2014) study asserts that equality plays a significant role in teacher-student relationships during meditation classes. The focus lies on the students' wellbeing and the teacher must make everyone feel welcome, equal and comfortable (Aalderen et. al., 2014). Consequently, teachers are encouraged to establish a compassionate relationship with their students (Ahlin & Kjellgren, 2016). The smiling voice may then provide the teacher with the ability to visually and audibly spread kindness, warmth and other qualities that are associated with and promoted by meditation teachers (van Aalderen et. al., 2014; Ahlin & Kjellgren, 2016). In recent

years, meditation practices have gained increased popularity, with people increasingly sharing blogs and videos about meditation across the internet (Salzberg, 2010). In particular, in a world that is increasingly investing and consuming more time in virtual realities, meditation has provided a healthy balance (Salzberg, 2010). Meditation practices are then promoted as the key to happiness, a way of healing and a tool to help us obtain decision-making skills and other romanticised virtues (Salzberg, 2010). In contrast to fast-paced ordinary life, meditation invites us to slow down and reconnect with the simplicity of being (Ahlin & Kjellgren, 2016). As a result, meditation teachers are required to embody the core qualities and values taught in meditation practices (Ahlin & Kjellgren, 2016). These qualities include mindfulness, happiness and peacefulness (Salzberg, 2010). The identity of meditation teachers may then be constructed and reified through their positioning in these discourses. Linguistic styles may be adopted by meditation teachers as a way to emphasise the purpose of the practice and the inner tranquillity of the meditation teacher. Motivations for employing gestural features such as smiling voice may have further emerged in the discourse of meditation as a happy practice (Ahlin & Kjellgren, 2016).

It is important to keep in mind the very spiritual association of meditation (Salzberg, 2010). Sociolinguistic studies have found that religious and spiritual beliefs of individuals can be reflected in language use (Yaeger-Dror, 2014). Yaeger-Dror (2014) argues that religion can be viewed as a sociolinguistic variable. Individuals of various religions have been shown to use distinct linguistic styles to express their religious membership (Yaeger-Dror, 2014). As such, religious people may use distinct language to emphasise their ideological commitment (Yaeger-Dror, 2014). However, studies have mainly focused on the lexical variables used by religious individuals as opposed to their voice quality or non-verbal cues (Yaeger-Dror, 2014). With regards to meditation, I would hypothesise that breathy and whispery voice function as identifiable variables for meditation teachers. The soft — and what is often described as sexual — voice quality of breathy and whispery voice may signify an individual's spiritual connection (Hall, 1995), especially since breathy voice carries positive and intimate connotations (Hall, 1995; Podesva, 2011). By the same token, smiling voice may further contribute to the embodiment of positivity. This aligns with the mission of meditation teachers to inspire people to find their inner, most intimate connection and happiness (Aalderen et. al., 2014). Overall, both discourses surrounding meditation and personae associated with meditation teachers mutually impact the use of linguistic styles. Additionally, the distinct variables I have discussed may have emerged from meditation discourses, particularly considering its recent increase in publicity.

IV Conclusion

In this essay I explored stylistic variables that have not yet been discussed in the context of guided meditation. I therefore explored social meanings that have previously been associated with the linguistic features discussed. I have suggested that discourses surrounding meditation practices have influenced and inspired the distinctive language usage of meditation teachers. I identified three main linguistic variables in my data, yet more language features may be identified. I then argued that values and ideas fostered in meditation practices may influence the linguistic behaviour of meditation teachers. Due to the lack of sociolinguistic literature on guided meditation, further research may reaffirm, contest and build on my hypothesis. In addition, linguistic styles encompassing lexical choices may assist our understanding of meditation teachers' language use. This may then reflect upon their socially constructed identity in relation to their profession. The increasing emergence of meditation provokes the need to consider language use in meditation as a field of linguistic research.

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MOTIVATION, COMPETITION AND SUCCESS IN SECOND LANGUAGE ACQUISITION: A CASE STUDY

Henry Leslie-O'Neill*

Contents

I Introduction

A learner's success in second language acquisition (SLA) can be attributed to a broad range of factors. Of these factors, motivation is one of the most important. Motivation is a force that compels a learner to continue learning, and it is influenced by many different elements, such as intrinsic passion, external pressures, rewards and desires. In this case study, the elements that positively contribute to motivation and the way that motivation positively contributes to success will be analysed.

Learning a foreign language is a long and arduous task. To succeed in completing such a long-term goal, it is vital to have strong and sustained motivation. It is so important, that achieving anything without some form of motivation would be near impossible. Dörnyei (1998, p.117) affirms that

> motivation provides the primary impetus to initiate learning the L2 and later the driving force to sustain the long and often tedious learning process; indeed, all the other factors involved in L2 acquisition presuppose motivation to some extent.

Hence, any factor that positively contributes to one's motivation can be said to contribute very strongly to one's success. Gardner (1985) splits motivation into two categories: integrative, referring to personal attitudes like enjoying speaking a language; and instrumental, referring to external pressures like receiving a good grade. Instrumental/extrinsic motivation can be further split, from more to less intrinsic, into integrated (part of one's identity), identified (within one's values), introjected (social pressures like guilt), and external (rewards or punishments) motivation

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(Ryan & Deci, 2000). This is part of Ryan and Deci's (2000) Self Determination Theory, central to which is a learner's need for autonomy. They argue that a learner will be more motivated if they feel autonomous. As Dörnyei (2001, p.12) summarises: "We will be more motivated to do something out of our own will than something we are forced to do."

In terms of language learning, Dörnyei (1994) outlines a tripartite model of motivation: the language level, consisting of attitudes towards the language, the usefulness of learning it, and integrated and identified motivations; the learner level, consisting of the learner's need for achievement and their self-confidence; and the learning situation level, consisting of factors concerning the course syllabus, the student-teacher relation, and student-student relations in the classroom. Later, Dörnyei and Ottó (1998) developed a procedural model of motivation to properly consider how goals, learning approaches, and motivation levels change over time. They describe the pre-actional phase, where a learner sets a goal and plans their approach, the actional phase, where they carry out their plan, and the post-actional phase, where they reflect on their approach and consider the next step. These are both helpful frameworks for understanding motivation in SLA.

According to Dörnyei (1994), competition — the pressure to perform better than others — is generally acknowledged to have a negative effect on motivation and success. Instead, he recommends fostering a cooperative environment, which promotes higher intrinsic motivation, less anxiety, more involvement, and more positive attitudes towards the content and the teacher. McGroarty (1989) identified six main benefits of cooperative learning over competitive learning: increased practice, increased general language skills, opportunities to integrate language with content, a wider variety of content, improved teacher-student communication, and improved student-student communication and support. On the other hand, Kristensen et al. (2015) suggest that competition in classrooms can be an effective way to encourage students to work harder, as long as the attitude is playful, cooperation is not completely lost, and actual learning is necessary to win.

II Research Questions

The research questions this case study sets out to answer are:

1 What are the most powerful/important sources of motivation for the interviewee?

2 How well do the discussed models of motivation apply for the interviewee?

3 Does competition have a positive or negative effect on motivation and success?

III Method and Results

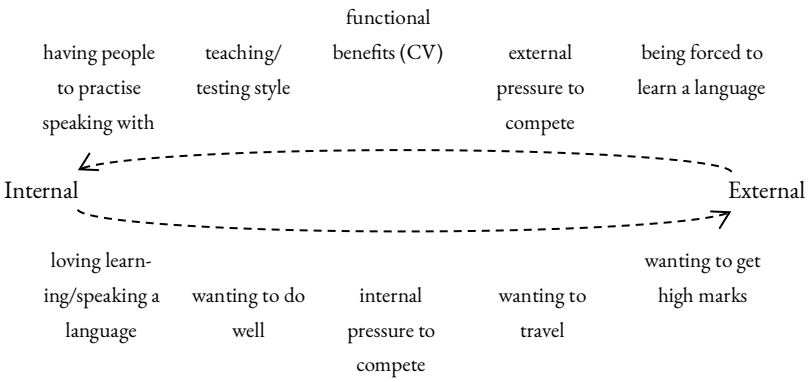
A 30-minute interview was conducted with a 22-year-old woman named Deidre. Deidre grew up speaking English in rural Victoria and studied German from grade 7 to 12. In grade 10, she spent one month on exchange in a small town in Bavaria, Germany. By the end of grade 12 she was at an intermediate, conversational level of fluency. She states that one of her main goals in learning German was to get high marks at school, and by this measure she was successful. However, she did not continue learning German after high school and her fluency has declined since, so by a more general measure such as 'becoming and remaining fluent', she was less successful. Both of these aspects will be considered.

The interview was semi-structured to ensure relevant data were collected while allowing Deidre to talk at length about what she considered important. The interview was recorded and transcribed.

The transcript was then examined and the key factors that, according to Deidre, had positive effects on her success were gathered into the following table, grouped as 'internal' or 'external', based on where they originate from. Note that there is significant overlap with some of these. They are broadly ordered from most important at the top and least important at the bottom.

IV Discussion

In analysing the factors affecting Deidre's motivation, we see that where they come from is more complicated than either 'internal' or 'external'. There appear to be two distinct continuums on which we can place them: internal forces with progressively more orientation to the external, and external forces with progressively more orientation to the internal. This can be schematised like so:



To explain, 'wanting to get high marks' is a strongly external-oriented motivation, as marks are a kind of externally-allocated reward system, but the root of the motivation is undeniably internal — Deidre's *desire* to get these marks. On this model, we can make the important distinction between this external-oriented internal motivation and an entirely external motivation such as being forced to learn/speak a language. On the other end, 'having people to practice speaking with' stems from an external origin — the school's decision to hire language assistants — but it has a highly internal-oriented direction, connecting with Deidre on a personal, emotional level. This is distinguished from 'loving learning/speaking a language', an entirely internal motivation with very little orientation towards the external.

In visualising a model in this way, future research can focus more specifically on which factors provide the strongest positive effect on motivation. New, interesting research questions thus come to light. Are external-oriented internal motivations more powerful than internal-only ones, and vice versa? Is it best to have motivations on all points of the spectrum or is just one enough?

Deidre has strong motivations across all parts of the model. Internal motivations, such as loving learning, internal pressure, and wanting to get high marks, seem to be the most important for her and the ones most positively contributing to her success. However, her external motivations are undeniably vital: without being forced to speak/learn, without effective teaching/testing styles, without having German-speakers to talk to, she would likely have never progressed. Concerning the importance of external pressure to compete, she states:

> I guess if I was just taking classes or something, like maybe I wouldn't actually be that motivated, because there isn't anything driving me, in the same way. (L183)

And on continuing learning after graduating, when it would have been unforced and without a teacher, she states:

> I didn't consciously just stop learning but when you're away from the classroom and there aren't really many facilities to learn you don't really know how to teach yourself. I've never really been good at teaching myself things, I need a teacher. (L207)

Thus, it is clear that while autonomous, internal motivations are indeed powerful (Ryan & Deci, 2000), external motivations and resources are, in this case, equally vital.

Competition, both internally and externally encouraged, was identified by Deidre as a strong force maintaining her motivation. She describes herself as a competitive person (L163) and the high school system as an inherently competitive environment, which is encouraged by teachers, tests, marks, and classmates (L173). She considers this to be a wholly positive effect:

> But it wasn't a bad thing, like it wasn't badly competitive, we were just those sort of people. So I guess it was almost like a strategy, that helped us learn, push us further, and try harder. (L170)

This is in conflict with Dörnyei's (1994) and McGroarty's (1989) dismissal of competition as a positive motivational factor. It does, however, align with the view of Kristensen et al. (2015) that competition can be a positive motivating force if handled in the right way. It appears that the competition in Deidre's class was playful and the goal of the competition was always directed towards becoming better at German, thus it follows the suggestions of Kristensen et al. (2015).

It is important to note that Deidre was one of the highest-performing students in the class (L154). McGroarty (1989, p.127), in criticising competitive learning, states that it only benefits the most "academically able" students. Thus, while cooperative learning may be the most equitable technique from a teacher's perspective, competitive learning might be more beneficial from the perspective of the most proficient students. Indeed, Robinson (1990) finds that cooperative learning models can disadvantage talented students by limiting the extent of their growth to the average grade level. So, in terms of positively contributing to Deidre's success, a competitive learning environment seems to be advantageous.

On the other hand, there does seem to be a downside to this competitiveness. On picking German back up at University, Deidre says:

> Once I got to university, and you had to do those like placement tests for languages and stuff and it was that kind of competitive environment again I guess that maybe took a bit of the love of it away, cos I didn't want to be competitive in German anymore. (L211)

Perhaps from this we can hypothesise that although fostering competition was beneficial for short- to medium-term goals, eg, getting good marks and going on exchange, it did not instil or strengthen the unending internal passion for learning German necessary for long-term commitment and success. Following Dörnyei and Ottó's (1998) process model of motivation over time, Deidre's main goal, set up in the pre-actional phase, was to do well in school. This goal was constructed both by herself and by her learning environment. Once she graduated, her goal was complete. Now in the post-actional phase and no longer so motivated by a desire for high marks, she was left with no goal strong enough to make her continue learning. She had also developed a clear association of language learning with competition and stress, which dissuaded her from continuing. If her learning environment had been less competitive and more focused on fostering an internal love of the language and on setting longer-term goals, she might have had the motivation to pursue further success.

V Conclusion

This case study has been an illuminating exercise investigating several positively-contributing factors of motivation and success in SLA. We have considered an alternative model of motivation that distinguishes between internal and external motivations and their internal or external orientations along a continuum. We have seen that internal motivations appear to have the most powerful and maintainable positive effects, leading to long-term motivation and success. External forces, such as providing engaging resources and effective teachers, allocating marks to reward effort, and even forcing a learner to learn or speak the language, can nevertheless be critical for learners to succeed, especially in Deidre's case. Finally, we have considered several arguments for and against the effectiveness of competition. In this case, competition had positive and negative impacts: positive in the mid-term, by compelling Deidre to achieve her goal of getting high marks at school, but perhaps negative in the long term, by associating language learning with stress and by leaving Deidre with no further motivation once she completed her goal. Much further research is necessary to comprehensively elaborate upon the possible effects of competition, and when it should or should not be encouraged. Perhaps the most important message this case study offers is that generalisations about factors positively affecting SLA may very well not hold for any one individual. Future research should always take this into account.

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THAI PHONOLOGICAL TRANSFER: PREDICTIVE POWERS OF THE CONTRASTIVE ANALYSIS HYPOTHESIS

VINCENT MURPHY*

CONTENTS

I INTRODUCTION

The notion of transfer in learning has been an investigation in psychology for at least the last 80 years as a notion borne out of the psychology of learning (Duncan, 1958; Major, 2008; Travers, 1977). In its broadest interpretation it is claimed that "the learning of task A will affect the subsequent learning of task B", however, the extent to which prior knowledge influences new tasks is debatable (Jakobovits,

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1970, p.188). Some theorists, such as Ausubel (1963) have claimed that all learning involves a transfer of knowledge. Whilst not accepted in this broad sense it has since become recognised that attempts at communication in a second language often involve a 'transfer' of elements as the patterns of the native language (NL/L1) are superimposed on the patterns learned in the target language (TL/L2) (Gass, 1979). This paper will examine the role of transfer and the extent to which Thai learners of English are influenced by their L1 in the realm of phonology – specifically, whether transfer can predict which errors will be made in production of English fricatives.

II Literature Review

A *Transfer in Linguistics*

Transfer as a field of enquiry in linguistics has its roots in Trubetzkoy's (1939/1958) assertion that the 'sieve' of the L1 'filters' one's perception in the L2; a notion that led language and pedagogy scholars to examine the similarities and differences between the L1 and L2 (Fries, 1945). By adapting the view of transfer from pedagogy to the linguistic context Weinrich introduced the notion of *transfer* and *interference* in L2 acquisition which operated on all levels of the target language (1953). Transfer was conceptualised as the use of the L1 that leads to 'correct' usage of the L2, whereas interference would lead to 'incorrect' language use.

B *Phonological Transfer Research*

Phonology has been a focus of a significant amount of research in transfer, with a emphasis on a large range of areas including on segmentals (Hung & Man, 2002), syllable structure (Basson, 1986) and dialects (Wolfram, Childs and Torbert, 2000; Hansen-Edwards & Zampini, 2008). Voice Onset Time is heavily theorised with researchers finding that if the VOT specifications of L2 stops are not the same as the native language then speakers will produce the L2 VOT with values between the NL and the TL (Flege, 1991; Sancier & Fowler, 1997). Selinker (1992) noted how existing categories like 'rhotic' can help with prediction however it can be too broad to properly suggest substitutions. One can expect that Hebrew /χ/ will be substituted for English /ɹ/, however Contrastive Analysis does not specify what should replace /θ/ or /ð/ and suggests that any of /t, d/ or /s, z/ are viable substitutions (Selinker 1992). Of most relevance to this study is the previous work on acquisition of L2 English fricatives. The acquisition of English interdental fricatives /θ/ and /ð/ has been the subject of several studies as they are rare cross-linguistically and speakers will often substitute another phoneme for them (e.g., Altenberg &

Vago, 1987). Researchers have since treated this phoneme substitution as a process dependent on the L1 phoneme inventory (Diaz-Campos, 2004). Through the use of Optimality Theory, Lombardi (2003) was able to show why speakers of some languages (e.g. Thai, Hungarian, Russian) substitute /t/ for /θ/ but others (e.g. Japanese, German, Egyptian Arabic) instead substitute /s/ as a result of L1 influence.

C *Contrastive Analysis Hypothesis*

Stemming from this theoretical underpinning, scholars sought to determine whether analyses of difference between L1 and L2 would have pedagogical applications, as learning a new language would involve identifying and overcoming differences between the L1 and L2 (Foley & Flynn, 2013, p.98.). In a work on applied linguistics designed for language teachers Lado developed the *Contrastive Analysis* (CA) approach to language transfer and acquisition (1957). Under this approach, learning a new language involves the identification and learning of differences between the L1 and L2. It is asserted that similarities between the languages will facilitate acquisition whereas differences will be much more difficult to acquire. Furthermore, Lado argued that studying the differences in phonological systems between the L1 and L2 could predict areas of difficulty for learners. As such, the fundamental claim of CA is that transfer will explain all errors in a learner's TL through a thorough examination of these points of difference in phonological, syntactic, morphological and lexical systems. Since Lado's seminal work, Contrastive Analysis has undergone changes, most notably the introduction of a strong/weak distinction by Wardhaugh. Wardhaugh reconceptualised CA whereby the strong version of the theory would predict all errors in the language whereas a weak version would explain errors post hoc (1970).

Despite the insights derived from CA, subsequent research has shown that L2 speech acquisition is significantly more complex than CA might suggest. The notion of *interlanguage* argued that errors in the L2 are not simply the result of differences in the phonological system, but stem from a myriad of factors, of which differences between the L1 and L2 are only a part (Selinker, 1972). Furthermore, it has been found that similar phenomena can be more difficult for learners as the distinctions between the NL and TL are more nuanced and require greater analysis (Oller and Ziahosseiny, 1970). For instance, Flege (1995) found that whilst some phonemes which do not exist in the L1 might be difficult to produce, others may be accurate from the start of learning. Whilst the strong form of the CAH does not account for many of the findings, the weak version – that a speaker's L1 phonology will shape his L2 speech – is still assumed by most theories of L2 phonology today (Davidson, 2011).

D *Thai Transfer*

The production of English fricatives by L1 speakers of Thai has been previously examined through a Contrastive Analysis framework, with varying conclusions drawn. Richards (1966) examined speakers of English in New Zealand and found that Thai learners realised /v/ as [w], /θ/ as [t], /ð/ as [d], /z/ as [s], /ʃ/ as [tɕʰ]. He attributed the discrepancies to issues stemming from L1 transfer. Burkadt (2008) examined the production of /θ/ and /ð/ in word-initial position, finding that /θ/ could be target-like or realised as [t, ð, d, v, f], whilst /ð/ was predominantly realised as [d]. Chunsuvimol & Ronakiat (2000 & 2001) found that /v/ is a problem for a number of Thai learners and is most often produced as [f] and [w]. These studies were all impressionistic with results based off the perceptions of the researchers. To my knowledge, two studies have been conducted which used acoustic measures. Roengpitya (2011) conducted an acoustic study of three female learners of Thai aged 18-19 and found that many English voiced fricatives were pronounced as devoiced word initially, intervocalically and finally. A shortcoming of this was that the author did not provide descriptions of results and simply presented graphs. Kitikanan (2016) examined fricatives at word initial position and found that impressionistically a low percentage were produced as target-like. The author supplemented this perceptual analysis with acoustic phonetics. This study aims to address the gap in literature by combining acoustic and impressionistic analyses and applying it to an Australian context. This will be done through a replication of Briere & Chiachanpong's (1980) study which will be explained below.

III Research Questions

Building on the theoretical framework as outlined by Contrastive Analysis and previous studies, the overarching research questions of the present study are:

1 Will Contrastive Analysis help explain errors in Thai speakers' interlanguage?

2 Are the findings in this study commensurate with previous Thai L1 learners of English?

IV Methodology

A *Study Being Replicated*

This study replicates the work of Briere and Chiachanpong (1980) who analysed pronunciation errors in the speech of Thai four learners. By comparing the phonological systems of Thai and English they were able to identify which sounds did not

occur in the L1 and would thus be difficult for learners (Table 1). Thus the phonemes to be investigated are AusE /ɹ/, /v/, /ʃ/, /θ/, /d͡ʒ/, /z/, /ð/ and /ʒ/ based on their absence from the Thai phonological system. This study has chosen to focus on the forms that are absent from the Thai phonological system, rather than including those with an impermissible distribution e.g. word-final /f/, /s/ and /l/ are impossible in Thai.[1] This study has used the same word lists as found in their study (Appendix A).

Table 1 (Australian English (AE) from Cox and Palethrope 2007; Thai from Tingsabadh & Abramson 1993)

		Postalveolar		**Palatal**		**Velar**		**Glottal**	
		AE	T	AE	T	AE	T	AE	T
Plosive						k g	k kʰ		ʔ
Affricate		ʧ ʤ	ʨ ʨʰ						
Nasal						ŋ	ŋ		
Fricative		ʃ ʒ						h	
Approximant				j		w	w		
Trill									
Lateral approximant									

[1] Whilst /ɹ/ is also absent from the Thai phonological system, it is not part of the scope of this study due to article on word limits.

	Bilabial		Labiodental		Dental		Alveolar	
	AE	T	AE	T	AE	T	AE	T
Plosive	p b	p p^h b					t d	t t^h d
Affricate								
Nasal	m	m					n	n
Fricative	f v	f	θ ð				s z	s
Approximant							ɹ	
Trill								r
Lateral approximant							l	l

Briere & Chiachanpong hypothesised that the phonemes in the TL would be substituted with the closest sound from the Thai phonological system. In order to determine what constituted 'closest' they used Chomsky and Halle's (1968) distinctive feature chart comparing Thai and English (Table 2). This is in line with Brown's (2000) theory that a learner's L1 will influence L2 acquisition at an abstract level through the inventory of distinguishing phonemic features in the L1. This suggests that learners will be able to perceive contrasts in features if they have prior experience distinguishing along those lines, e.g., differentiating between voiced and voiceless stops. This allowed for the following predictions to be made:

1 /θ/ will be realised as [t] because it shares the most features and occurs in a similar distribution to /θ/.

2 /ð/ will be realised as [d] because both are obstruents.

3 /ʃ/ and /ʒ/ will be realised as [t͡ʃ] because they share the most features with one another.

4 /d͡ʒ/ will be realised as [t͡ʃ] because they share the most features

5 /v/ will be realised as [f] as these two sounds share the most features.

6 /z/will be realised as [s] because these two sounds also share the most features.

Table 2 'Comparative Chart of Distinctive Features for Thai and AE'

	Australian English										
	f	s	l	r	θ	ð	ʃ	ʒ	dʒ	z	v
High	-	-	-	-	-	-	+	+	+	-	-
Anterior	+	+	+	+	+	+	-	-	-	-	+
Coronal	-	+	+	+	+	+	+	+	+	+	-
Voice	-	-	+	+	-	+	-	+	+	+	+
Continuant	+	+	+	+	+	+	+	+	-	+	+
Nasal	-	-	-	-	-	-	-	-	-	-	-
Strident	+	+	-	-	-	-	+	+	+	+	+
Sonorant	-	-	+	+	-	-	-	-	-	-	-
Aspiration	-	-	-	-	-	-	-	-	-	-	-
Lateral			+	-							

	Thai													
	t	tʰ	d	s	n	f	tʃ	tʃʰ	p	pʰ	m	b	l	r
High	-	-	-	-	-	-	+	+	-	-	-	-	-	-
Anterior	+	+	+	+	+	+	-	-	+	+	+	+	+	+
Coronal	+	+	+	+	+	-	+	+	-	-	-	-	+	+
Voice	-	-	+	-	+	-	-	-	-	-	+	+	+	+
Continuant	-	-	-	+	-	+	-	-	-	-	-	-	+	+
Nasal	-	-	-	-	+	-	-	-	-	-	+	-	-	-
Strident	-	-	-	+	-	+	+	+	-	-	-	-	-	-
Sonorant	-	-	-	-	+	-	-	-	-	-	+	-	+	+
Aspiration	-	+	-	-	-	-	-	+	-	+	-	-	-	-
Lateral													+	-

Their research yielded the following results:

- /θ/ was realised as [ð, t]
- /ð/ was realised as [d, n, θ, ʔ]
- /ʃ/ was realised as [t͡ʃ, s]
- /ʒ/ was realised as [z]
- /d͡ʒ/ was realised as [t͡ʃ]
- /v/ was realised as [f, ʊ, w]
- /z/ was realised as [s]

This paper examines the above seven phonemes and will determine whether the above predictions are consistent with AusE participants and thus whether the results are generalisable outside of the USA.

B *Participants*

Three L1 speakers of Thai were recruited for this study who had each lived in Thailand for a minimum of 17 years. Participant C did his final year of study in Australia. Participant A completed an undergraduate degree in Journalism before completing a Master of Applied Linguistics at The University of Melbourne. Participant B is completing a Bachelor of Commerce and Participant C is completing a Master of Engineering.

C *Procedure/Instruments*

This data was elicited from word lists with the target features in word initial, medial, and final position and was supplemented with "free speech". Participants were asked a question previously used by Labov (1976) about whether they had been in a situation where they felt they were in danger of being killed; reflecting Krashen's (1977) 'acquired' speech as there is little use of the monitor given the rapidity of the answer will encourage a focus on content rather than on form. What followed was a semi-structured interview which asked questions such as what jobs had the participants had held, and what their language learning experiences had consisted of (see Appendix B for interview transcripts). This was designed to elicit enough tokens for a full analysis. These recordings were then scrutinised by the researcher and where an error was found it was verified with the use of PRAAT to incorporate an acoustic analysis to show evidence of devoicing, frication etc.

V Results

The results for this study have been broken down into the individual participants and is laid out in Tables 3, 4, and 5 below. The first column indicates the number of tokens in the target sound, first in the free speech and then in the word list. The second column lists the errors made in the free speech, what the sounds were substituted for, where it occurred most frequently, and the percentage for which certain phones were substituted. Where no errors were made it was marked as 'none' and where there were no tokens under examination it was marked with a dash. It was also noted whether the substitute phone was predicted by CA.

Table 3 (Participant A)

Number of occurrences of target sound			Substitutions in free speech	Word list substitutions
AusE phoneme	Free speech	Word list		
θ	12	12	θ → [t] x1 word finally (predicted by CA) 8%	None
ð	38	12	ð → [d] x14 times, most often word initially (predicted by CA) 34%	None
ʒ	0	12	-	ʒ → [ʃ] x2 times when in word medial position (unpredicted by CA) 17%
ʃ	2	12	None	ʃ → [t͡ʃ] x1 in 'shockingly' 8%
v	20	12	v → [f] x1 word finally (predicted by CA) 5%	None
z	50	12	z → [s] x4 word finally (predicted by CA) 9%	None
d͡ʒ	8	12	d͡ʒ → [t͡ʃ] x3 word medially (predicted by CA) 25%	None

Thus, Participant A attempted AusE /θ/ 12 times in free speech along with the 12 occurrences in the word list. She made one substitution in free speech, accounting for 8% of the total tokens under examination, with /θ/ being substituted for [t]. Participant A twice substituted /ʒ/ for [ʃʃ] in medial position which is unpredicted by CA. Evidence for this is seen in the absence of a voice bar in Image 1 compared to native speaker realisation which includes a voice bar, indicating that the segment is voiced (Image 2) (Ladefoged 1975). Further evidence is provided in Images 3 & 4 for the word "measurement". Participant A also once substituted ʃ for [t͡ʃ]. This participant did not make errors in the realisation of [ð], [v], [z] and [d͡ʒ] in the word list. The amount of errors in free speech were more numerous as Participant A made errors in the free speech that were not present in the word list (ð, v, z, d͡ʒ). She made the least errors of the three participants in her interlanguage and showed the greatest L2 aptitude. This may be down to two factors 1) she has spent the most amount of time in Anglophone countries, having studied in the US and Australia for a combined 8 years at both undergraduate and Master level or 2) Participant A completed a Master of Applied Linguistics and this could indicate a higher awareness of her speech compared to the other participants.

Image 1: Participant A 'worthiness' with devoiced fricative circled

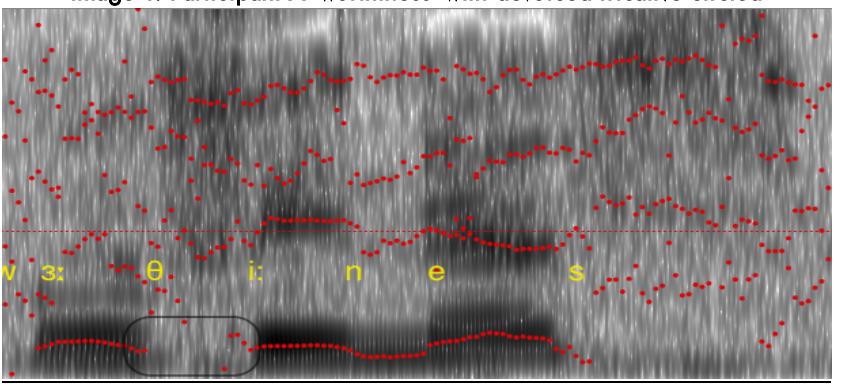


Image 2: Native speaker 'worthiness' with voice bar circled

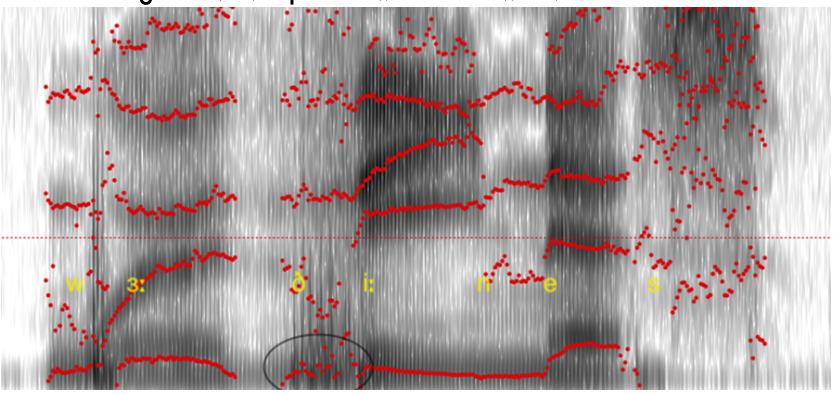


Image 3: Participant A 'measurement' with devoiced fricative circled

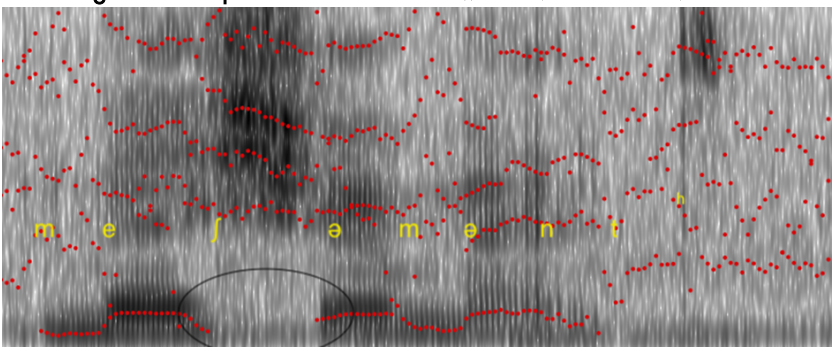


Image 4: Native speaker 'measurement' with voice bar circled

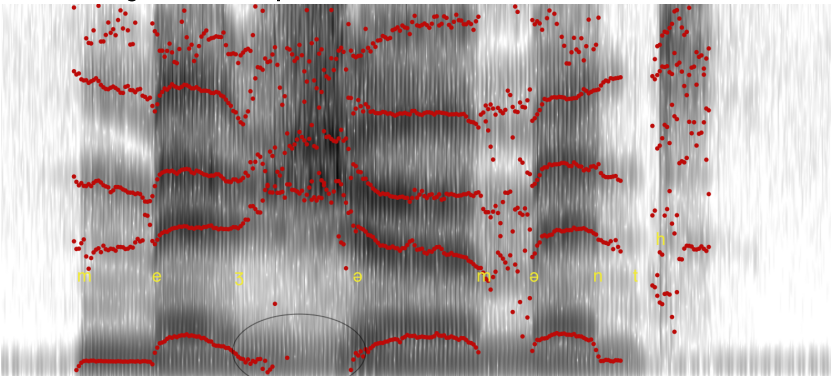


Table 4: Participant B

Number of occurrences of target sound			Substitutions in free speech	Word list substitutions
AusE phoneme	Free speech	Word list		
θ	9	12	θ → [t] x2 both word medially (predicted by CA) 22%	None
ð	26	12	ð → [θ] x2 word finally (not predicted by CA) 8% ð → [d] x16 (predicted by CA) 61%	ð → [θ] x3 word finally (not predicted by CA) 25%
ʒ	0	12	-	None
ʃ	6	12	None	None
v	14	12	v → [f] x3 (predicted by CA) 14%	v → [f] x2 word final (predicted by CA) 17%
z	21	12	z → [s] x4 all word finally (predicted by CA) 19%	z → [s] x3 word finally (predicted by CA) 25%
d͡ʒ	8	12	d͡ʒ → [t͡ʃ] x2 both word initially (predicted by CA) 25%	None

Participant B made errors in the word list in the production of /ð/, realising it as [θ] twice in the word final positions (see Images 5 and 6 for comparison). The absence of a voice bar has been circled, evidencing its production as a devoiced fricative. This was contrary to his free speech, with most substitutions for /ð/ being [d] (61%).

Image 5: Participant B 'loathe' with devoiced final fricative

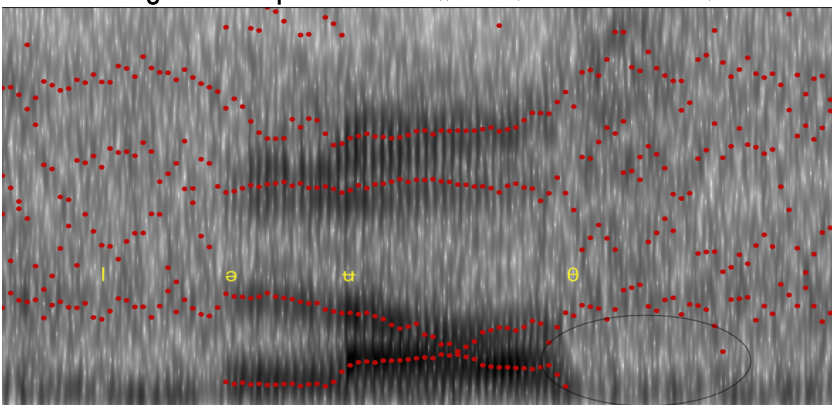
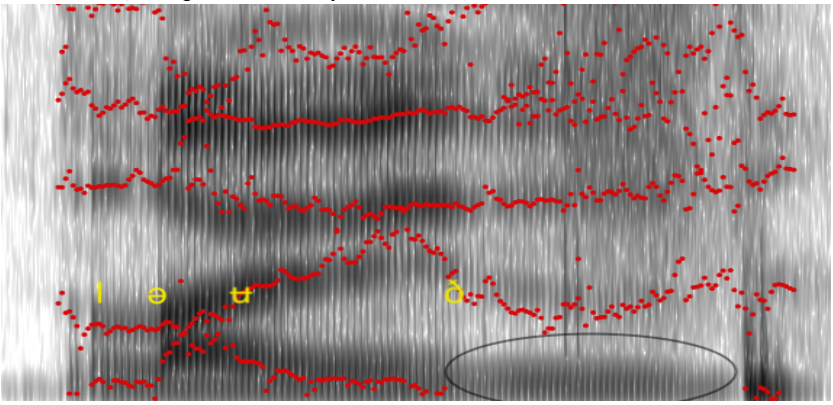


Image 6: Native speaker 'loathe' with voice bar circled



He also made errors in the word list as predicted by CA in the realisation of /v/ (substituting [f] 17% of the time) and /z/ (substituting [s] 25% of the time). These results were replicated in the free speech at 14% and 19% respectively. The substitution of [s] for /z/ is shown in Images 7 and 8. Further, Participant B substituted /d͡ʒ/ for [t͡ʃ] in 25% of free speech situations and [t] in place of [θ] 22% of tokens.

Image 7: Participant B 'victimise' devoiced word finally

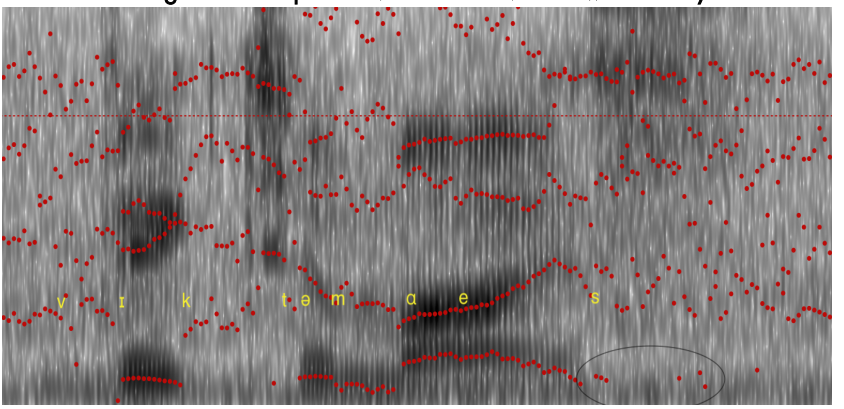


Image 8: Native speaker 'victimise' with voice bar circled

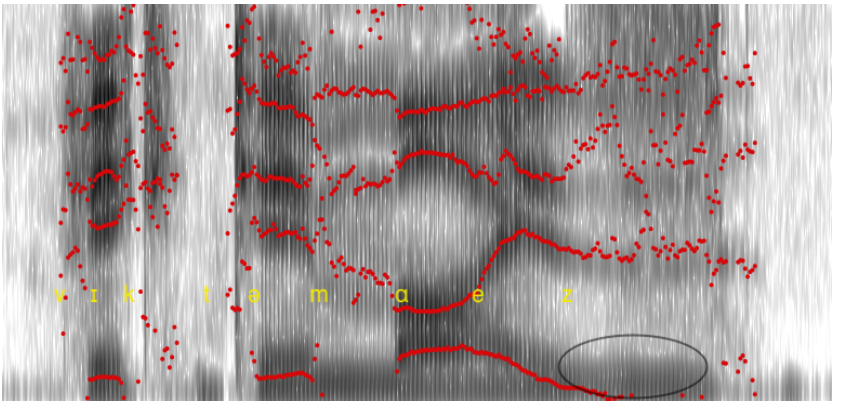


Table 5: Participant C

Number of occurrences of target sound			Free speech substitutions	Word list substitutions
AusE phoneme	Free speech	Word list		
θ	15	12	θ → [t] x4 predominantly word initial (predicted by CA) 27%	θ → [t] x6 2 word initial, 1 medial, 3 final (predicted by CA) 50%

ð	35	12	ð → [d] x15 predominantly word initial (predicted by CA) 42%	ð → [d] x4 3 word medial (predicted by CA) 44% ð → [t] x2 both word final (not predicted by CA) 22%
ʒ	0	12	-	None
ʃ	18	12	ʃ → [s] x3 all in "English" (not predicted by CA) 17%	None
v	34	12	v → [f] x8 all word final (predicted by CA) 24% v → [w] x3 all word medial (not predicted by CA) 9%	v → [f] x1 word finally (predicted by CA) 8% v → [w] x 6 all word medial (not predicted by CA) 50%
z	23	12	z → [s] x 6 all word final (predicted by CA) 26%	z → [s] x6 predominantly word finally (predicted by CA) 50%
d͡ʒ	9	12	d͡ʒ → [ʃ] x2 both in 'language' (not predicted by CA) 22%	d͡ʒ → [g] x1 in 'negligence' (not predicted by CA) 8%

Participant C made the highest number of errors, substituting ð for [t] twice in word final position and for [d] in 44% of the word list and 42% of the free speech. The evidence for substitution of [θ] for /t/ is provided by spectrograms below which show an absence of frication and a 'stop' in sound, suggesting a plosive in place of the necessary fricative (Ladefoged 1975). The circled part of Image 10 shows high energy aperiodic movement which suggests frication, this is absent in Image 9 where there is no sound, instead a complete closure resulting in no reading on the spectrogram. Other errors included substituting [w] for /v/, [s] for /z/ and [ʃ] for d͡ʒ. A potential reason for the high amount of errors is his apparent lack of motivation and willingness to engage in his learning, evidenced by wanting to physically remove himself from his classrooms when around his Thai teachers (Appendix B). The interview elucidated negative learning experiences with regards to his English experience in Thailand.

Image 9: Participant C 'undergrowth' with stop in place of fricative word finally

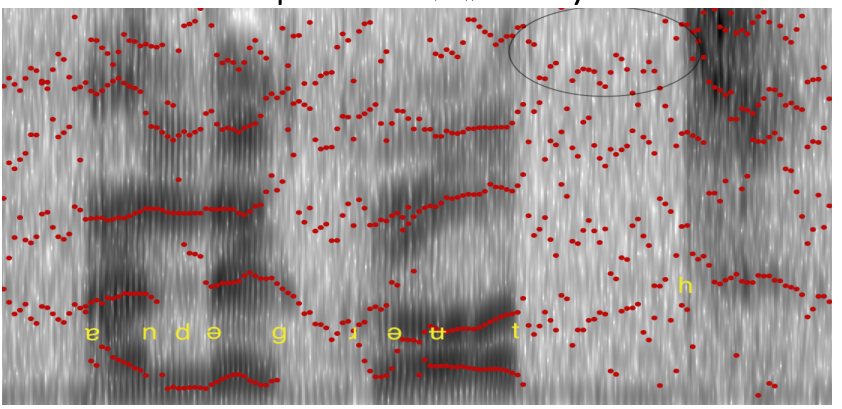
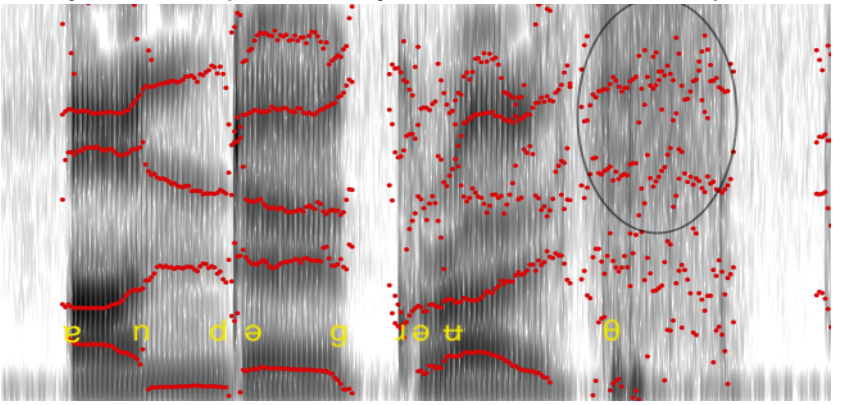


Image 10: Native speaker 'undergrowth' with fricative word finally circled



VI Discussion

A *Will Contrastive Analysis Help to Explain Errors in Thai Speakers' Interlanguage?*

The phone /θ/ produced 14 errors from the three speakers, out of a total of 74 tokens, substituting [t] each time, accounting for 19% of all tokens. This rate is significantly lower than the error rate for its voiced counterpart /ð/. This is potentially due to the fact that /θ/'s existence has been attested in Thai. In a phonetic study of Thai, Harris (1972) found four speakers out of 60 subjects who pronounced Thai /s/ as /θ/. 100% of the errors made were the substitution predicted by CA, however

there is no consensus as to where the error is most likely to occur with an even spread across word initial, medial and final position.

The sound which presents the most difficulty for Thai learners of English appears to be /ð/. As predicted [d] was used as the most often substituted, occurring 49 times out of 135 tokens (36%). The realisation of /ð/ as [θ] on five occasions can be seen as target language influence as [θ] does not occur in Thai but is part of the target system. These substitutions were all made by Participant B in word-final position, suggesting that he tends to devoice word-finally. Participant C produced [t] twice in word final position in words "teethe" and "loathe" in the word list, of which CA cannot account for.

There were two errors in realisation of /ʒ/ as [ʃ], however this is not accounted for by CA. This appears to be an interlanguage error as neither sound occurs in Thai and thus the substitution must be made from the target system.

A further error was made in the pronunciation of [ʃ], one of which can be explained by CA. It was predicted that /ʃ/ would be replaced by [t͡ʃ], only Participant A made this substitution. There were three substitutions for [s], all in "English" by Participant C. Briere & Chiachanpong suggest that these errors could be the result of: 1) imperfect control of the target system which resulted in inaccurate interlanguage or 2) reinterpretation of /ʃ/ as Thai /s/ in word final position.

There were 24 errors in production of /v/, 15 of which can be accounted for by CA when /v/ is pronounced as /f/. The other substitution was for Thai [w] which occurred nine times, all by Participant C. These errors were solely intervocalic, occurring in words such as "every", "eleven", and "discover". The reason for these substitutions is unknown, however it could be due to the orthographic similarity between /w/ and /v/.

Another error in production was the devoicing of /z/ → [s] for 18% of all productions (23/130). These were predominantly word-final, reflecting the results of Briere and Chiachanpong. This provides further evidence for the predictive power of CA.

A final point of analysis is the production of /dʒ/. There were eight substitutions with five predicted by CA as Participants A & B realised /dʒ/ as [t͡ʃ]. Two tokens were realised as [ʃ], word finally in "language". This could be attributed to an TL error as [ʃ] does not occur in the L1. A final error was made in the production of "negligence" where it was realised as [g]. This is mostly likely an orthographical error as the first 'g' is pronounced as [g] but the second is [dʒ]. Hence, it is reasonable to suggest that the confusion is orthographic.

The errors and subsequent substitutions made above provide some evidence for the weak version of CA – that errors can be explained after the fact (Wardhaugh 1970). This is seen in a high number of errors being substituted for the predicted phone, however it is not absolutely predictive. The scope for probabilistic

occurrence means that CA is not so easily falsifiable and stands more as a suggestion post hoc (Major, 2008, p.65). That the L2 sounds were mostly frequently substituted for their closest L1 equivalent reinforces Weinrich's (1953) original assertion that learners will use the nearest L1 phoneme. The existence of L1 sounds seems to promote their production in the L2 through a 'positive transfer' (Major, 1987, p.64).

B *Are the Findings in this Study Commensurate with Previous Thai L1 Learners of English?*

One of the most frequent phenomena observed was the devoicing of fricatives, especially in word final position. This was evidenced in the realisation of /v/ as [f], /z/ as [s], /d͡ʒ/ as [t͡ʃ] and /ð/ as [θ]. This reflects Roengpitya's (2011) findings that the majority of English voiceless fricatives are produced as devoiced, especially word finally.

The realisation of /ð/ as [d, θ] was produced at similar ratios to the original study, however this research did not uncover any productions of [n] or [ʔ]. This realisation reinforces the findings of Richards (1966) and Burkadt (2008), who found the most frequent substitution for /ð/ was [d].

The realisation of /ʒ/ as [ʃ] is contrary to the findings of Briere and Chiachanpong (1980) who found its most frequent substitution was [z]. Both this study and the original had low numbers of occurrences of these phonemes so further investigation is warranted to uncover whether there is an appropriate substitution.

The production of /v/ as [w] and [f] is in line with the results of Briere and Chiachanpong, as well as substantiating the claims of Chunsuvimol & Ronakiat (2000; 2001) that found evidence for this substitution being the most likely. Burkadt (2008) and Richards (1966) had similar findings for this phone.

Another token substitution that reflected previous studies was /θ/ as [t] which is in line with the findings from Burkadt (2008) and (1996). This phenomenon also appears to occur frequently cross-linguistically as Lombardi (2003) found the same substitution for speakers of Thai, Russian, and Hungarian.

When taken together, this suggests that the findings of this essay are in accord with previous studies into English fricative production, specifically that of Thai learners of English. Further avenues for study would be a more in-depth examination of /ʒ/ as the evidence from which to draw conclusions was scant as there were relatively few occurrences of this phoneme. Another area of potential study would be an investigation into the effect consonant clusters have on the production of these fricatives. This study has predominantly examined words of a CVCV structure and whether CC structures affect the realisation of the phonemes merits further study.

VII Appendixes

A *Appendix A: Word List with Target Phones*

	Initial	Medial	Final
/r/	Recognise Regiment Resident	Shuddering Victory Decorate	Discover Another Employer
/v/	Victory Vitamin Victimise	Discover Receiving Eleven	Effective Intensive Selective
/ʃ/	Shuddering Shockingly Shuttlecock	Vacation Impartial Ambition	Jellyfish Feverish Underbrush
/θ/	Thousandfold Thinkable Thoughtfulness	Marathon Anything Sympathise	Underneath Undergrowth Seventeenth
/d͡ʒ/	Journalist Jubilee Germinate	Negligence Passenger Languages	Heritage Personage Interchange
/z/	Zip-code Zipper Zealous	Hazily Hazardous laziness	Visualise Sympathise Victimise
/ð/	Then Their Those	Brotherly Bothersome Worthiness	Breathe Teethe Loathe
/ʒ/		Visualise Measurement Usually	Camouflage Sabotage Persiflage
/f/			Handkerchief Paragraph Photograph
/s/			Hazardous Laziness Residence
/l/			Remedial Material Impartial

B *Appendix B: Transcriptions*

1 *Participant A*

Have you ever been in a situation where you thought you were in danger of dying?

When I was fourteen I was in the back of a, it's like a Thai pickup truck turned into a transport kinda thing. I was really tired and we were going up a mountain. This was at some school camp thing. I was at the end of the truck holding onto one of the poles and I was really sleepy, really tired. I accidentally fell asleep and let go of the pole and I almost fell out off the bus, van, whatever that car thing was. It was so scary and someone grabbed my hand in time so I didn't die.

Why don't you tell me about some of the jobs you've had?
One of them was when I was studying in America and I was working for this, like a student sport broadcasting company and umm I was. Well I did a lot of things but one time I had to do this job where I was holding a microphone. It's like a microphone connected to some sort of half circle thing that you can pick up like smashing sounds when people smack into each other, or when the ball bounces stuff like that. But you had to kinda turn it towards where the action is the whole game. It was American Football game which stops basically every one or two minutes. It's like every, one, two minutes I had to pick it up, not even pick it up. I had to hold it the whole time. I had to lift it up. Put it down, lift it up. It went on for three hours. By the time I was done with that I was just. Like I'm never doing this job again except I did it like five more times because it paid well and well I had nothing else to do. But I also have another job where I was working in a physics lab, even though I was a journalism major. Basically every morning I would have to prepare for experiments and some demo stuff. So, sometimes we'd have really fun things like liquid nitrogen, like freezing stuff but I think one day I was supposed to prepare a banana or an apple, a few fruits and a container of liquid nitrogen. I picked up the banana but I accidentally dropped the whole banana in the liquid nitrogen but I didn't want to tell anyone. Nothing happened, it wasn't like, yeah nothing happened but I didn't' want to tell anyone. So I pretended like this banana was already in there so I was like 'oooh what is this frozen banana?'. But no one buy it, no one bought it and they were like 'Earn you're not supposed to do that, we only have one banana'. And the professor ended up using it and was like 'oh look at this cool banana, we only put it in the freezer'. He didn't know. I had to get it out from the liquid nitrogen and I put it on like a plate next to it and by the time he came back it had warmed up a little bit but it was still cold. He thought it was just a frozen banana but just in the freezer. It was actually because I dropped it. It was so bad.

2 *Participant B*

How long have you been learning English for and what's your English learning background?
I can't remember when I started but it's since I remember anything. I'm already learning English in school. So it's probably since kindergarten or something. What's the other question?

You've been learning for how long? Do you enjoy learning English?
Yeah sure. Certainly. I get to make friends with people from different countries, different backgrounds cos everyone is learning English so it's just, it's an international language. Everyone is speaking it so if I not to speak it, I can communicate my ideas with more people than just speaking Thai.

Do you think it's a good idea to communicate with more people than just Thai speakers?
Of course. That's why, not only English, I am learning Chinese too. Cos the two most spoken languages in the world are Chinese and English. Yeah that's why. It's just that concept of opening up your door and your ideas to other people.

What kind of jobs have you had? Have you had any part time or casual jobs and do you have any good stories from when you were working?
Last year I was doing a part time job at a Thai restaurant. Can I mention the name? It's called Jinda Thai. It's one of the most famous one's in Melbourne. Yeah I ummm I had a lot of Australian customers as well and I had. There was one time where I think they ordered something I think they had never tried before. I brought it to their table and then they were like 'no we didn't order this one'. Don't give me a problem a massive problem. I had to take it back to the kitchen and be like 'did you tell me the wrong table?". They were like 'no this is what they ordered' then I had to explain to them, I think it was *muu ping*, you know *muu ping?* It's like pork on skewer. Yeah and they're like, they have never seen it before so when they saw it in like skewers and with sticky rice and stuff they were like 'no no we didn't order this' and I had to teach them how to eat it.

Have you ever been in a situation where you thought you were going to die or scared for your life?
Maybe when every time I'm driving fast it's like. Anything can happen when you go pretty fast so that's maybe when I think I'm prone to death the most or in danger.

3 *Participant C*

When did you start learning English?
So I think I start learning English since first grade, maybe at like, I can't remember for how many years now. So three in high school, three in middle school, I don't know. Twelve? Maybe twelve years. Twelve or less than twelve years.

Do you enjoy learning English?
No actually no. In Thailand, not at all. Cos my school were like, we were Christian Catholic school so we were forced to learn English but I couldn't didn't use it every day. English for me is not my thing. Every time I see a foreign teacher I just walk away from him. Every time I saw them I went back.

Do you think your English has improved since you came to Australia? In what ways?
Yeah. A little bit. Grammar I wouldn't say improve a lot. I still hate writing because I'm an engineering student so my grammar is not good. I think I can communicate with people right now. I think. I hope.

What kind of instruction did you receive in Thailand? Did they focus heavily on grammar or speech? What kind of lessons did you have?
In Thailand, from what I learned, we don't really like focus on communication. I think more on grammar side. Really how to construct a sentence, how the grammar works. I'm not afraid. Every time I go to English class we don't use English. Some Thai teacher don't use English when they teach and students have no chance to speak. When they do, it's so hard for them to express themselves or they shy. Something like that.

Do you have a favourite experience when learning/communicating in English?
I would say, cos I went to Collingwood English Language School. I think that's the best experience I had learning English. At that language school I have a lot of fun learning English and they were very supportive. I think I improved massively from unable to understand anything, not being able to understand anything to being able to speak with people. I think that's...

What was so different about the instruction there compared to in Thailand?
We basically, we been put in the classroom where you don't have your native friends. I don't have Thai friends. We have all the international students, international

friends so the teacher will go around and ask you. Any question they give they will ask anyone. It's a small class so they can ask anyone and everyone can express themselves maybe in two minutes for each question. Express themselves about this topics. "What do you think?" You have to. They engage us to get involved. Back in Thailand it's not like here. The education system is not like here at all. Students are afraid to talk, afraid to challenge a teacher. Even in any subject. Especially in English when students aren't very confident in English so they never challenge it. So teachers will like, almost give a lecture. The size of the class affects a lot as well. So here maybe 8 to 10 students so interaction with student and teacher is much easier.

Have you ever been in a situation where you were scared for your life or thought you might die?

Yeah. Sometimes. I'm scared when I cross the street in Thailand. You know. They drive so fast and yeah that's happened when I was younger. I didn't even look both ways.

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THE ASSESSMENT OF NARRATIVE AND PRAGMATIC COMPETENCE IN CHILDREN WITH AUTISM SPECTRUM DISORDERS

ZITING GUO*

CONTENTS

I INTRODUCTION

Poor performance of linguistic competence in communicative interaction has been recorded in children with autism spectrum disorders (ASDs) as compared to typically developing (TD) children in age-matched groups. Previous studies have shown that several aspects of language disabilities contribute to social language impairment, among which pragmatic and narrative incompetence are crucial. Considering the essential linguistic characteristics used to identify social language competence, an analysis of the performance of these skills calls for standardised tests and quantitative assessments. Thus, this paper aims to review commonly used assessment tools and discuss subsequent findings on the linguistic performance distinctions between children with ASDs and TD controls.

II ASSESSMENT METHODS OF NARRATIVE AND PRAGMATIC COMPETENCE

Though observational and qualitative assessments have been widely used in narrative analysis, accurate criteria and standardised checklists of specific language skills are required when comparing the performance of children with ASDs with that of TD controls (Young et al., 2005, p. 4). Several standardised tests have thus been introduced to identify pragmatic and narrative competence. These include, inter alia, the Children's Communication Checklist (2nd ed.) (CCC-2), the Test of Pragmatic Language (TOPL), and the Expression, Reception and Recall of Narrative

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Instrument (ERRNI). Although the assessments were not originally aimed at individuals with ASD, they provide examples of children's narrative and pragmatic description in a clinical context. Quantitative data is likely to be collected for further analysis, such as narrative research, when hand-coding systems and a range of computational methods have been introduced into the assessment of narrative and pragmatic competence — for instance, hand-coding systems and Latent Semantic Analysis (LSA) are combined by Lee et al. (2018).

Table 1 'Measures of Narrative and Pragmatic Competence'

Research by authors	Measure of language ability used
King & Palikara (2018)	BAS II[1]
	BPVS II[2]
	CELF IV UK[3]
	CCC-2[4]
	ERRNI[5]
	Narrative Tasks[6]
Tanaka et al. (2017)	CCC-2
Stirling et al. (2016)	IPSyn[7]
Cocquyt et al. (2015)	EPVs[8]
Young et al. (2005)	CELF-3[9]
	TOPL[10]
	SNAP[11]

Although multiple standardised and non-standardised tools have been introduced to benefit practical research — responding to the need for the documentation of data — researchers have not yet reached an agreement on the subcategories of pragmatic and narrative skills. Despite these tests, a few researchers have established their own coding schemes based on previous studies and their own

[1] British Ability Scales (2nd ed.) (Elliot et al., 1996).

[2] British Picture Vocabulary Scale (2nd ed.) (Dunn et al., 1997).

[3] Clinical Evaluation of Language Fundamentals (4th ed.) (Semel et al., 2006).

[4] Children's Communication Checklist (2nd ed.) (Bishop, 1998).

[5] Expression, Reception and Recall of Narrative Instrument (Bishop, 2004).

[6] Narrative Tasks (King et al., 2013, 2014).

[7] Index of Productive Syntax (Scarborough, 1990).

[8] Evaluatie van Pragmatische Vaardigheden (Cocquyt et al., 2015).

[9] Clinical Evaluation of Language Fundamentals (3rd ed.) (Semel, Wiig & Secord, 1995).

[10] Test of Pragmatic Language (Phelps-Terasaki & Phelps-Gunn, 1992).

[11] Strong Narrative Assessment Procedure (Strong, 1998).

observation. However, the validity and reliability of these schemes should both be fully evaluated in the clinical context. A sample of these coding schemes is shown in the table below:

Table 2 'Sample Schema of Narrative and Pragmatic Competence'

Measure	Subscales
CCC-2	Speech
	Syntax
	Coherence
	Pragmatics: initiation
	Scripted language
	Nonverbal communication

III Pragmatic Deficiency

Pragmatics has been considered one of the more distinctive linguistic domains to assess language impairment in ASD children if we are to understand their communicative ability in the real world, as it investigates the use of appropriate language in diverse social contexts (King & Palikara, 2018). A range of studies have shed light on the differences in the use of pragmatic skills between ASD children and the TD population, and have attempted to prepare quantitative evidence in the form of assessments to support the planning of clinical intervention.

Most researchers share a similar understanding of pragmatic deficiency in children with ASD, while a few hold different views. Compared to TD controls, ASD children are believed to perform no better or worse on pragmatic production, eg turn taking, initiation, and the use of cohesive devices. A number of studies suggest that the frequency and quality of pragmatic skills usage are distinctly different between ASD children and their TD peers. The research conducted by King and Palikara demonstrates that children with ASD show only a few differences in speech production and syntax but with respect to other domains — for example, semantics, coherence and social relations — the weakness in pragmatic skills is remarkable (2018, p. 9). On the contrary, it has been suggested that no significant difference has been shown in semantic and syntactic measures of cohesion and clause production between the two experimental groups (Young et al., 2005, p. 8). Though the methodology used in this research has been criticised as ineffective, the label of high functioning autism in the research should be reconsidered.

IV Narrative Competence

Narrative, an integrated measure that involves the collaborative use of multiple language strategies, is widely used to evaluate the language competence of people with communicative disabilities. The data is generally collected through the storytelling process, which requires children with ASD and TD controls to produce texts according to given narrative tasks. Narrative assessments can be categorised by narratives in various social contexts, such as 'story stems' and event narratives. Interestingly, most storybooks used as resources in this research are wordless and accompanied by extra guidance, ie, recordings of the story.

Distinguishable linguistic characteristics have been recorded in the narratives of ASD children in previous studies. Less complex syntax has been recognised as one of the stylistic features of language impairment in children with ASD, compared to TD children. For instance, children with ASD are more likely to use less complicated structures when retelling stories, which means that fewer clauses are observed in their utterances. Moreover, limited cohesive devices are used in the narratives, which leads to a lack of coherence. On the contrary, both groups show comparable performance in the number of utterances and words used. Interestingly, children with ASD and TD children show few differences in retelling structured stories but significant differences in non-structured ones.

V Areas for Future Research

Debates over the assessment of narrative and pragmatic competence in children with ASD are still drawing researchers' attention to come up with methods that can be used systematically. As the studies are aimed at understanding the language impairment of children with ASD and developing their communicative skills in diverse social contexts, the criteria of these assessments are expected to be expanded to apply to broader social settings, instead of the clinical environment alone. Further, in terms of the number of experimental subjects, a larger number of participants is more likely to provide more convincing evidence to support the research. Finally, most assessments have targeted specific age groups, so changes in language abilities with age should be taken into consideration as well in future research.

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METAPHORICAL INTERPRETATIONS: AN ARGUMENT FOR RELEVANCE THEORY

Henry Leslie-O'Neill *

Contents

I Introduction

Metaphors are utterances that express something beyond, but inextricably tied to, their literal meaning (see Hills, 2017 and Searle, 1979, for a more comprehensive characterisation). They seem distinct from literal utterances in their framing of propositions in unique ways and their inability to be adequately paraphrased, among other features (Schroeter, 2018, Lecture 9). Many theories of language have addressed the problem of explaining how a metaphor's meaning is understood. None have done so more comprehensively than Relevance Theory (RT).

II Relevance Theory

RT explains that the core process of ostensive communication — that is, speaker-intended non-natural meaning — is one according to the principle of least effort. Hearers, when faced with any utterance, test likely interpretations until they find one that satisfies their expectations of cognitive effect, then they stop (Wilson & Sperber, 2002, p. 260). That interpretation is *optimally relevant*. It is in the best interest of speakers, understanding this process, to encode their utterances in such a way that the optimally relevant interpretation is what they intend to communicate, while also minimising their own effort. Every utterance, by virtue of being uttered, conveys an expectation that it will be worth interpreting (ibid, p. 256; comparable with Grice's maxim of Relevance). Take the following example (1):

> Miranda*:* What do you think of *Gilmore Girls*?
>
> Henry*:* (a) I watch it every night.

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The optimally relevant interpretation of (1)(a) is "Henry likes *Gilmore Girls*". First, Miranda accepts the presumption of relevance — in some way, Henry's utterance must answer her question, but taken at face value it does not, so she must dig deeper. She calls to mind relevant contextual knowledge and notices that the set "People who do Q regularly" overlaps with the set "People who like Q". Henry watches *Gilmore Girls* regularly, perhaps that means he likes it. That satisfies her expectation of relevance — it answers her question — so she stops there.

Sperber and Wilson (1986) outline how *loose talk* fits into this framework. Loose talk is a communication strategy that devalues truth to maximise cognitive effect and minimise effort (Sperber & Wilson, 1986, p. 162). For example (2):

> [Henry has watched 10 of 22 episodes of *Gilmore Girls* season 2]
>
> Miranda*:* How far through season 2 are you?
>
> Henry: (a) Halfway.
>
> (b) Forty-five point four five recurring percent of the way through.

In (2)(a), according to literal truth conditions, Henry has knowingly lied. However, according to RT, (2)(a) is still a more appropriate answer than (2)(b) because Miranda can infer similar useful conclusions from both answers — "I shouldn't talk about the finale", "He probably doesn't hate it", etc. — but (2)(a) is far easier to process.

This same fundamental process can be further extended to explain metaphor. In the RT framework, metaphor is simply an extreme case of *loose talk* (ibid., p. 166), which is itself an extension of literal speech. Remembering the expectation of relevance, an utterance that takes more effort to interpret necessarily promises more rewards to justify the effort (ibid., pp. 166-7). Consider the example (3):

> [Lorelai has had a bad day and would like some coffee to cheer her up]
>
> Lorelai: (a) This is a jumbo coffee morning. I need coffee in an I.V.
>
> (*Gilmore Girls, Season 1, Episode 2*)

Focusing on the I.V. metaphor, the most optimally relevant interpretation is something like:

> (4)(a) Lorelai wants a large amount of coffee, quickly.

The hearer reaches this by *modifying* the concept *I.V.*, which has all its typical properties, eg, "Medical instrument for administering liquids intravenously", into the related *ad hoc* concept *I.V.**, which has broader properties that are more relevant to the current context, eg, "Method of consuming large amounts of liquid quicker than normal" (Wilson & Carston 2006, p. 5). This modified, context-specific

concept has properties that *are* literally applicable to the utterance. Thus, the hearer now has a clear interpretation, (4)(a).

However, if (4)(a) were the only interpretation, the effect would not justify the hearer's effort, especially when Lorelai could have said it literally with equal effort on her part. The bonus of metaphors is that they offer many relevant interpretations of varying strengths (Sperber & Wilson 1986, p. 167). The main interpretations of (3)(a) are (4)(a), "Lorelai has had a bad day", and "Coffee will make her feel better". The metaphor appears to *mean* these. Weaker ones might be "Coffee is like morphine for her", "She might collapse without coffee", etc. These add to the depth of a metaphor, but the onus is on the hearer if they take these as part of the meaning (ibid., p. 167).

Further adding to a metaphor's depth is the possible range of properties the hearer may attribute to the *ad hoc* concept in the process of interpretation. For example (5):

> *I.V.** may comprise:
>
> (a) Method of consuming large amounts of liquid quicker than normal;
>
> (b) Method of administering drugs; and
>
> (c) Important life-saving procedure, etc.

These properties may each be modified again and again, creating a ripple effect of less relevant associations that add to the complexity of the metaphor and offer a greater cognitive effect as a reward for the hearer's effort.

This is a broad overview of how metaphors are understood in the RT framework. I will now demonstrate one reason why RT is a preferable formulation of the process above others.

III Communication on a Continuum

There are many approaches that are useful in understanding the mechanisms of metaphor. Aristotle (1954, p. 156) claimed that metaphors are just more concise similes, drawing a comparison between two entities. This is a simple and surprisingly effective evaluation, but goes no way to explaining how hearers decipher what properties are being compared. As Searle (1979, p. 425) points out, all things are like each other in some way. Searle (1979, pp. 430-1) delineates a detailed process of the interpretation of metaphors: first, hearers detect that the utterance, taken literally, is defective; second, they search for possible similarities between the entities being compared; third, they decide which shared properties the speaker likely intended to highlight. This is not so different from RT, but does not properly explain how hearers decide when to *switch on* the process and still fails to provide a full

account of the similarity-picking process. Walton (1993) characterises metaphors as *props* in a language-as-play scenario, allowing the hearer to imagine possible worlds where, for example, coffee could be delivered intravenously (3)(a). This is a unique analysis that intuitively explains the beauty and joy derived from metaphors.

However, all of these and other theories of metaphor share a major drawback: they present metaphor as a special speech act detached from normal communication. In Aristotle's view, an utterance is either a comparison or it is not; for Searle, an utterance either prompts hearers to look for a comparison or it does not; for Walton, an utterance either is or is not used as a prop for play. In RT, on the other hand, metaphor is seen as part of a continuum of speech, from completely literal — ie, the speaker's meaning is the same as the sentence's meaning (Searle 1979, p. 418) — to completely figurative. Thus, literal and metaphorical speech are different, undeniably, but they are not discrete.

Why should we believe there are discrete categories separating metaphors from literal utterances? This is not the case in any other realm of speech: promising is a type of asserting; requesting is nicely demanding; sarcasm and hyperbole are just different types of untruthfulness. It would be bizarre to imagine that every, or any, utterance could be determined as belonging to one type of speech and not another. Moreover, if there were distinct groupings between literal and metaphorical utterances, and different processes for interpreting each group, as Searle (1979, p. 430) suggests, we would need clear ways to figure out which is which. In the RT framework, this is not necessary. There is a single cognitive mechanism to interpret any utterance, literal or figurative. In the same way that Lewis (1979, pp. 339-58) explains a swathe of communicative features with his single theory of *scorekeeping*, RT explains how numerous kinds of inferences can be made according to one process. If the purpose of linguistic inquiry is to construct a comprehensive, holistic, and efficient theory of language, RT is surely the most promising.

Schroeter (2018, Lecture 9) outlines six distinctive features of metaphor, a sufficiently exhaustive list of what sets it apart from literal speech. However, on closer inspection, we can see that these features are either not different to literal speech or are clearly linked to literal speech in some 'sliding scale' continuous arrangement. Furthermore, we find that RT accounts for every feature.

Informativeness and Linguistic Flexibility: These refer to the fact that metaphors can express real information and be used adaptably across words, sentences, even whole texts. Both features clearly apply to literal speech as well, suggesting that metaphors are not so different.

Live vs Dead: This highlights the fact that new metaphors may become stale over time. For example, "stale" originally described food and drink (Merriam-Webster.com). At some point it was then used, as a metaphor, to describe something else. This first use would likely have brought to mind beautiful, novel associations.

Now we can unthinkingly use it to describe anything, as a synonym for "boring", with few associations of bread. In time, perhaps, speakers may forget its etymology altogether. So it appears that metaphors and literal speech are simply two ends on a continuum: as new metaphors are repeated, they slide towards the literal end ***bit by bit*** — a process of lexicalisation (Wilson & Carston 2006, 11). A live metaphor requires an involved interpretive process; a dead one, like a regular word, is more straightforward.

Framing: This acknowledges the way metaphors can characterise one concept or entity in the light of another. This certainly does not apply to literal speech, but, as above, a metaphor's framing may fall anywhere on a continuum from non-existent — where literal speech lies — to powerful and unique. RT explains this in a Fregean manner: framing is imparted by how one reaches the final interpretation.

Productivity: This is the fact that metaphors allow hearers to dig as deep as they want, consistently finding further interpretations. Literal speech can also be productive, if only marginally. There are many interpretations of "Luke is nice"; they are just not interesting or diverse. This makes sense in the RT framework: a hearer has a certain amount of control over the effort they exert in interpretation. If they set a high expectation of effect, they can be expected to put a lot of effort in and draw many interpretations out.

Indeterminacy: This is the idea that metaphors often do not have a single correct interpretation. This is explained by RT, as discussed above, and also applies to literal speech. The phrase "You drive too fast" could equally implicate "I feel unsafe when you drive" or "You're going to get fined", with neither more correct than the other. The diversity and number of interpretations simply increases in metaphorical speech.

Therefore, as has been clearly expounded, metaphors differ from literal speech only in a matter of degree. They are not categorically distinct. RT is a more powerful theory than others, then, because it recognises and explains this fact. Other theories' discussions of the notable characteristics of metaphor are useful, but their failure to connect metaphor to other types of speech severely limits their importance within an efficient, comprehensive theory of language.

IV Emergent Properties and Conclusions

One area where the RT explanation seems tenuous is when the implicature of a metaphor does not seem to follow from even a modified version of the literal concept. For example (6):

(a) "Kirk is a snake."

might strongly implicate:

(7)(a) "Kirk is deceitful."

How does one arrive at this interpretation? The properties of the concept *SNAKE* do not include "deceitful", and neither would the modified concept *SNAKE**. Instead, Wilson and Carston (2006, p. 12) suggest the properties of the modified concept must be themselves treated as metaphors. Thus, a property of *SNAKE**, for example "attacks without warning", is modified to *ATTACKS WITHOUT WARNING**, with properties like "deceives", which then literally applies to Kirk and delivers the interpretation (7)(a). This is the *emergent property*: one that is not originally related to the original concept, only brought up by the interpretive process.

Romero and Soria (2014, p. 498) take issue with this approach, disapproving of the recursive process. In complex metaphors, they argue, repeatedly modifying concepts requires so much work that the effect-to-effort ratio depreciates. On the other hand, maybe it does not. Tendahl (2009, p. 95), for example, suggests that this process might not be as effortful as it seems. Romero and Soria (2014, p. 98) also question whether the leap between physical non-human properties could ever be connected to emotional human properties, but Wilson and Carston (2006, p. 22) provide a succinct explanation of how this connection is made.

It is important to recognise, moreover, that these, and other, challenges to RT are minor. Romero and Soria (2014, p. 490) accept the core principles of RT, only diverging in their explanation of more fringe cases. Tendahl (2009, p. 192) advocates a hybrid theory, combining RT with a cognitive linguistics approach. It is clear that RT has been ground-breaking in its explanation of vastly diverse types of speech, from literal to metaphorical, with a unitary principle, and it will certainly play an important role in developing an even better theory of language in the future.

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THE MEANINGS OF THE CANTONESE PARTICLE 啲 *ZEK1*: A NATURAL SEMANTIC METALANGUAGE STUDY

GIOVANNI C L MA *

CONTENTS

I INTRODUCTION

This paper investigates the meanings of the Cantonese particle *zek1* 啲 by using the Natural Semantic Metalanguage (NSM) approach proposed by Wierzbicka (eg, 1972) and Goddard (eg, 2011). I argue that Cantonese particles have meanings and the meanings can be captured by semantic analysis. This conclusion challenges the conventional L2 learner's understanding of Cantonese particles — that particles tend to have no meaning. The data is collected from elicitation with two Hong Kong Cantonese native speakers, and is presented as follows. A brief motivation of the present paper is introduced, followed by the relevant concepts of particles regarding Cantonese language and Cantonese particles. I will then provide a literature review on the works that have been done on Cantonese particles and explain what is NSM. Finally, I propose two explications for *zek1* 啲 in order to fill the gap of the literature and bring an insightful implication into the study of second language teaching.

II MOTIVATION

I tutored Cantonese to Australian English speakers when I was doing my undergraduate degree in Australia. During the lessons, I heard complaints from almost

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all of my students about Cantonese particles, as they did not think these particles were meaningful at all. Yet, as a native Cantonese speaker, my intuition told me that this claim was inaccurate. I also found that it was laborious for me to explain the meanings of the Cantonese particles to L2 learners due to the lack of word-by-word English translation. This personal experience motivated me to work on this topic.

III Particles

Particles, according to Goddard (2011, p. 162), are the small, morphologically inert words which are left over after nouns, pronouns, verbs, and the other major grammatical classes have been established. Their functions, as Bauer and Benedict (1997, p. 291) state, are to:

> Perform different kinds of speech-acts, such as requiring, reminding, refusing, advising, asserting, persuading, questioning, etc., and to express the speaker's emotional attitudes of surprise, outrage, passion, blaming, doubt, dissatisfaction, patience, impatience, conceit, hesitation, reluctance, etc., toward situations and his/her interlocutor's utterances.

This function is argued as similar to that expressed by intonation in the non-tonal languages such as English (Wakefield, 2010, p. 14). Therefore, we can conclude that Cantonese particles do not have direct counterparts in English (Leung, 2011, p. 246). The lack of direct counterparts in English explains why English speakers in particular, or learners of languages which do not have particles, think that Cantonese particles have no meaning and thus can be ignored. However, as Wierzbicka (2003, p. 341) argues, the meaning of particles "is crucial to the interaction mediated by speech ... if a learner of a language failed to master the meaning of its particles, their communicative competence would be drastically impaired." Hence, it is crucial for us to understand the different meanings of particles, especially for the purpose of learning a language that contains particle elements in it.

IV The Cantonese Language and Its Particles

Cantonese is a language that belongs to the Sinitic language family and is widely spoken in specific areas of China such as Canton, Hong Kong, Macao, and overseas such as Indonesia, Malaysia and Singapore (Bourgerie, Tong & James, 2010, p. 1). This paper only focuses on Hong Kong Cantonese, which is different to other varieties of Cantonese such as Malaysian Cantonese and Canton Cantonese (Bauer, 2016, p. 120).

Cantonese is rich in particles and its particles outnumber that of Mandarin (Luke, 1990, p. 1). The exact number of Cantonese particles varies according to

different studies, from 30 (Kwok, 1984) to 95 (Leung, 1992). Further, there has been a debate on whether the term 'Cantonese sentence-final particles' or 'Cantonese utterance particles' should be used. Following Matthews and Yip (2010), I adopt the latter view in this paper, since not every particle appears at the end of a sentence.

As defined by Leung (2011, p. 246), Cantonese particles "are bound morphemes that attach to the utterance." Cantonese speakers use them in everyday conversation with a high frequency. For example, Luke (1990, p. 11) reports that on average, a particle is used every 1.5 seconds in continuous talk. Native Cantonese speakers agree that by omitting particles in daily speech, the speech becomes unnatural which might cause an incomplete conveyance of the full meanings of speech (Matthews & Yip 2010, p. 389). Despite the importance of particles, Cantonese particles in particular, it is difficult for L2 learners to master the use of particles.

V Literature Review

Cantonese particles have always been at the centre of linguistic study. Luke (1990) dedicates a book-length study on Cantonese particles using Conversational Analysis, with a particular focus on three particles: *laa1* 啦, *lo3* 囉 and *wo3* 喔. Matthews and Yip (2011) offer a detailed account of Cantonese particles in terms of their pragmatic functions. Despite the innovative and insightful descriptions of Cantonese particles provided by these two studies, obscurity and circularity prevent L2 learners from fully understanding the meanings of Cantonese particles. For example, Matthews and Yip (2011) use technical terms, such as assertive, imperative and persuasive to categorise Cantonese particles. Luke (1990) also states one of the properties of *lo3* 囉 as "a device for portraying a state-of-affair as one whose sense and significance is dependent on some other, often previously mentioned, state-of-affairs." This kind of description is not only obscure but also involves circularity because the words used in the definition are not semantic primes. L2 learners have to find the definition of every word used in the definition above, which might end in an endless search. Besides, despite the fact that meanings of particles are highly dependent on context, the existing neglect of interactions between speaker and addressee also makes these definitions insufficient. These problems make learning Cantonese particles a laborious task for L2 Cantonese learners.

VI The Natural Semantic Metalanguage Approach

The Natural Semantic Metalanguage (NSM) approach is used in this paper to investigate the meanings of *zek1* 唧. This approach was inaugurated in Wierzbicka's book *Semantics Primitives* written in 1972, having its root in the Leibnizian quest for a "universal alphabet of human thoughts" (Grande, 1997, p. 14). It is defined as

"a decompositional system of meaning representation based on empirically established universal semantic primes, ie, simple indefinable meanings which appear to be present as word-meanings in all languages" (Goddard, 2010, p. 459). By using universal semantic primes, the NSM approach aims to avoid circularity and obscurity. Compared to other semantic approaches, including formal semantics and cognitive semantics which use technical terms, semantic jargon, logic symbols and image schemata, the opposition to circularity and obscurity is what marks the uniqueness of NSM. The use of technical terms is argued by NSM practitioners as terminological obscure (Goddard, 2002, p. 5).

Semantic primes are semantically minimal elements as they cannot be defined any further. In other words, they are irreducible. A good NSM analysis thus has explication formed by these semantic primes (Goddard, 2011, p. 65). These semantic primes are easier and simpler for us to understand than, for instance, the logic terms used by formal semanticists and the irreducible binary terms used in Componential Analysis. The number of semantic primes increases steadily since the initiate set is proposed to contain 14 primes (Wierzbicka, 1972). Recently, Goddard and Wierzbicka (2014) have stated that there are 65 recognised semantic primes. Despite the limited number of semantic primes, the choice of words is in fact more flexible than what we originally think because of the valency options and allolexy.

Goddard (2011, p. 69) gives an example for the valency options for the word *do*. Initially, the minimal frame of *do* is:

> someone did something

This is because *do* has an obligatory 'agent' (the doer) and complement. However, it is not the only sentence structure that can be used to write up an explication. We can, according to the semantic role of *do*, propose three other valency options:

> someone did something to someone else
> someone did something to something
> someone did something to something with something

The first and second examples show that *do* can take an optional 'patient' whereas the third one shows that *do* can take further optional 'instruments'.

Allolexy describes the phenomenon where "exponents of semantic primes may have variants forms (allolexes or allomorphs)" (Goddard, 2011, p. 67). For example, 'I/me' is one type of positional allolexy. Whether we should use 'I' or 'me' depends on the position of this prime in a sentence according to language-specific rules of English, ie, whether it is accusative or nominative (Goddard, 2011, p. 68). Allolexy, alongside valency options, allow NSM protectionists to be flexible when they write up an explication as well as to ensure readability.

In order to avoid circularity and obscurity in semantic analysis, NSM not only requires semantic primes, but also "a mini syntax", defined as "certain patterns of primes found universally" (Goddard, 2011, p.69) For example, it is hypothesised that one could put primes such as 'someone', 'something', 'say', 'bad', and 'you' in "someone said something bad about you" in any language (Goddard, 2011, p. 69).

The NSM approach is powerful in explaining particles because NSM explication is written from the speaker's point of view (Wakefield, 2011, pp. 75-76). Leung (2011, p. 254) also argues that the interaction between the speaker and the addressee plays a crucial role in deciding the meanings, "therefore references to 'I' and 'you', two semantic primes, are necessary." Because of the mentioned advantages, together with Leung's research (2011) which studies the Cantonese sentence-final *laa1* 啦 with NSM approach, I decided to adopt the same theoretical framework for this paper.

VII Methodology

Three recorded conversations from two native Cantonese speakers during an elicitation session are used as the main source of data for this research. During the conversations, the Cantonese particle *zek1* 唧 was used — they were asked to create three scenarios and the according conversations together. They are native Cantonese speakers who study at a university in Australia. The data is presented in interlinear glosses, showing the traditional Cantonese characters, the romanticised phonemes of the characters (according to *jyutping,* the romanisation system for Cantonese proposed by The Linguistics Society of Hong Kong), the morpheme-by-morpheme translations, and the English free translations, from the top to the bottom.

The NSM explications are written using English semantic primes because one of the outcomes of this paper is to provide a readable account to L2 Cantonese learners whose native language is generally English.

VIII The NSM Explications of *zek1* 唧 and Discussion

The following are the NSM explications of *zek1* 唧:

[A] Semantic explication of Cantonese *zek1* (where X says *zek1* to Y in examples (1) and (2):

> Someone X says this because
> X did/had something
> Y thinks X did something many times / had many of this 'something'
> X thinks he (X) did not do this 'something' many times / had many of this something
> X knows Y feels bad

X wants Y to feel good
X wants to say to Y what he (X) did / had was not many

[B] Semantic explication of Cantonese *zek1* (where X says *zek1* to Y in example (3)):

X says this because
Y feels bad because X said/did something bad
X wants to say to Y what he said was not true
X wants to say to Y what he did was not bad
X knows Y feels bad
X wants Y to feel good

I will then discuss explication [A] with two examples. The first example is a conversation between X and Y, two young men.

Example (1):

Y:	你	就	好	啦，		
	nei5	zau6	ho2	laa1		
	2-SG	then	good	PTC		
	‘How lucky you were!					
	之前	有	咁多	日	假。	
	zi1cin4	yau5	gam2do1	jat6	gaa3	
	before	have	so-many	day	holiday	
	You had so many holidays.’					
X:	一個	禮拜	啫!	都	唔	多。
	jat1go3	lai5baai3	zek1	dou1	m4	do1
	one-CLF	week	PTC	all	NEG	many
	‘One week only. It’s not that much at all.’					

The second example is a conversation between X and Y. Y is a female teenager and X is a male teenager. They are a couple.

Example (2):

Y:	你	個	衰人，	去	酒吧	識	女仔?
	nei5	go3	seoi1jan4	heoi3	zau2baa1	sik1	neoi5zai2
	2-SING	CLF	bad-person	go	bar	know	female-boy

'You bastard, you went to the bar and flirted with girls?'

X:	一次	咁	多	啲，	原諒	我	啦！
	jat1ci3	gam3	do1	zek1	jyun4loeng6	ngo5	laa1
	one-time	so	many	PTC	forgive	me	PTC

'Just one time, please forgive me.'

Y:	一次	不一忠，	百次	不一用！
	jat1ci3	bat1zung1	baak3ci3	bat1jung6
	one-time	no-royalty	hundred-time	no-use

'For trust not him that hath once broken faith.'

In example (1), Y is jealous of X because Y thinks X had many holidays (component (a)). X replies to Y by saying "one week only", "一個禮拜啲 jat1go3 lai5baai3 zek1" to show that he does not think that the holidays he had were many (component (c)). Compare this to the definition of *zek1* 啲 given by Matthews and Yip (2011, p. 408): "[it] serves to play down an idea, typically a quantity or amount, meaning 'only' or 'just'," to which my explication shows partial agreement. Yet, their definition fails in capturing the interaction between the speaker and the addressee, that is, the addressee's attitude (components (b), (d) and (e)). Hence, it also overlooks the speaker's other intention, that is, trying to comfort the addressee by telling him/her that he did not do / have many 'something' (component (f)). Without considering these aspects, the meanings of *zek1* 啲 cannot be fully captured and understood. These aspects also give rise to a difference between *zek1* 啲 and the Cantonese equivalent of the English word 'only', 剩係 *zing6hai6*.

In example (2), Y knew that X had flirted with girls in a bar and therefore she felt betrayed by him (component (a), (b) and (d)). X's use of *zek1* 啲 is similar to that in example (1). X wanted to tell his girlfriend Y that he had done this one time 'only' and that it is not a big deal (components (c) and (f)) and hoped that it could make Y feel better (component (e)).

The interesting point that needs to be addressed is that quite often Cantonese speakers use *zek1* 啲 in their speech even if they have only done something once. This is the case in example (2). To most of the men, flirting with girls in bars may not be a serious problem and having done it once is completely acceptable. However,

to their girlfriends, even flirting once with other girls is not acceptable. To link this use of *zek1* 啲 to Matthews and Yip's definition, it is also a kind of "play down", but it is not about the amount but rather the importance of an event.

I will now discuss explication [B] with the example below:

Example (3):

Y:	你	傻	㗎？
	nei5	so4	gaa4
	2-SG	silly	PTC
	'Are you nuts?		

話	你	女－朋友	同	阿 Ken	一齊？
waa6	nei5	neoi5pang4jau5	tung4	aa1Ken	jat1cai4
say	2-POSS	female-friend	with	Ken	together
Did you say your girlfriend is dating Ken?'					

X:	講－笑	啲！
	gong2siu3	zek1
	speak-laugh	PTC
	'Just kidding!'	

Y:	邊個	得－閒	同	你	講－笑？
	bin1go3	dak1haan4	tung4	nei5	gong2siu3
	who	have-free.time	with	2-SG	speak-laugh
	'I don't have time for you to joke around.'				

In this conversation, Y is a friend of X's girlfriend. X's suspicion that his girlfriend is dating Ken (component (a)) frustrates Y (component (d)), so X says, "just kidding" to Y to show that what he said is not true (component (b)) and therefore is trying to ease the tension between him and Y (component (e)). That may just be purely a joke, or maybe not. We can consider this use as a kind of "play down" too. But it is a different kind of "play down".

The second explication is in fact similar to the first explication. However, the difference between the two explications lies in whether what someone did/said/had is measurable or not. As in example (3), it was not because X said that his girlfriend was dating Ken many times that made Y frustrated, but rather the content of what X said and its degree of seriousness. The use of *zek1* 啲 in example (3) "plays down" the degree of seriousness by declining it truthfulness (component (b)).

In order to justify the irreplaceability of the meanings of *zek1* 唧, another Cantonese particle, *gaa3* 㗎 is used to test how the meaning of the sentence is changed. According to Leung (2013, p. 9), the semantic explication of *gaa3* 㗎 is:

> it is good if you know this.

Example (4) (Leung, 2013, p. 9):[1]

X:	唔	可以	咁一樣	㗎。
	m4	ho2ji5	gam2joeng6	gaa3
	NEG	can	like-this	PTC

'(You) can't be like this gaa3.' / '(You) can't do that gaa3.'

If we replace *zek1* 唧 with *gaa3* 㗎 in example (1), it becomes:

Example (5):

Y:	你	就	好	啦，		
	nei5	zau6	ho2	laa1		
	2-SG	then	good	PTC		
	'How lucky you were!					
	之前	有	咁多	日	假。	
	zi1cin4	yau5	gam2do1	jat6	gaa3	
	before	have	so-many	day	holiday	
	You had so many holidays.'					
X:	#一個	禮拜	㗎!	都	唔	多。
	jat1go3	lai5baai3	zek1	dou1	m4	do1
	one	week	PT	all	NEG	many

'#One week [gaa3]. It's not much at all.'

If *gaa3* 㗎 is used in the above example instead of *zek1* 唧, the sentence becomes unnatural and semantically ill-formed within this context. This is because X's intention of saying this sentence is no longer telling Y that his holiday is not much, but rather how good it is if Y knows that X has one-week holidays. What X says also implies that X acknowledges that one-week holidays are long. This change does not make sense in the context of this conversation because it contrasts with what X says

[1] I have slightly changed the gloss to ensure that the glossing style is coherent in this study.

later: "they are not many at all." If Y says to X, "Wow, your holiday was long, wasn't it?", X's response "Yes! I had one-week holidays [*gaa3*]" would make sense because by saying this X means, "Yes, the holiday was indeed long, and it is good if you know it" because it reinforces Y's assumption that X's holiday is long. Therefore, not only do all particles in Cantonese have meaning, but the meaning of each is unique and irreplaceable in a given context.

Two explications of the Cantonese particle *zek1* 啲 are proposed in this study. The study adds further value to the research area of Cantonese particles, given that no work has been done on investigating *zek1* 啲 using the NSM approach. As with other NSM analyses, the explications in this paper are constituted by semantic primes. Examining the explications in this research demonstrates that Cantonese particles in fact have meaning. More importantly, their meanings are contextually determined, based on the interaction between the speaker(s) and the addressee(s). Without particles, the communication between Cantonese speakers is unnatural, or even fails to deliver its effectiveness. L2 Cantonese learners could also benefit from the NSM explications proposed in this paper, because the meanings of *zek1* 啲 as revealed by semantic primes are easier for them to understand.

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Interlinear Glosses

2	Second Person
CLF	Classifier
NEG	Negative/Negation
POS	Possessive
PTC	Particle
SG	Singular

AN ANALYSIS OF MOTION VERBS IN HINDI

Romi Hill,* Tiger Liu**
and My Ngoc Tran†

Contents

I Introduction

The Max Planck Institute for Psycholinguistics (MPIP) offers a series of resources to be used in the examination of the countless typological features of the world's languages. This study was conducted for that purpose, looking into the syntax and semantics of motion verbs and motion predication used in Hindi, an Indo-Aryan language spoken in India.

A brief introduction will be made to both the typological properties of motion verbs, as well as the Hindi language itself, discussing and reviewing current literature and our current understandings of both.

Following will be a description of the methodology applied in this research, including information on our native-speaker informant, the data collection process, and a brief discussion marking potentially dissatisfactory elements to the study.

A critical and in-depth analysis of the data will make up the bulk of this study, with the final section concluding our research and relating our conclusions to the introductory basis of Hindi and motion verbs.

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II An Introduction to Motion Verbs

Figuring out when, where, how, and to whom an action occurs in the context of automatic responses is a central task to the natural processing of language (Hautli-Janisz, 2014). The study of verbs that denote changes in posture and location, either in causative or non-causative ways, is therefore essential for language learners when it comes to organising their perception of movement.

The way in which verbs encode for directed motion and manner vary across languages. According to Zubizarreta (2007, pp. 317-318), in Italian, for example, verbs encode the two features simultaneously rather than independently. Contrastively, Korean motion verbs independently denote activity, and hence do not encode for directed motion (Zubizarreta, 2007). Beyond their syntactic variations, both Italian and Korean, and other such languages, exhibit a semantic link between motion verbs and motion phrases, in that the path of a phrase is modified by its verb (Zubizarreta, 2007).

We can observe variation in many languages' syntactic obligations for motion verbs. In English for example, motion verbs are allowed to occur in different syntactic frames (Walkin & Hill, 1995). Path phrases in English are also able to expand the semantic profile of verbs, in contrast to languages such as Hindi where path phrases are subject to the compatibility requirements of the verb (Narasimhan, 2003).

In addition, the deictic reference of motion relative to a speaker can affect the constraints on our verbs (Narasimhan, 2003). Conclusively, cross-linguistic variations in morphological encoding, semantic references, and the existence of the speaker themselves all contribute to the complex rules and obligations placed upon the motion of verbs of a language, and Hindi is no exception.

III An Introduction to Hindi

Hindi is an Indo-Aryan (Indic) language, with its roots lying in the Indo-European family of languages ("A Guide to Hindi", n.d). According to Hautli-Janisz (2014, p. 3), Hindi is a SOV language, and is written in the Devanagari script, from left to right. Along with English, Hindi is an official language in India. It is one of the most widely spoken languages in the world, with data showing over 400 million first-language speakers and 100 million second-language speakers in 2017 ("A Guide to Hindi", n.d).

Having been derived from several languages, Hindi's grammar boasts semantic and syntactic-morphological complexity. As Poornima and Koenig (2009, p. 282) suggested, this complexity is evidenced by lexical features such as the marking of gender in its nouns, from Sanskrit, as well as several contextually-specific rules. Take, for example, the requirement for adjective, verb, and noun agreement in the

use of post-positional constructions, or the requirement for full verb conjugation only being applicable to present and future constructions (Narasimhan, 2003).

Hindi uses complex predicates of motion and path, using two verbal heads in a single clause to encode for motion (Hautli-Janisz, 2014). From a typological perspective, this employment demonstrates that Hindi belongs to the group of equipollently-framed languages, where both the manner and path of a motion verb are encoded on equivalent grammatical terms, with no subordination of either (Slobin 2004, 2005).

In the interest of better understanding motion verbs, the complexity of Hindi's verb constructions lends itself well to the study of motion, manner, and pathway encoding.

IV Methodology

The informant for our study is a 47 year old, female, first-language speaker of Hindi. She grew up speaking Hindi in New Delhi, the urban capital of India, and was exposed to both Hindi and English in the academic and social context. Since moving to Australia in 2001, she has spoken English in a much greater capacity, but maintains her daily usage of Hindi in her social spheres and in her family life.

Our data collection process primarily followed MPIP's manual on 'Motion Verbs stimulus'. We instructed our informant to watch the 96 included clips, which we categorised as either 'come/go clips', 'enter/exit clips', or 'manner clips'. We asked her to briefly describe what was happening in each clip, with the opportunity to modify or correct her answers if she so desired. Her answers were recorded and documented using the same laptop computer displaying the clips, with the built-in webcam and microphones.

Though we adhered to MPIP's guidelines as much as possible, a consideration of task constraints and speaker bias led to some slight deviations. Given the brief and small-scale nature of this task, we only collected data from one informant rather than three. Also, to prevent primer bias from influencing our informant's responses, the name of every clip was changed to a generic name, such as 'clip 1', as opposed to the given labels of 'ComeGoPath1.avi'. Those labels were chosen to fit the Wilkins Questionnaire, which was not relevant to our study.

Furthermore, we did not 'fish' for answers as the manual had instructed. During the collection process, we found that the informant's intuitive answers would offer the most syntactically accurate sentence, with our data collector noticing that the same verbs of 'come' (*aa*) and 'go' (*jaa*) were used consistently with post-positional adjuncts denoting pathway and manner. Accordingly, he decided not to suggest framing the description with the proposed verbs of 'enter/exit', 'go onto/go off', or

'enter/ascend/go under'. Analysis is then not only focused on motion *verbs*, but also on how different *postpositional adjuncts* can used in motion predication.

Based on the slight, unexpected shift in focus during the data collection, our aims became more aligned with understanding the *manner* in which motion is described, rather than explore the semantics of a variety of motion verbs. This also minimised the influences of verbal selectional restrictions and conjugations, and allowed for comparisons between the postpositional adjuncts in the data to be easily made.

V Issues with the Study

During the data collection and analysis phases of this study, we found instances where unaccounted variables could bias our data. The first issue we found lay within the nature of the videos themselves, being both abstract and short. Their nature made for a degree of semantic ambiguity, which both confused the informant and gave them difficulty in choosing as accurate a description as possible. This was compounded by the ordering of the data set frequently presenting two consecutive, minimally-different scenarios. Crucially, the isolated context of each video, to the end of controlling for pragmatic functions, was compromised. These factors resulted in our informant asking, in three instances, to revise a previous answer after seeing another similar scenario. The final correction for each case was used, where relevant, in our analysis.

An element of difficulty presented itself in completing our analysis of Hindi, in that we often found ourselves comparing Hindi's verbs to their English counterparts. This was due to the underlying assumptions that verb function would be similar in the data-set language, Hindi as with the language of the researchers, English (Slobin, 2004). Critically, this could mislead the criticality and accuracy of the analysis. In an effort to control for this bias, we attempted to focus mostly on the analysis of extra information and the ways in which it was encoded, whilst minimising the assumptions we made about grammatical and argument-based functions in the language.

VI Data Analysis

The videos are divided into three sets: come/go, enter/exit, and manner. As discussed in the methodology, our analysis is not only focused on eliciting different motions verbs, but also on the adjuncts associated with a contained set of motion verbs. The numbering of examples in this paper corresponds to the MPI elicitation material and not to the order in which they have appeared below.

A *Come/Go*

Example (1):

gaind	dhubba	ke	taraph	jaa	rah-i	hai
ball	box	GEN	side	go	PROG-M	3.SG.AUX.EXIST

'The ball is going towards the box.'

(1) is a simple example of how *jaa* 'go' is used in a sentence involving motion. As expected, this sentence follows SOV word order. *Gaind* 'ball' is the subject, *dhubba* 'box' is the object, *ke taraph* 'towards' is the postposition, and the verb phrase consists of *jaa* 'go' - the lexical verb, *rahi* - the progressive marker, and *hai* - the auxiliary verb.

Example (3):

gaind	mere	taraph	aa	rah-i	hai
ball	1SG.OBJ.GEN	side	come	PROG-M	3SG.AUX.EXIST

'The ball is coming towards me.'

Compare (1) to a standard sentence containing *aa* 'come' (3). (1) and (3) are almost identical. It appears that *jaa* is used when the ball is moving *away* from the informant, and *aa* is used when the ball is moving *toward* the informant. It's interesting to note that the goal in both sentences is indicated by 'GEN side', whether the genitive marker is a free morpheme or encoded into the object pronoun.

Example (2):

gaind	hari	ghas	pe	ghan
ball	green	grass	on	cube

sai	mere	taraph	aa	rah-	hai
from	1SG.OBJ.GEN	side	come	PROG-M	3SG.AUX.EXIST

'The ball on the green grass is coming from the cube towards me.'

(2) is in fact very similar to (3), where (2) contains additional adjuncts *hari ghas pe* and *ghan sai.* In (2) and (3), the ball's path is almost identical, with (2) also specifying a sources: a cube. The absence of a cube in (3) caused the informant to drop the directional adjunct indicating the source: *ghan sai* 'from the cube'.

This implies that Hindi uses motion verbs relative to the *goal* of the subject entity, and not the source. The source does not have to be specified to use *aa* 'come', but the goal must be the direction of the speaker, indicating that Hindi uses egocentric spatial awareness with regards to *aa* 'come'. Additionally, the locative adjunct *hari ghas pe* has been dropped in (3), likely because she had already uttered that phrase immediately prior.

Example (4):

bohot	dire~dire	gaind	jaa	rah-i	hai
very	slowly.REP	ball	go	PROG-M	3SG.AUX.EXIST

'The ball is going very slowly.'

Another interesting example is (4), which illustrates the use of an adjectival adjunct describing manner in conjunction with motion verbs. The video for (4) depicts the ball moving towards its goal, a cube, slowly relative to other clips. The clip stops before the ball reaches its goal. As the ball is moving 'away' from the informant, she uses *jaa* 'go', as expected. What was surprising, however, is that the goal was not acknowledged at all. Instead, she talked about the *manner* in which the ball was moving; *bohot dire dire.*

Furthermore, she also specifically emphasised the manner through her use of reduplication, *dire dire*, and through the pre-head adverbial intensifier *bohot.* A possible explanation for this construction is that the ball never reached its goal; the video ends before the ball reaches the cube. This could imply that positional adverbs specifying the goal can only be used with motion verbs like *jaa* 'go' once the subject entity has *reached* its goal, such as *dhubba ke taraph* in (1).

The previous sentences are relatively straightforward videos, intended to elicit the broad semantic space of *jaa* 'go' and *aa* 'come'. We have seen that *aa* 'come' is used when the subject entity's goal is the speaker, and *jaa* 'go' is used when the ball is moving directly away from the speaker. With this path, *jaa* 'come' could be used regardless of whether there is a discernible goal or not. However, there are still some scenarios we have not established. For example, we cannot predict what verb is used when there is no discernible source or goal. (6) may provide some clues.

Example (6):

hari	ghas	mein	khali	gaind
green	grass	in	black	ball

nazur	aa	rah-i	hai
see	come	PROG-M	3SG.AUX.EXIST

'The black ball is being seen in the green grass.'

The video for (6) consists of a ball moving from left to right across green grass, where there is no tangible source or goal. The ball is moving from left to right to avoid the egocentric references of *aa* 'come'. Given our current analysis, it is difficult to guess whether she will use *aa* 'come' or *jaa* 'go'. Our informant uses the phrase *nazur aa rahi hai* which can be translated to 'coming into sight'. Though our informant still uses the motion verb *aa* 'come', it appears that it is not used in the same way as it had been in (2) and (3). Instead, *nazur aa* could be an example of a *compound verb,* which Hindi is known for having (Hook, 1975). This suggests that compound verbs could be used in place of a single motion verb, motivated by the fact that there is no distinguishable goal or source.

Example (7):

gaind	dhubb-e	sai	belen	ke	taraph
ball	box-PL	from	cylinder	GEN	side

jaa	rah-i	hai	aur	rook	jati	hai
go	PROG-M	is	and	stop	PRES	3SG.AUX.EXIST

'The ball is going from the box towards the cylinder, and stops.'

Another scenario we have not established is whether *jaa* 'go' or *aa* 'come' should be used when the ball is both on a path towards the speaker, and stops at a tangible goal. This is established in (7).

The video consists of a ball moving away from a box, towards a cylinder, and the ball is moving towards the speaker. In this scenario, our informant chose to use *jaa.* This implies that the definitive goal takes priority over the direction of the path. If Hindi gave preference to the direction of the path, *aa* would be used instead.

This is not to say that the direction of the path is not important. Let us consider the use of *rook* 'stop'. This is of interest as the ball does not stop, actually reaching its goal of the cylinder. A possible explanation is that the ball 'stops' relative to its

path towards the speaker. The ball doesn't stop before it reaches its goal; it stops before it reaches the speaker. This highlights the interactions between the components which make up a *path*: the source and goal determines the choice between *aa* and *jaa*, but egocentricity is still specified when relevant.

Her use of tense is interesting too. She uses the present tense for *rook (jati hai)*, and the present progressive for *jaa (rahi hai)*. This indicates that motion verbs preference the present progressive, whereas if there is a lack of motion, the verb does not specify aspect.

Example (8):

gaind	ke	disha	badal	gaye	hai
ball	GEN	direction	change	PST	3SG.AUX.EXIST

'The direction of the ball changed.'

For (8), the ball starts next to a cube in the top left of the screen, and moves diagonally downwards to the right.

This sentence does not use motion verbs at all, and the ball's direction does not change during the video. It appears that she is describing the direction change relative to previous videos, as the verb phrase *badal gaye hai* is in the past tense. It is also interesting to note that past tense is in the same syntactic distribution of the progressive marker *rahi*.

These set of videos elicit the use of come and go in Hindi. We see that *jaa* 'go' is used when an entity is moving away from the speaker, or the subject entity has a tangible goal. If there is no tangible goal, and the ball is moving towards the speaker, *aa* 'come' will be used. More complicated verbs can be seen in use outside of these scenarios, such as in (6) and (8).

B *Enter/Exit*

The second set of videos are intended to elicit the difference between enter and exit verbs. As discussed in the Issues section, we modified the intention of the videos and focused on the use of the postpositional adjunct heads, *undar* 'inside' and *bahar* 'outside', in conjunction with the motion verbs *jaa* 'go' and *aa* 'come'.

The first two sentences of our analysis show the standard use of *undar* 'inside' and *bahar* 'outside'.

Example (9):

gaind	vrrt	ke	undar	jaa	rah-i	hai
ball	circle	GEN	inside	go	PROG-M	3SG.AUX.EXIST

'The ball is going inside the circle.'

This video involves a ball rolling from the outside to the inside of a circle. The ball moves from right to left. Because the ball has a tangible goal, the inside of the circle, she uses the verb *jaa* 'go', as expected.

Example (15):

gaind	vrrt	sai	bahar	jaa	rah-i	hai
ball	circle	from	outside	go	PROG-M	3SG.AUX.EXIST

'The ball is going out of the circle.'

(15) is a standard sentence involving *bahar* 'outside'. It is almost identical to (9), where *ke undar* is used instead of *sai bahar*:

This video involves a ball rolling from the inside to the outside of a circle, completely enclosed in a larger rectangle. It's interesting to see that the sentence does not mention the rectangle at all. This seems to imply that the use of *undar* 'inside' and *bahar* 'outside' described the *change* in the subject entity's path once it had arrived at the goal. In this instance, the ball's movement did not change environments in relation to the rectangle, so the rectangle is not mentioned.

So far, we have seen postpositional adjunct heads which specify the source and goal of the path, and the direction of the path - relative to the speaker - is encoded in the verb; *jaa* and *aa*.

Example (16):

golee	arddh	vrrt	sai	nikhal	rah-i	hai
bullet	half	circle	from	come.out	PROG-M	3SG.AUX.EXIST

'The bullet is coming out of the half-circle.'

Example (17):

arddh	vrrt	golee	ke
half	circle	bullet	GEN

taraph	jaa	rah-a	hai
side	go	PROG-F	3SG.AUX.EXIST

'The half-circle is going towards the bullet.'

The comparison between (16) and (17) yield interesting results. The videos for these sentences are almost identical, where the only difference is the moving subject entity. In the video for (16), the bullet is moving into a half circle, and the video for (17) shows a half circle moving over a bullet.

In (17), the same verbal phrase seen previously, *jaa rahi hai,* is used when the moving subject entity encloses another entity. The moving subject entity is seen for the entire duration of its path, as opposed to (16) where the moving subject entity is enclosed for part of the clip. In the occurrence of (16), she uses a different motion verb: *nikhal* 'come out'.

In English, the verb 'come out' describes a moving entity being enclosed for a partial duration of its path, and it always reaches its goal outside the enclosing entity. In Hindi, however, it appears that *nikal* 'come out' does not need specify the goal, focusing instead on the fact that the path is, at times, enclosed in another entity. This implies that *nikal* 'come out' encodes the manner of the motion rather than the specific *source* or *goal* of the path.

Example (18):

gaind	vrrt	sai	bahar	jaa	rah-i	hai
ball	circle	from	outside	go	PROG-M	3SG.AUX.EXIST

hari	medhan	pe.
green	oval	on

'The ball is going out of the circle, on the green oval.'

(18) is almost identical to (15), with the only difference being the addition of the locative adjunct *hari medhan pe*. There is no grammatical or syntactic reason as to why she would use *hari medhan pe* 'on the green oval', so we believe she simply made an arbitrary semantic change from *hari ghas pe* 'on the green grass'. It's interesting that she specifies a green oval in (18), considering she does not mention

anything about the ball's path's surface in (15). This could be because she does want to repeat herself from (15), or because the presence of the rectangle in (15) could have realigned the focus of her response.

The second set of videos reinforce our findings from the come/go videos, where *jaa* 'go' is used for paths with tangible goals and *aa* 'come' is used for paths towards the speaker. This set establishes the scenarios in which the adjuncts *undar* 'inside' and *bahar* 'outside' can occur. We have seen that these adjuncts are used only when there is a change during the subject entity's path, such as in (15). Additionally, we have found another verb which can be used to encode the manner of the motion, such as *nikal* in (16).

C *Manner*

These videos are intended to determine how the manner of a verb is encoded. This set can also help us establish whether Hindi is satellite-framed, verb-framed, or a combination of both as an equipollently-framed language.

Example (19):

gaind uchal~uchal
ball jump~REP
'Ball is bouncing

ke plate pur jaa rah-i hai
to plate top go PROG-M 3SG.AUX.EXIST
to the top of the plate.'

Example (20):

gaind uchal~uchal ke vrrt ke
ball jump~REP GEN circle to

undar jaa rah-i hai
inside go PROG-M 3SG.AUX
'Ball is bouncing into the circle.'

Example (22):

hari	ghas	pur	gaind	uchal	ke	mere
green	grass	on	ball	jump	GEN	1SG.OBJ.GEN

pas	aa	rah-i	hai
near	come	PROG-M	3SG.AUX.EXIST

'The ball is jumping closer to me on the green grass.'

The structure of these sentences follows the expectations and hypotheses deduced from the previous data.

For example, the videos for (19), (20), and (22) have a discernible goal. The plate in (19) and a circle in (20) are tangible goals, so the informant uses *jaa* 'go', and *aa* 'come' is used for egocentricity in (22). This is consistent with the use of *jaa* 'go' and *aa* 'come' established in the first set of videos. Additionally, she uses *undar* 'inside' in (20), to describe the act of 'entering' the circle, similar to the sentences from the enter/exit videos.

(19) and (20) contain reduplication of the verb *uchal* 'jump'. This use of reduplication converts the verb into an adverbial adjunct; *uchal uchal* 'bounce'. This suggests that both manner, in *uchal uchal*, and path, such as *jaa*, can be encoded in elements of the verb phrase. It could be inferred that path is of greater importance than manner, as the verb describing the path *jaa* is the main verb.

Example (21):

hari	ghas	ke	upar
green	grass	GEN	top

gaind	uchal	rah-i	hai
ball	jump	PROG-M	3SG.AUX.EXIST

'On the green grass, the ball is jumping.'

This is also further reinforced by (21). (21) uses the motion verb *uchal* 'jump' as the head of the verb phrase *uchal rahi hai*. The video shows a ball jumping across the screen from right to left, with no tangible source or goal. Because the ball does not follow the path implied by *jaa 'go'* or *aa 'come'*, the informant is comfortable with using a verb which encodes manner without mention of the path: *uchal*.

Interesting comparisons can be drawn between (21) and (6) from the come/go videos. The subject entity has a similar path in both sentences, with the difference

being the *manner* of the ball: jumping in (21) or rolling in (6). In both of these videos, the informant avoided using the typical constructions of the motion verbs *come/go,* instead using *nazur aa rahi hai* (two verbal heads) and *uchal rahi hai* (no motion verb).

The results of our analysis indicate that Hindi can encode both the *manner* and *path* of motion in verbs, and is therefore an equipollently-framed language. However, there is a preference for encoding the *path* of the subject entity. Further analysis on encoding *manner* in verbs would be required to make a conclusive statement.

VII Conclusion

As seen above, Hindi is restricted in the use of motion verbs. The analysis demonstrates that Hindi uses motion verbs primarily dependent on the goal of the subject entity; in other words, the source and goal determines the choice of motion verbs. Given this, we still find some motion verbs which are dependent upon *manner*, such as (16). English and other Germanic languages, in contrast, allow motion verbs to occur in different semantic-syntactic constructions, with fewer restrictions on the number of combinations of motion and paths that the sentence could take.

More nuanced analysis is required for examples with two verbs; (6), (7), (19), (20), (21), (22). There are two possibilities which can be drawn: Either there are two verb heads, in which two verbs can both equally be analysed as heads of the clause; or the two verbs have an auxiliary-subordination relationship. Given the limited information we have, we are unable to draw a fully-supported conclusion. There may be an auxiliary-subordination relationship, given that we see instances of prioritisation when it comes to choosing between manner and path. Conversely, we know that Hindi is an equipollently-framed language, and our data could show instances of dual verbal heads. More analysis and further research may shed greater light on what we have found.

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CUT AND BREAK VERBS IN MANDARIN CHINESE: A TYPOLOGICAL ANALYSIS

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Catherine Wen†

Contents

I Typological Property

Based on the research of Jürgen Bohnemeyer, Melissa Bowerman and Penelope Brown (2001), our group looked at the verbs of "cutting and breaking". Specifically, we examined how Mandarin Chinese described the "cutting" and "breaking" of objects when different instruments were used. It has been observed that across languages, there is much variation in the lexical classifications of events involving cutting and breaking (Pye, Loeb and Pao, 1995). For example, in English, the verb "break", can be used to describe any kind of object that is broken, no matter the instrument used to break it (Bohnemeyer, Bowerman and Brown, 2001, p. 90). In K'iche' Maya however, different verbs are used to describe various types of broken objects as there is not a general verb for "break".

The authors of the research elucidate four aims, of which we attempt to fulfil three. The first aim, to 'determine the extensions of the verbs' used to describe breaking/cutting, will be revealed progressively through analysis of our data and the discovery of patterns in verb use. The second aim of the research endeavours to establish whether certain cut/break verbs 'co-lexicalize manner of action, instrument, manner of state change, or type of object' (Bohnemeyer, Bowerman and Brown,

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2001, p. 90). For example, in English, we know that "hack" implies a somewhat furious or frantic action, co-lexicalising manner of action, while "stab" co-lexicalises a sharp instrument. Our own research will explore this second aim through discussion of resultative verb compounds (RVC) present in Mandarin (Chen, 2007, p. 273), and how these verb constructions do co-lexicalise manner of action, instrument, and manner of state change. Finally, our study will look at answering the fourth aim of the original research, looking at the verb argument structure of Mandarin in relation to cutting and breaking verbs.

II Mandarin Chinese

The language that we have chosen is Mandarin Chinese. The primary motivation for this was that all of us have a high level of proficiency in Mandarin, which would render analysis much easier, as our competency in Mandarin would enable us to directly examine the data without an over-reliance on translations wherein it may be harder to detect some of the nuances in the language. Beyond this, a more minor reason was because we were particularly interested in the semantic information encoded by different verb types, because verb constructions in Mandarin are rather complex.

Mandarin is a part of the Chinese language family, which is an independent branch of the Sino- Tibetan languages. In common usage, Mandarin denotes a "common language" or a "uniform standard" based on the Beijing dialect (Li and Thompson, 1989). This standard is known as Putonghua in China and a similar standard known as Guoyu was adopted in Taiwan in the early 50s. The term "Mandarin" in this report encompasses both terms. Today it is spoken in both these regions and serves as a lingua franca.

In the hope that we might obtain differing data from different speakers, we elected to have one participant from Mainland China and a second participant from Taiwan, knowing that there are minor lexical and syntactic differences between the two varieties. Speaker 1 is 56 years old and was born in Guangzhou, China. She grew up speaking Cantonese with her family and friends as it is the regional dialect. She considers herself a first language speaker of Mandarin as it was the medium of instruction in school, and continues to use Mandarin at work and has heavy exposure to Mandarin media via the news, WeChat, and online videos. Speaker 2 is 54 years old and was born in Hsinchu. She grew up speaking Hakka at home, then Mandarin once she commenced schooling. She also learnt Taiwanese as a child, and considers all three languages to be her first language, though she considers Mandarin to be her most proficient language and continues to use it in her everyday life.

III Methodology

For this study, we drew upon the "Cut and Break" field manual developed and made available by the Max Planck Institute for Psycholinguistics (MPI).

We used 47 clips (out of 61) as the stimulus.[1] The decision to use a subset was so that we would not be overwhelmed with data. Our selection of clips included all objects and all instruments, also covering clips that showed objects breaking spontaneously and actors opening objects.

For the data collection sessions, we used two separate mobile phones (iPhones) as video recording devices (one for backup). The session was laid out so that the language informant sat opposite the researcher at a table, and a laptop was placed in between them (angled more towards the informant) on the table. To cut down on recording time, we placed a sheet of paper with the two questions written upon it, so that the participant could refer to it after each video and be reminded of the questions if needed.

Before recording, the informant signed the consent form and was given a brief explanation of how the session would be conducted, namely that a series of clips would be shown and they would have to respond to the two questions:

- What did the agent do?
- What happened to the object?

In Mandarin this was: 他/她做了什么? (*tā/tā zuò le shén me*; lit:he/she did what?) and 这/那个东 西怎么了? (*zhè/nà gè dōng xī zěn me le*; lit: this/that thing what happened?)

After each clip was shown, the informant would answer (or be prompted to answer), then the next clip would be played, so on and so forth. Once every clip was shown, we concluded the session by explaining the purpose of the activity.

We did not strictly follow the protocol set out in the MPI materials, only asking the two main questions outlined above. This is partly because we wanted to keep the task simple as we only had two participants. Using only two questions meant we minimised the difference in procedure if we had follow-up questions based on their responses. Another reason is because we were unfamiliar with the grammatical technicalities of the procedure outlined in the MPI materials. If we had more time, we would familiarise ourselves with the relevant areas of syntax and lexical knowledge regarding verbs, in order to conduct a more in-depth and better-informed study. After reviewing the transcripts, we realised that Speaker 2 did not correctly recognise the object in Video 2 (V2). Similarly, in V11, she misidentified

[1] Speaker 1 was shown 49 clips whilst speaker 2 was shown 47 clips. This discrepancy is due to two clips (file number 53 and 54) which appeared to be missing from the folder link when the materials were downloaded so speaker 2 was not shown those clips. Subsequently Speaker 1's data for those two clips were excluded from the transcript.

what was happening. Strictly following the protocol outlined in the field manual, the videos should have been replayed both times.

IV Analysis

A *Cut and Break*

In English, cut and break (C&B) verbs are monomorphemic, meaning that they lexicalise both the causal action and resulting state of a C&B event (Chen, 2007). Mandarin is different in that it undergoes a productive process whereby C&B events are described using a resultative verb compound (RVC). The first verb (V1) encodes the action, whilst the second verb (V2) encodes the resultant state. For example, Video 5 perfectly encapsulates the nature of RVCs:

Example (5.1):

他	用	刀	在	砍	胡萝卜
tā	yòng	dāo	zài	kǎn	hú luó bo
he	use	knife	DUR	chop	carrot

'He uses a knife to chop the carrots.'

胡萝卜	砍	断	了	以后
hú luó bo	kǎn	duàn	le	yǐ hòu
carrot	chop	break	PFV	after

飞	到	到处	都	是
fēi	dào	dàochù	dōu	shì
fly	COV	everywhere	all	COP

'After the carrots were chopped, they went all over the place.'

Example (5.2):

他 在 砍 红萝卜
tā zài kǎn hóng luó bo
he DUR chop carrot
'He is chopping carrots.'

那 一 些 红萝卜
nà yī xiē hóng luó bo
that one PL carrot

断 了 很 多 块
duàn le hěn duō kuài
break PFV very many piece
'Those carrots broke into many pieces.'

When answering what the agent does (question 1), both speakers say *kǎn* 'chop', solely describing the action of the carrot being chopped. In answering what happens to the object (question 2), Speaker 1 (S1) uses *kan duan* 'chop-break' and describes the C&B event (action + resultant state), whereas Speaker 2 (S2) just says *duan* 'break', describing only the resultant state. Thus it can be seen that the two components of an RVC (V_1 and V_2) can be used on their own, but when doing so, they only capture one part of a C&B event.

Thanks to this compounding nature of C&B verbs in Mandarin, a state change that is entailed by a monomorphemic verb like *cut* or *break* in English is defeasible in Mandarin (Chen, 2007). In describing a partially snapped branch in Video 19, S2 only uses *zhe* 'snap', and negates the full C&B event *zhe duan* 'snap-break':

Example (19.2):

有 一 个 女 的
yǒu yī gè nǚ de
exist one CLF female POSS

在 折 一 根 树 枝 ,
zài zhé yī gēn shù zhī
DUR snap one CLF branch

但是	她	没有	把	它	完全	折	断
dàn shì	tā	méiyǒu	bǎ	tā	wán quán	zhé	duàn
but	she	NEG	BA	it	completely	snap	break

'There is a woman snapping a branch, but she did not snap it apart completely.'

The verb *zhe* 'snap' encodes the sub-event of cutting action, which implies but does not entail that the branch has fully snapped. In Mandarin, the lexicalisation of the resulting event is performed by an additional verb (V2), like *duan* 'break',, which confirms the actual state change.

There were differences between the speakers in how *qie* 'cut' seemed to co-lexicalise the instrument and manner. In 7.1 and 7.14, S1 uses *qie*, perhaps focusing more on the instrument being used, whereas S2 uses *ge* 'cut', a verb that encodes a back-and-forth cutting action. Chen describes *ge* as 'do cutting with a single blade or blade-like instrument slowly, duratively, back and forth' (2007, p. 278).

These differences may be attributed to Mandarin not having one overarching verb 'to cut' which encapsulates all events. Depending on the manner or instrument involved, a specific C&B verb is selected. This notion is shown in this example:

Example (41.2):

对	,	那	个	是	砍	,	不	是	切
duì		nà	gè	shì	kǎn		bù	shì	qiè
yes		that	one	COP	chop		NEG	COP	cut

Yes, that's chopping, not cutting.

S2 emphasises that *kan* 'chop' (or 'hack') is more appropriate. This may be for two reasons. Firstly, *kan* encodes a manner of cutting that is forceful. This is congruent with Chen's analysis that *kan* is an action verb that encodes 'do cutting with a single blade or blade-like instrument with force' (Chen, 2007, p. 278). In Video 4, S2 uses kan to describe a furious manner of cutting:

Example (4.2):

他	在	砍	一	块	布
tā	zài	kǎn	yī	kuài	bù
he	DUR	chop	one	CLF	cloth

'He is chopping a piece of cloth.'

When selecting an action verb, the manner of the action tends to override instrument. So despite a knife being used (which would typically elicit *qie*), *kan* is used instead.

Secondly, *kan* may co-lexicalise the the instrument, namely a machete. In other clips where a machete is used (CF3 & 6), *kan* also appears. Likewise, *kan* co-lexicalises for axe, as seen in Video 8, 31 & 38. We could say then, that *kan* co-lexicalises for larger, bulkier instruments. In contrast, *qie* would be more appropriate for a smaller instrument like a knife and is typically for a less forceful manner of action.

Interestingly, in Video 35 and 41, S1 uses *qie* 'cut' to describe a machete chopping a carrot and watermelon respectively. She does not make a distinction with *kan* as S2 does. Given this is only a preliminary analysis, it would be interesting to see whether the encoding of C&B events might be subjective between Mandarin speakers. In fact, Chen's analysis found that there are nine 'cutting with single blade' verbs that could be used to describe the action (2007). This may help explain why there were differences in our speakers verb choices.

Moving onto a brief discussion of result verbs (V2), Chen found that they can be differentiated on the basis of the object's degree of being broken. Since result verbs specify the outcome of a C&B event, our data also found that they co-lexicalise the manner of state change:

Example (25.1):

木	棍	给	砸	碎	了
mù	gùn	gěi	zá	suì	le
wood	stick	CAUS	smash	shatter	PFV

The stick has been smashed apart.

Example (25.2):

那	根	树枝	被	砍	断	了	,
nà	gēn	shù zhī	bèi	kǎn	duàn	le	
that	CLF	branch	PASS	chop	break	PFV	

砍	碎	了
kǎn	suì	le
chop	shatter	PFV

'That branch has been chopped apart, shattered.'

Example (33.1):

这	个	瓦罐	给	用	锤子
zhè	gè	wǎ guàn	gěi	yòng	chuí zi
this	CLF	jar	CAUS	use	hammer

砸	碎	了
zá	suì	le
smash	shatter	PFV

'This jar has been shattered by the hammer.'

Example (33.2):

那	个	花瓶	碎	了
nà	gè	huāpíng	suì	le
that	CLF	vase	shatter	PFV

'That vase smashed apart.'

Both speakers use *sui*, which denote 'shatter' or 'be-in-pieces'. The choice of a result verb does not depend on the C&B action. In CF31 and 39, both speakers use *sui* for the result verb (V2), but for the action verb (V1), S1 uses *za* 'smash' and S2 uses *kan* 'chop'. For our data, *sui* also co-lexicalised the instrument hammer.

B *Cut and Break — Kai*

Following on from the above discussion on RVCs, we turn to examining the verb *kai* in more detail. As a verb itself, it means 'to open', but when *kai* is the result verb (V2) in an RVC and thus encodes the state change of an object, *kai* can mean 'be separate' or 'be apart'. Uses of *kai* in an RVC construction by our participants include:

Example (1.1):

她	把	一	块	画布	撕	开	了
tā	bǎ	yī	kuài	huà bù	sī	kāi	le
she	BA	one	CLF	cloth	tear	open	PFV

'She tore apart a piece of cloth.'

Example (8.1):

绳子	断	开	两	节
sheng zi	duàn	kāi	liǎng	jié
rope	break	open	two	piece

'The rope broke into two pieces.'

Example (20.1):

他	用	水果	刀	把	胡萝卜	切	开
tā	yòng	shuǐ guǒ	dāo	bǎ	hú luó bo	qiè	kāi
he	use	fruit	knife	BA	carrot	cut	open

分	开	两	节
fēn	kāi	liǎng	jié
separate	open	two	piece

'He used a fruit knife to cut the carrot, separating it into two pieces.'

In these above examples, the objects all in some way or another are separated or pull apart. In the first example, a cloth is being torn apart into two separate pieces, indicated by the RVC construction *si-kai* 'to rip/tear usually with hands-be open/be separate'. *Si* co-lexicalises the instrument used in the action, denoting the action involves use of the hands, while *kai* describes the resulting state of the cloth. In 'CF13 S1', we see that a piece of string is broken into two pieces completely, described by S1 as *duan-kai* 'break-open'. 'CF26 S1' shows a carrot being cut into two pieces, in which S1 uses *qie-kai* 'cut-open' to describe the cutting event. *Qie* once again co-lexicalises the type of instrument, implying "cutting with a single blade or blade-like instrument" (Chen, 2007, p. 278), while *kai* indexes the state change of the carrot into two pieces. It can be seen from these examples that *kai* refers to objects that have undergone a change of state; from one whole entity into usually two separate pieces.

In some cases, *kai* can be interchanged with *duan* 'to break' to describe the same event. While in Video 20 (CF26) above, S1 used *qie-kai* to explain what the agent did to the carrot, the example below shows S1 to switch to *qie-duan* 'cut-break' when recounting what happened to the object:

Example (20.1):

胡萝卜	给	切	断	了
hú luó bo	gěi	qiè	duàn	le
carrot	CAUS	cut	break	PFV

'The carrot was cut apart.'

According to Chen (2007, p. 279), *kai* and *duan* fall under the same type of result verb, distinguished from *sui* "be in pieces" and *lan* "be in pieces, mashed, tattered or rotten, unusable". Chen also elucidates how all events that can be classified as *duan* can be classified as *kai*, but the reverse is not true. In other words, *duan* is a subset of *kai* events, where *duan* is the separation of specifically long objects or objects broken crosswise:

Example (27.1):

书	给	打	开	了	,	翻	开	了
shū	gěi	dǎ	kāi	le		fān	kāi	le
book	CAUS	strike	open	PFV		flip	open	PFV

'The book has been opened, flipped open.'

In these above example, *kai* still appears within an RVC construction (*fen-kai, da-kai, fan-kai*) and *kai* still describes an object being separated (e.g. a teapot lid separated from the main teapot body). However, *kai* cannot be interchanged with *duan* as none of these events involve a necessarily long object or an object broken crosswise. These examples suggest events that aren't classified as cutting or breaking in Chinese, but events of 'opening'.

To conclude this section, we can say that the verb *kai* can be used in an RVC construction to both signify the separation or breaking apart of an object, or indicate an opening event. In some instances, *kai* and can be interchanged with *duan*, if the cutting or breaking event involves an object that is either long or has been broken crosswise.

C *Causatives and Anticausatives*

The data collected revealed constraints on the types of verbs that are able to be used in various syntactic constructions. When prompted with the question what happened to the thing, we noted that there was a tendency to avoid the passive construction *bei*. Both speakers favoured anticausative constructions and would

default to the passive if the verb in question could not be anticausativised. Compare, for example:

Example (14.1):

树	枝	被	她	切	断	了
shù	zhī	bèi	tā	qiè	duàn	le
branch		PASS	she	cut	break	PFV

'The branch was cut apart by her.'

Example (2.2):

一	根	铁	条	断	了	吧
yī	gēn	tiě	tiáo	duàn	le	ba
one	CLF	steel	rod	break	PFV	SA

It seems like a steel rod broke, I suppose.

Anticausative constructions, which lack that agent of causation (as in 2.2) were much more common, but were limited to *break* type verbs. The substitution of a *cut* type verb would render an anticausative construction in Mandarin ungrammatical. In cases where it was necessary to describe what happened to the object, where a *cut* motion was effected, there was a tendency from S1 to employ a causative construction *gei*:

Example (27.1):

书	给	打	开	了	,	翻	开	了
shū	gěi	dǎ	kāi	le		fān	kāi	le
book	CAUS	strike	open	PFV		flip	open	PFV

'The book has been opened, flipped open.'

It would appear therefore that lexicalisation choices do have an impact on the argument structure property of verbs in Mandarin Chinese, as *cut* type verbs can be used in causative constructions but not in the anticausative, and vice versa for *break* type verbs.

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SPATIAL FRAMES OF REFERENCE IN THAI AND SGAW KAREN

VINCENT MURPHY *

CONTENTS

I INTRODUCTION

Spatial frames of reference (FoRs) are coordinate systems which are used to describe the location, orientation or path of objects with respect to other objects (Majid et al., 2004). The concept of a frame of reference system was first proposed by Gestalt theorists (Koffka, 1935). However, the conceptualisation of spatial descriptions can be traced back to Kant's assertion that the human body frame was the source of all intuitions about the nature of space (1991[1768]). Since then there has been a considerable amount of literature in the field, ranging from typological work to classification of reference frames (Levinson, 2003; Pederson et al., 1998). This work has uncovered an array of different mechanisms for encoding space, from reliance on cardinal directions (Haviland, 1993) through to the left/right distinctions which characterise English. This essay seeks to determine the spatial frames of reference used in two of the languages of Thailand. Using data elicited from native speakers of Sgaw Karen and Thai by participating in Ann Senghas' 'man and tree game' as used in Terrill & Burenhult (2008), a partial typology of some of the frames of

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reference of Southeast Asian languages can be compiled. The previous work in this field has not uncovered understandings of spatial frames of reference in these language. The research into spatial frames of reference in the Southeast Asian area has previously involved Mandarin and Jahai from the Malay Peninsula (Burenhult, 2005; Xiangiun & Yip, 2016; Zhang, 2009). What follows is a description of the frames of reference as used in Sgaw Karen, Thai, and a critical examination of the drawbacks of this study.

II Frames of Reference in Spatial Relations

At the heart of motion in spatial relational semantics is Talmy's (1985, 2000) assertion that "motion in space and static spatial relations involve a relation ... between a figure and a ground" (Berthele et al., 2015, p. 83). The relationship between a figure and a ground is known as the "association function" and this association function can either be discussed with projective or non-projective relations with FoRs falling in the former category (Romero-Méndez, 2011, p. 915). A projective relation means that, when locating a figure with reference to a ground, a perspective is projected from a reference point (either ourselves or something else) onto that figure. This separates the space into different sections whereby one can impose a coordinate system or a frame of reference through which to describe objects in the spatial domain. This section gives an account of the predominant frames of reference and where a number of languages fit into a broader spatial semantics typology.

One of the preeminent authors on FoRs, Stephen Levinson, has delineated three distinct frames of reference systems — absolute, intrinsic, and relative (2003; Pederson et al., 1998). The absolute FoR invokes a binary relationship between the object and larger, fixed, and unchangeable phenomena such as cardinal directions, eg, *the mountain is north of the river*. This can also include environmental phenomena such as *towards the mountain top*, *upriver*, etc. The Absolute FoR is used in a number of the world's languages. Speakers of Guugu Yimithirr use absolute FoRs for all spatial relations, even on such a small-scale as describing our body, eg, *the ant is on your south leg* (Haviland, 1993). Arrente and Hai||om use a similar north/south distinction whilst languages such as Balinese make distinctions towards geographical features including mountains and uphill/downhill spatial orientations (Levinson, 2003; Majid et al., 2004, p. 112; Wassman & Dasen, 1998).

Intrinsic FoRs involve a similarly binary relationship between the figure and a ground. However, it is in the ground that the coordinate system must be oriented. This is done by projecting a coordinate system from the ground through which one can place the figure in space (Bender et al., 2010, p.288). When using an intrinsic FoR the cognitive system parses the ground into their major parts such as 'front', 'back', and 'side' in order to locate objects used in intrinsic systems (Majid et al.,

2004, p. 109). It ascribes intrinsic qualities to the ground which are then used for identification of location of the figure, eg, *the truck is in front of the car*. This has seen the interlocutor designate a part of the car the 'front' from which one can identify the truck as being there. English has mixed strategies of parsing the ground based either on an orientation template giving 'top', 'bottom' and 'sides' as well as functional criteria — the 'front' of something is the part of the building that you enter in (Majid et al., 2004, p. 109). It invokes an asymmetry in the object such that its intrinsic reference is not dependent on the viewer's position; the front of the car will be the front regardless of where one observes it from. Languages which make most use of the intrinsic frame for small-scale manipulable objects include Jaminjung, Mopan, and Totonac (Majid et al., 2004, p.112).

Relative frames of reference involve a ternary relationship between the figure, the ground and an external viewpoint in which one projects axes, derived from the observer's body, onto the ground or figure of a spatial representation (Majid et al., 2004, p. 109; O'Meara & Baez, 2011, p. 841). It involves parsing the space into front, back, left and right and projecting them from our own viewpoint onto the ground such that the relationship can be articulated and the figure identified. The anchor of the coordinate system is the observer's body, and is thus not fixed. This frame is wholly dependent on the standpoint of the speaker. An example of a relative FoR would be *the ball is to the left of the tree*, whereby one projects their own perspective of left onto the tree and, by adopting the position of the describer, any listener can identify the position of the ball. Majid et al (2004) identify Indo-European languages such as Dutch and English, as well as Japanese, as languages whose spatial systems have a strong preference for the relative frame of reference. It is within this tripartite framework of spatial relations that an investigation into frames of reference as used in Thai and Sgaw Karen will be conducted.

III Sgaw Karen

A *Background*

Sgaw Karen is a language spoken by the Karen ethnic minority across eastern Myanmar and North/Western Thailand. Keyes estimates they are the largest tribal minority in both Myanmar and Thailand, numbering three million in Myanmar and close to 200,000 in Thailand (1997, p. 49). They live a predominantly rural life and can be found in villages in every northern and western province in Thailand (Ratanakul, 2001). Sgaw Karen is one of three languages in the Southern Karenic language family, along with Pwo and Lekhe (Bradley, 1997; Dawkins & Phillips, 2009; Manson, 2011). The isolation of the Karen people has meant that a number of dialects have sprung up across the region. However, they appear to be almost

mutually unintelligible (Kato, 2007, p. 634). Sgaw Karens refer to themselves as *P'gaz k'nyau* and their language is used as the medium of communication through which all social and cultural meanings are expressed (Cross, 1854, p. 292; Rajah, 2004, p. 1). Furthermore, the P'gaz k'nyau language is used for religious instruction for the Karen Christian minority across Northern Thailand. This has resulted in the Sgaw Karens living in Thailand having had their language systematised and romanised so as to aid with religious ceremonies (Jones, 1961, p. v). A Sgaw Karen script based off the Burmese script was used in Gilmore's (1898) grammar, however the dialect here uses the romanisation.

The data which has been glossed is a dialect of Sgaw Karen and it is important to note some grammatical properties of the language before analysis. Sgaw Karen has no morphological distinction between words and morphemes, hence the paucity of morphology in the data (Jones, 1961, p. 24; Vogelin & Vogelin, 1965, p. 25). The only inflectional morphology in the language is inflection of pronouns for case, of which they only inflect for subject and direct object (Kato, 2007). This has been represented in the glossed data.

B *Participant and Methodology*

The data for analysis was elicited using a modified version of the 'Man and Tree' task, originally developed by the Max Planck Institute (Levinson et al., 1992). In this task, there are 16 photos of a man and a tree. However, they are all slightly different with the man shifting around the tree at 90 degrees, as well as the man's orientation changing by 90 degrees. Whilst usually undertaken with two participants, the data for Sgaw Karen was only taken from a single participant, as it was not possible to locate two participants at the same time who were willing to perform the task. The Sgaw Karen participant for the 'Man and Tree' game is 65-year-old retired teacher hereafter referred to as P. P, who is a Sgaw Karen and Thai native speaker, also has competent L2 English skills. P self-identified as being a speaker of a Sgaw Karen dialect and his vocabulary matches parts of Brown's (1854) comparative vocabulary of Karen dialects. The high dialectal variance in the Karennic languages may result in minor discrepancies between what has been written about the language previously and what is exhibited in the data (Kato, 2007).

The experiment was conducted with just the one participant. I gave instructions to the participant in English and handed him pictures of different 'Man and Tree' orientations which he would then describe back to me and I would transcribe them using the Sgaw romanised script. This would then be reviewed by the participant and together we would go through a morpheme-by-morpheme gloss with him, offering advice and descriptions on points of grammar. This was then cross-referenced with grammars and writings on Sgaw Karen (Gilmore, 1898; Jones, 1961).

This attempted to compensate for any deficiencies in grammatical and metalinguistic knowledge my interlocutor might have had about his own language. The instructions for the task were given in English and subsequent explanations (either of the grammar or of the task) were also in English. Given that there was only a single participant and that it was not done conversationally, as is the norm, the data is merely sixteen lines of Sgaw Karen which has been glossed.

C *Results and Discussion*

Based on the following data, it would appear that Sgaw Karen has a strong preference for both the intrinsic and relative frames of reference, interchanging between the two, and the data bears a strong resemblance to how English speakers might offer descriptions of the space. As P did not need to describe the different orientations of the man to anyone, the answers are all variations on the boy or tree being either at the 'back', 'front', 'left' or 'right', with respect to the ground. This has meant that several of the responses are actually identical, despite the man having a different orientation. The examples are enumerated from (1) to (16), in the order that the speaker was shown the image. Examples (1), (5), and (13) use the same method of spatial reference and so do examples (2), (11), and (14):

Examples (1), (5), (13):

pauxhkwa	*hpo*	*of*	*waile*	*seif*	*av*	*hkleqi*
man	little	exist	at	tree	LOC	back

'A boy is behind the tree.'



Examples (2), (11), (14):

pauxhkwa	*hpo*	*of*	*waile*	*seīf*	*ãx*	*maixnya*
man	little	exist	at	tree	LOC	front

'A boy is in front of the tree.'



This demonstrates usage of the relative frame of reference where English speakers would do the same. It has parsed the space into 'front' and 'back', with the man being the anchor of the coordinate system from which the space is described.

Example (16) uses the intrinsic FoR, however this has swapped the subject and direct object of the clause such that the subject is now that of the tree. It has centred the coordinate system in the boy such that the tree is located with respect to the man's inherent 'front', independent of the speaker's viewpoint. This was the same for examples (8) and (9) as well.

Example (16):

seif	*of*	*waile*	*pauxhkwa*	*hpo*	*ax*	*maixnya*
tree	exist	at	man	little	LOC	front

'A tree is in front of the boy.'

The change of subject/object position is evident in example (9) where the axis has been centred in the boy and projected out from his back, 'behind' which is where the tree can then be placed.

Example (9):

seif	*of*	*waile*	*pauxhkwa*	*hpo*	*av*	*hkleqi*
tree	exist	at	man	little	LOC	behind

'A tree is behind the boy.'

The relative frame of reference also appears to be strongly favoured in Sgaw Karen with a number of examples using this FoR. Example (3) utilises the relative FoR in placing the boy on the right side of the tree.

Example (3):

pauxhkwa	*hpo*	*of*	*waile*	*seif*	*cuhswai*	*av*	*k'paz*
man	little	exist	at	tree	right	LOC	side

'A boy is on the right side of the tree.'

By adopting the position of the viewer and looking at the card from P's perspective, it is straightforward to place the boy in the spatial realm to the right of the tree. This relative frame of reference is also illustrated in examples (4), (6), (10) and (12), where the man is facing either away from, or towards the viewer's perspective. What is notable about example (6) is that the corresponding image of the man facing to the left, but where he is on the left side of the tree, has not been described in the same way. The tree has been described as being 'behind' the man, instead of the man being located to the 'left' or the 'right' of the tree (example (8)). The participant has chosen not to position the boy in relation to the tree, off to the 'left', but has instead elected to change the order of the subject and object and use 'behind'. Therefore, for the orientation of the man, we have two different ways of describing the spatial relation dependent on either side. This perhaps shows flexibility in the way of describing spatial relations but it would need to be uncovered with more thorough data.

Example (6):

pauxhkwa	*hpo*	*of*	*waile*	*cuhswai*	*seif*	*av*	*k'paz*
man	little	exist	at	right	tree	LOC	side

'A boy is to the right of the tree.'

Example (8):

seif	*of*	*waile*	*pauxhkwa*	*hpo*	*av*	*hkleqi*
tree	exist	at	man	little	LOC	behind

'A tree is behind the boy.'

Interestingly, when the boy is positioned in front of the tree but is facing either to the left or right of the picture, the participant has chosen to use 'beside'. This represents a form of the intrinsic FoR with the participant using the boy's facets but has not explicitly named them as 'left' or 'right'. This is seen in the following examples:

Examples (7) and (15):

seif	*of*	*waile*	*pauxhkwa*	*hpo*	*av*	*k'paz*
tree	exist	at	man	little	LOC	side

'A tree is beside the boy.'

(7)

(15)

He elected to not use 'front', which he used for when the boy had a different orientation (in examples (2) and (11), he is facing towards and away from the tree respectively and the boy has been described as in front of the tree both times). To understand why this choice has been made it will require further questioning of the participant.

Example (2):

pauxhkwa	*hpo*	*of*	*waile*	*seīf*	*āx*	*maixnya*
man	little	exist	at	tree	LOC	front

'A boy is in front of the tree.'

Example (11):

pauxhkwa	*hpo*	*of*	*waile*	*seif*	*ax*	*maixnya*
man	little	exist	at	tree	LOC	front

'A boy is in front of the tree.'

IV Thai

A *Background*

Thai is a significantly more theorised language than Sgaw Karen, owing to its status as the national language of Thailand with more than 60 million speakers (Ethnologue). Simlarly to Sgaw Karen, Thai is an analytic language with a very low morpheme-to-word ratio (Noss, 1964). This absence of inflectional morphology is highly common in the languages of mainland Southeast Asia (Enfield, 2015).

B *Methodology*

My two participants, who remain nameless, are two Thai native speaker students at the University of Melbourne. They shall be referred to as A and B. They too were tested using the 'Man and Tree' game. However, both A and B were available to participate at the same time. They have an excellent English competency, owing to their education at English-speaking universities for six years.

For this experiment I explained the task to both participants in English and positioned them at opposite ends of the table with the 16 photos in front of them. This is a slight variation on the usual method employed — participants usually sit next to each other. By positioning them opposite to each other, there was potential for the directions to point in different ways. The reason for the set-up was so that the interlocutors would need to describe the pictures in extensive detail so that they could select the correct picture. Participant A would describe a chosen photo to B, who would then select the corresponding one from in front of them. This resulted in a random and different order to the data elicited from the Sgaw Karen set. They each were able to trial the experiment twice before I started recording and transcribing. After the task had been completed, I sat with both participant A and B to transcribe the data and produce a morpheme-by-morpheme gloss with a romanisation. This data was then cross-checked with Noss' (1964) grammar to ensure morphemic accuracy.

C *Results and Discussion*

The data elicited from participants A and B would indicate a preference for the relative and intrinsic frames of reference in conversational Thai. Thai describes spatial relations in much the same way as English, first orienting the man in relation to the participants, and then locating the tree in the projected space. The part of the description that orients the man is done with the relative frame, whilst the tree is located using the intrinsic frame. In contrast to the Sgaw Karen data, there is no overlap between any of the examples.

The relative frame of reference was used for only two of the cards, in examples (1) and (8).

Example (1):

ผู้ชาย	หัน	หลัง	ให้	เรา
phūchai	*han*	*hlâng*	*hî*	*rao*
man	turn	back	for	1PL

แล้วก็	ต้นไม้	อยู่	ทางซ้าย	ของ	ผู้ชาย
lǽw-gôr	*tônmî*	*yŭ*	*thang-sai*	*kung*	*phūchai*
and	tree	COP	way-left	of	man

'The man turns his back to us and the tree is to the left of the man.'

xample (8):

ผู้ชาย	หัน	หลัง	ให้	เรา
phūchai	*han*	*hlâng*	*hî*	*rao*
man	turn	back	for	1PL

แล้วก็	ต้นไม้	อยู่	ข้างขวา	ของ	ผู้ชาย
lǽw-gôr	*tônmî*	*yŭ*	*khang-kwa*	*kung*	*phūchai*
and	tree	is	side-right	of	man

'The man is facing away from us and the tree is to the right side of the man.'

One can instantly see the similarities between these two photos: the man is facing the same way. This is also the perspective of the viewer, meaning that the axis of the speaker and the little man are identical. The use of the relative FoR here could in fact be the use of the intrinsic frame, but is able to pass as the relative because the

'left' and 'right' side of the man are the same as that of the speaker. This means that the parsing of the social space for the man and the speaker is identical.

The intrinsic FoR is also used in Thai to describe the spatial relationship between the figure and ground. This is done by describing which way the man is facing and then using him as the orientation for the coordinate system. The intrinsic FoR is by far the most commonly used out of all the data elicited, showing a clear preference. The first example of this is number (2).

Example (2):

ผู้ชาย	หัน	ซ้ายมือ	ให้	เรา
phūchai	*han*	*sai-mue*	*hî*	*rao*
man	turn	left-hand	for	1PL

แล้วก็	ต้นไม้	อยู่	ข้างหลัง	ผู้ชาย
lêw-gôr	*tônmî*	*yŭ*	*khang-hlâng*	*phūchai*
and	tree	COP	side-back	man

'The man turns to the left and the tree is behind him.'

In this spatial description, A ascribed the front of the man as the direction he is facing, a decision that is obviously understood by B. This necessitates that his back would be the opposite side of the man. By extending this axis outwards from the man, the tree is subsequently located behind him. The projection of the space from the back of the man is also used in examples (3) and (6).

Example (3):

ผู้ชาย	หัน	หลัง	ให้	เรา
phūchai	*han*	*hlâng*	*hî*	*rao*
man	turn	back	for	1PL

แล้วก็	ต้นไม้	อยู่	ข้างหลัง
lêwgôr	*tônmî*	*yŭ*	*khang-hlâng*
and	tree	COP	side-back

'The man is facing away from us and the tree is behind him.'

Example (6):

ผู้ชาย	ยัง	หัน	ขวา	ให้	เรา
phūchai	*yang*	*han*	*hwa*	*hî*	*rao*
man	still	turn	right	for	1PL

'Man is still facing right for us

แล้วก็	ต้นไม้	อยู่	ข้างหลัง	ผู้ชาย
lêw-gôr	*tônmî*	*yŭ*	*khang-hlâng*	*phūchai*
and	tree	COP	back-side	man

and the tree is behind the man.'

Further evidence for the intrinsic FoRs, whereby the axis of spatial description is centred in the man, comes from the examples where the interlocutors describe the tree as being to the left/right of the man. This does not correspond to the left/right distinction of the speakers. In example (5), the speakers orient the man as facing to the right, from their perspective. However when describing the location of the tree, it is situated to the left of the man. This shows a very clear use of the intrinsic FoR as it has assumed the perspective of the man and used the notion of left/right from his position as the means of describing the tree in the spatial realm.

Example (5):

A: ผู้ชาย หัน ข้าง หัน ขวา ให้ ใช่ปะ
phūchai *han* *khang* *han* *hwa* *hî* *chaîpa*
man turn side turn right for correct.Q
'The man is facing right for ... correct

(interjecting and speaking over each other)

แล้วก็ ต้นไม้ อยู่ ซ้ายมือ ของ ผู้ชาย
lêw-gôr *tônmî* *yù* *sai-mue* *kung* *phūchai*
and tree COP left-hand of man
and the tree is to the left of the man.'

B: แปปนึง ผู้ชาย หัน ขวา ให้ เรา แล้ว ต้นไม้?
pae-pnung *phūchai* *han* *hwa* *hî* *rao* *lêw-gôr* *tônmî*
wait-one man turns right for 1PL and tree
'Wait. Is the man facing right for us and the tree?'

A: ต้นไม้ อยู่ ซ้ายมือ ผู้ชาย
tônmî *yù* *sai-mue* *phūchai*
tree is left-hand man
'Tree is to the left of the man.'

Further evidence of this intrinsic frame of reference is exhibited in example 10. Much like in example (5), the interlocutors orient the direction of the man with respect to their own internal left/right distinction. However, they describe the tree using the left/right distinction from the man's perspective.

Example 10:

A:	ผู้ชาย	หัน	ซ้ายมือ	ให้	เรา
	phūchai	*han*	*sai-mue*	*hî*	*rao*
	man	turn	left-hand	for	1PL

'The man is facing to our left ...

ต้นไม้	อยู่	ข้างขวา	ของ	ผู้ชาย
tônmî	*yŭ*	*khang-kwa*	*kung*	*phūchai*
tree	is	side-right	of	man

the tree is to his right side.'

B:	ต้นไม้	
	tônmî	
	tree	

'Tree?'

A:	ต้นไม้	อยู่	ข้างขวา
	tônmî	*yŭ*	*khang-kwa*
	tree	is	side-right

'Tree is on the right.'

Beyond the frames of reference prioritised by the two Thai speakers, the data has elucidated a number of other points which require further discussion. Primarily, there appear to be a number of ways in which one can describe the relative side of the man with respect to the tree. In example (1), A uses *thang-sai* ('left way' in English) to mean on the left side, however, in example (5), A uses *sai-mue* ('left hand' in English) to represent the same thing. This demonstrates greater flexibility in describing spatial relations as compared to Sgaw which only used *cuceif* ('left'). Both *thang-sai* and *sai-mue* have the same underlying semantic spatial description of being 'left' of the object. However, they appear to be used interchangeably. The data here does not show the same flexibility when used to describe something on

the right side. The only way in which the speakers located something to the right was by the use of the word *khang-kwa* (see examples (7), (8) and (10)) which translates as 'right side'. Given that *khang-hlang* and *khang-nga* mean 'back' and 'front' respectively, it is expected that *khang-sai* would be used to represent 'left'. However, this is not the case with the two other words preferred. Under example (2), we see them using one after another in order to describe the man's orientation, first as having turned left (*han sai*), then facing 'left-head' (*sai-mue*) and then with *thang-sai.*

Example (2):

A:	ผู้ชาย	หัน	ซ้ายมือ	ให้	เรา
	phūchai	*han*	*sai-mue*	*hî*	*rao*
	man	turn	left-hand	for	1PL
	'The man turns to the left				
	แล้วก็	ต้นไม้	อยู่	ข้างหลัง	ผู้ชาย
	lêw-gôr	*tônmî*	*yŭ*	*khang-hlâng*	*phūchai*
	and	tree	COP	side-back	man
	and the tree is behind him.'				
B:	ผู้ชาย	หัน	ซ้าย		
	phūchai	*han*	*sai*		
	man	turn	left		
	'Man turns left?'				
A:	ซ้ายมือ				
	sai-mue				
	left-hand				
	'Left.'				
B:	หัน	ไป	ทางซ้าย		
	han	*bai*	*thang-sai*		
	turn	to	way-left		
	'Turns to left side.'				

Another point of discussion is the order of the clauses. In all but one of the examples the orientation of the man comes first. However, in example (7) the tree is located and then the direction the man is facing is described:

Example (7):

A:	ต้นไม้	อยู่	ข้างขวา	ของ	ผู้ชาย	
	tônmî	*yù*	*khang-kwa*	*kung*	*phūchai*	
	tree	is	right-side	of	man	
	'The tree is to the right of the man					
	แล้วก็	ผู้ชาย	หัน	ข้างขวา	ให้	เรา
	lêw-gô	*phūchai*	*han*	*khang-kwa*	*hî*	*rao*
	and	man	turn	side-right	for	1PL
	and the man is facing right for us.'					

This perhaps suggests that clause order is interchangeable and orienting the man first is not necessary in order to convey all the information for Thai speakers.

V Issues

There are a number of issues with these results, owing principally to the methodology. Firstly, given that there was only one participant in the Sgaw Karen exercise, the task was not completed as instructed. This would present several problems. That there were a number of examples which had the same description, despite the picture showing a distinct orientation of the man and tree, means that I have not captured fully the variety of possibilities in the language. This was not an issue with the data elicited from Thai speakers as they completed the task with a much more rigid methodology and in the manner in which it is expected to be carried out. Secondly, the data in Sgaw Karen only gives one layer of spatial descriptions, without orienting the man. This also undermines the data as only one layer of descriptions does not indicate the true nature of all spatial descriptions in the language and only scratches the surface for possible frames of reference. Another concern with the methodology of the Sgaw data is that by handing P pictures and having him describe the scenario, it is not a naturalistic or conversational elicitation of data. This has meant that perhaps Sgaw Karen might describe spatial relations using different frames of reference when having a conversation, as it would need to involve another level of space by orienting the man first.

Another issue with the methodology is that there is a strong chance that the data was tainted in translation. Due to the Sgaw Karen speaker's only competent understanding of English there is a possibility that some instructions were lost in translation, or that he did not fully understand the task. There is also the possibility that although he answered the questions in Karen, he processed and translated it from

an English perspective so that I could understand it, rather than approaching it from a solely Karen understanding. This may have meant that some of the translation is not faithful to the Karen data but was interpreted by P to make it as close to English as possible.

VI Conclusion

From the data elicited by my three participants, it appears that Thai and Karen use a mixture of the intrinsic and relative frames of reference, alternating between whether the tree or the man was more suitable as the ground. Studies of frames of reference have not been extensive in languages of the area. However, Zhang's study revealed that Mandarin Chinese speakers would use the relative frame to describe objects on a non-geographical scale (2009, p. 594). However, there were differences found in route descriptions, with Northerners preferencing absolute frames as opposed to the Southerners who employed relative frames. The rural nature of Northern China is potentially a contributing factor as living in a rural environment appears correlated with use of the absolute frame (Majid et al., 2004). The historical predominantly rural lifestyle of the Karen people might entail their use of the absolute frame when giving directions which is a path for potential future research. A more in-depth study into the spatial frames of reference in Karen is needed as the methodology employed has significant limitations. For Thai speakers it appears quite rigid and straightforward, using the relative and intrinsic frames for table-top space, but a more thorough study with a number of participants is warranted as two speakers completing one task is not enough to generalise a finding across a whole population.

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JESPERSEN'S CYCLE IN FRENCH AND ENGLISH: A TYPOLOGICAL ACCOUNT OF NEGATION

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Contents

I Introduction

To affirm, or to negate? In all human systems of communication there exists negation, a property unique to human language alone; humans are "ipso facto the animals that deny" (Horn, 1989, p. xiii). Together, negation and affirmation constitute the grammatical category known as polarity, but it is negation which dominates as the marked feature, for affirmation is "taken for granted" (Lee, 2016, p. 4). At a glance a seemingly binary feature, its underlying complexity has driven considerable research in the field concerning how negation is realised morpho-syntactically, how it operates with respect to semantic and pragmatic distinctions aplenty, and what it is exactly that accounts for its changes over time. This paper will primarily focus on a diachronic analysis of a subset of Indo-European languages, principally French and English. I will first outline the manner in which sentential negation has evolved in those two languages, demonstrating how these developments correspond to stages as described by Jespersen's Cycle (Dahl, 1979; Jespersen, 1917). I will then

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explore possible motivations for the cycle, and whether or not its validity can be asserted. Having examined negation in its various incarnations, I will discuss the interpretations of bipartite negation as either double negatives or negative concordance, before concluding with accounts on how the latter may be licensed.

II Developments in Negation

A *French*

As French is a Romance language, it will be convenient to preface an overview of its negation by briefly touching upon negation in Latin (Clackson, 2016). In Latin, the negative marker was *non* 'not' (Poletto, 2016), which then evolved into two different forms in French (Smith, 2016):

- *non* [nɔ̃], when stressed
- *nen* [nən], when unstressed, which then underwent nasal deletion to become *ne* [nə]

According to Foulet, *ne* alone was sufficient in expressing clausal negation in Old French (as cited in Roberts, 2007, p. 78). Old French permitted the addition of an optional element following the verb, such as *pas* 'step', *point* 'stitch', and *mie* 'crumb', amongst others; these words eventually became grammaticalised and were used to emphasise negation (Smith, 2016), and are also known as minimisers (Bolinger, 1972). Today in Standard French, "both the pre-verbal and the post-verbal negative markers are obligatory" (Poletto, 2016, p. 836), with *ne...pas* surviving as the standard form and *ne...point* surviving in some transitive constructions, though according to Smith (2016), the latter is considered to be "archaic" or "literary" (p. 309). Price suggests that *pas* eventually became the standard form because it was particularly salient in the dialect of French spoken in Paris (as cited in Smith, 2016, p. 309), on which Modern Standard French is based (Harris & Vincent, 1988). In spoken French, particularly in colloquial contexts, *ne* becomes optional and is frequently omitted (Harris & Vincent, 1988; Willis, 2012).

The following examples illustrate how basic negation functions in Old French and Standard Modern French, and colloquial Modern French

Old French:

Jeo	ne	dis
I	NEG	say-PRS.1SG

'I don't say.'

Modern French (standard):	Je	ne	dis	pas
	I	NEG	say-PRS.1SG	NEG
	'I don't say.'			

Modern French (colloquial):	Je	dis	pas	
	I	say-PRS.1SG	NEG	
	'I don't say.'			

It is also worth noting that *ne* can still function alone as the negative marker in a few specific contexts, with verbs such as *savoir* 'to know', *pouvoir* 'to be able to', *cesser* 'to stop', and *oser* 'to dare'. This form of negation is only found in higher registers of language (Smith, 2016):

Tu	ne	cesses	de	parler
You	NEG	stop-PRS.2SG	PREP	speak-INF
'You don't stop talking.'				

French also has a form of negation known as pleonastic/expletive negation, allowing the insertion of a non-negative *ne* in certain syntactic contexts (Breitbarth, 2009), such as *il est plus intelligent qu'il n'en a l'air* ('he is more intelligent than he seems'). Here, while *ne* does not function as a negator, it does arise as a consequence of the entailment of the sentence (Smith, 2016): 'he is not as dumb as I had thought'. I shall not go into a discussion into the semantics/pragmatics which determine this particular use of *ne*, as it is beyond the scope of this paper.

B *English*

In much the same way as Old French, Old English negation was formed with a proclitic *ne*, which is then "strengthened" in Middle English (Horn, 1989, p. 454) with the negator *not*. As in French, *not* eventually became an obligatory element in a negative construction, but then moves one stage further than French in that *not* alone becomes sufficient to indicate the negative polarity of a statement, with the change complete by the 15th century (Ingham, 2010). *Do*-supported negation, ie, with *do* preceding the verb and *not* following the verb, is standard by the 17th century (Horn, 1989).

Old English:	Ic	ne	secge
	I	NEG	say-PRS.1SG
	'I don't say.'		

Middle English:	Ic	ne	seye	not
	I	NEG	say-PRS.1SG	NEG
	'I don't say.'			
Early Modern English:	I	say	not	
Modern English:	I	don't	say	

As an aside, Horn (1989) suggests that *n't* may not be an enclitic but in fact an "inflectional suffix on tensed auxiliaries" (p. 573), in that, while there does not seem to be a general constraint that prevents the stacking of clitics, eg, *I'd've* (in spoken form, at least), it would be ungrammatical to have a form such as **I've'n't*. This is further supported by Haegeman (1995), who found that *n't* moves with the inflected auxiliary.

III Jespersen's Cycle

A *Stages*

Jespersen's Cycle is a process by which pre-verbal negation in a language will weaken insofar as it becomes necessary to reinforce the negation by means of a post-verbal marker, which is at first optional, but later obligatory. As the latter marker is stronger, more noticeable than the former, the pre-verbal negator will eventually give way to the post-verbal marker. With time, the post-verbal marker may drift to precede the verb, thereby resetting the cycle (Dahl, 1979; Horn, 1989). Though there are different interpretations of Jespersen's Cycle, and consequently different ways to count the number of stages present in the process, I will proceed with an adaptation of Sundquist's (2007, p. 149) account of the cycle. My account distinguishes the optional and obligatory presence of the negative adverb, whereas Sundquist's account merges stages two and three from below:

1 Negation with single negative pre-verbal marker

2 Bipartite negation with single negative pre-verbal marker and optional negative post-verbal adverb

3 Bipartite negation with obligatory negative pre-verbal marker and obligatory negative post-verbal adverb

4 Bipartite negation with optional negative pre-verbal marker and obligatory negative post-verbal adverb

5 Negation with single negative post-verbal adverb

Firstly, the data presented above reveals that the stages are not necessarily mutually exclusive, in the sense that a language can be situated at multiple stages at any one point in time. That is to say, the overlapping of stages is possible. This is supported by Sundquist's (2007) analysis of the stages in the evolution of German negation, where he noted that there were "slowly blurring lines of distinction between the stages" (p. 151) and that "manifestation of the overlap" is possible (p. 164). This becomes quite evident upon examination of French patterns of negation, where negation is register-dependent, delineating formal and informal modes of speech. The most formal level of language corresponds to stage two, the standard level to stage three, and the lowest or colloquial level to stage four. The "comporaneity" (van der Auwera, 2010, p. 78) of these stages has also been supported otherwise. Stage four is complete in a number of other dialects of French or French-related languages, such as Québécois French, Haitian Creole (and some other French-based languages), and Northwestern Italian dialects (Poletto, 2016). Stern's (1937) work would also argue that *ne* would eventually disappear from standard French, because the "vestigial proclitic is doomed to extinction" (p. 263).

Secondly, in order for Jespersen's Cycle to repeat itself, it necessarily requires that the negation marker be moved to precede the verb such that it can return to stage 1. Data from English thus supports Horn's (1989) hypothesis of a NEG first principle, where there is a "strong tendency for negative markers to gravitate leftward so as to precede the finite verb or other possible foci of negation" (p. 452).

B *Motivations*

There are several different accounts of the factors which motivate Jespersen's Cycle. Van Gelderen (2011) argued along syntactic grounds, claiming that the negative marker is reanalysed in the following order due to a preference: a head, a clitic, a bound morpheme, before disappearing entirely. There is some support for this claim in that there were a number of verbs in Old English (*nis* 'not-is', *noebbe* 'not-have', *nylle* 'not-want) and in Latin (*nego* 'say no', *nescio* 'not-know', *nolo* 'not-want') which contained a negative bound morpheme, only to become completely obsolete (Horn, 1989). Though this account is somewhat satisfactory, it does not seem to be a complete account of the evolutionary narrative having neglected the origins of the post-verbal marker in the process and the role it has to play in the cycle.

Horn's (1989) account of the cycle concerns phonetic saliency. He argues that the negative particle *ne* is "phonetically weak" (p. 457), which is why it requires the presence of a stronger and more conspicuous post-verbal marker added in order to reinforce it. This argument is plausible as the schwa present in *ne* tends to be elided

in rapid speech. If it is phonetics which initiates the change, it is the perceived redundancy of the negative marker which renders it moribund, as, not only is it "barely audible" (Horn, 1989, p. 457), but also semantically weaker as the post-verbal marker becomes the syntactic item that is principally associated with negation. Labov's (1994) argument also involves a phonetic perspective, but his line of reasoning is couched in language acquisition, stating that particularly for children, sentences such as *je sais pas* ('I don't know') will be unambiguously negative, whereas *je sais* ('I know') is unambiguously positive because of the dropping of *ne*. Under this assumption, Labov (1994) argues that such a dichotomy may play a role in the consolidation of the negative marker.

Croft (2000), on the other hand, considers the change as a process of metanalysis, in that the addition of *pas* in French was added for emphasis, whereas *ne* signalled negative polarity, so the sum of *ne* and *pas* thus yields emphatic negation. From here, *pas* now encodes the negative polarity of the sentence, and so by logic *ne* can be reanalysed as the emphasising unit. This particular interpretation is supported by Bréal (1900), who wrote of how the association with the *ne* can render an item itself negative, and Gaatone (1971), who wrote of the redundancy of *ne*, "conditioned by another term which is the principal bearer of the negative value" (p. 99).[1] That two markers could simultaneously exist leads Breitbarth (2009) to believe that that existence should "entail their functional differentiation" (p. 63).

C *Evidence*

That different Romance languages exhibit signs of being at different stages of the cycle, having gone through the same changes along the way, provides some support that Jespersen's Cycle holds. The northern dialects of Italy, for example, are currently situated at different stages of Jespersen's Cycle (Benincà, Parry, & Pescarini, 2016). Compare Piedmontese and Ligurian, where Piedmontese has solely a post-verbal negative marker, and Ligurian retains a pre-verbal negative marker:

Piedmontese:	ˈdyrmiraj	nɛŋ
	sleep-FUT.1SG	NEG
	'I will not sleep.'	

Ligurian:	nu	ɖurmiˈɔ
	NEG	sleep-FUT.1SG
	'I will not sleep.'	

[1] « ... conditionné par un autre terme qui est le principal porteur de la valeur négative » (my own translation)

Moreover, there is also the argument to be made that English is showing signs of diminishing phonetic saliency for *do*-support in that, in colloquial English, *I don't wanna go* is realised as *I* [də] *wanna* go (Horn, 1989), perhaps showing a tendency that it will weaken enough over time such that a new post-verbal adverbial negator be added.

However, there is some evidence that Jespersen's Cycle is not necessarily universal in its processes. For one, despite Piedmontese being at the final stage of the cycle, having lost its pre-verbal negative marker around the 17th century (Benincà, Parry, & Pescarini, 2016), it has not undergone any further development since. Indeed, Benincà and Poletto (2005) affirm that there has been no language that has developed a pre-verbal negative morpheme starting from a post-verbal one.

Further to this, Martineau and Vinet (2005) noted a general tendency that the changes and the cycle progress quicker in Germanic languages than in Romance languages. But the factors that condition the change are still unknown. Poletto (2016) was hesitant to make any definite claims about the cycle, instead arguing that it is a "possible universal development of negative markers" (p. 837) but added that it "must be triggered by a complex cluster of properties not always present in Romance" (p. 837).

IV Interpretations of Bipartite Negation

The presence of bipartite negation brings forth one important dilemma in the language: whether the two constituent parts of the construction come together to form a positive meaning, or a negative one. If negation in natural language functions in the same way as it does in logic, then it makes sense that two negatives would make a positive. Assuming that the negator in a language behaves as it does under Boolean logic, with the negative operator ¬, "where one occurrence of ¬ has scope over another, the former cancel each other out" (Rowlett, 1998, p. 87). This is a case of a double negative. But this is not the case in systems that allow negative concord, where two negatives continue to produce a negative meaning. In the words of Rowlett (1998), they "reinforce" (p. 87) each other, and although common, negative concord is by no means a universal feature of language. Italian, for example, belongs to the group of languages that has negative concord, whilst English has a double negative interpretation:

Italian:	Nessuno	ha	fatto	niente
	NEG	have-PRS.3SG	do-PTCP	NEG
	'Nobody did anything.'			

English: No-one did nothing
NEG did NEG
'Someone did something.'

It is to be noted of course that certain dialects of English have negative concord, and would thus interpret this above phrase to have a positive meaning.

V Negative Concord

A *Types*

Negative concord languages fall under two types (Manea, 2013):

- Strict negative concord languages, which always have negative sentential negation (eg, Romanian); and
- Non-strict negative concord languages, which make the sentence negative marker obligatory "only if the n-word occurs in post-verbal position" (p. 562) — Italian, Spanish, and European Portuguese are all examples of non-strict negative concord languages; continental West-Germanic dialects are also negative concord (though this is disallowed in the standard varieties) (Zwart, 2005)

It is unclear why Romanian differs from the other Romance languages with regard to negative concord, but Sandfeld notes that it is similar to languages such as Greek, Bulgarian, Polish, and Hungarian in this regard (as cited in Manea, 2013, p. 562), so there is possibly a sprachbund effect here to account for its divergence from the rest of the Romance family.

Romanian (1): Nu cânta!
not sing.INF
'Do not sing!'

Romanian (2): Nu l-a înduioșat nimeni
not CL.ACC.3SG=has impressed nobody
'Nobody and nothing

și nimic
and nothing
impressed him.'

Italian (1):	Gianni	non	legge	niente
	Gianni	not	read	nothing
	'Gianni read nothing.'			

Italian (2):[2]	*Gianni	legge	niente
	Gianni	read	nothing
	'Gianni read nothing.'		

B *Licensing*

Jespersen has noted in earlier work that the phonetic size of the negative element in the language helps to determine whether or not that language is characterised by negative concord, where less phonetic bulk correlated with higher chances of having negative concord (as cited in Rowlett, 1998, p. 86).

But this explanation is too simplistic in the consideration of the complex nuances of negative concord. De Swart draws upon the notion of markedness to help account for the behaviour of negatives, arguing that negation is both unmarked and marked (de Swart, 2010). In the pair <affirmation, negation> it is the more marked of the two, whereas in the pair <(single) negation, double negation>, it is the unmarked variant. Using this as a foundation, de Swart (2010) argues for a possible evaluation of how bipartite negation selects its value as a double negative or negative concordance under an Optimality Theory framework, whereby each language ranks a set of constraints and selects the best possible outcome with a given input based on that ranking.

Roberts (2007) interprets negative concord as a consequence of agreement. Using the 'Agree' feature as proposed by Chomsky to relate formal features together and eliminate uninterpretable features, he argues that the presence of a negative element in a phrase would spread to other indefinites within the sentence for well-formedness, such that they will transform into negative elements. Some examples showing how negative elements from Modern French were in fact derived from words not carrying any negative meaning to begin with are as follows (Robert, 2007, p. 77):

[2] In the gloss above, I have indicated an ungrammatical form for Italian, as in this case the negative element follows the verb, and there is no pre-verbal negative element, non becomes compulsory (Haegeman, 1995).

Latin:	rem	
Modern French:	rien	ne ... rien
English:	'thing'	nothing

Latin:	personne	
Modern French:	personne	ne ... personne
English:	'person'	nobody

Under this analysis, negative concord is not as foreign as it would seem, with Horn (2010) arguing that it is simply the "spreading of a negative force to indefinites within the same clause" (p. 130), much like other agreement phenomena like subject-verb agreement or vowel harmony.

VI Conclusion

This paper has attempted to provide a brief exploratory expedition into basic sentential negation formation in some languages, which formed a foundation for our analysis on diachronic change in negation, the idea of Jespersen's Cycle, motivation and evidence for the cycle, as well as how all these notions interact in a more holistic consideration of bipartite negation, which may be accounted for under an OT framework. Though analyses of Jespersen's Cycle have been varied, it is clear that there are at least some properties of the idea which seem to be valid, but the extent to which this is true for all languages, and which factors come to play in triggering change, are still questions to be explored in future research.

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TAKING TURNS: A REPLICATIVE STUDY OF SYSTEMS ADOPTED BETWEEN SPEAKERS OF DANISH AND ENGLISH, AND DANES WITH DANES

ANNIKA SCHIMPFF*

CONTENTS

I INTRODUCTION

Social interactions between interlocutors are highly complex and various strategies need to be employed for them to be successful interactions (Corps, Gambi, & Pickering, 2018). Typically, a successful interaction requires both verbal and non-verbal strategies. Turn-taking refers to the ability to transition between speaker and listener roles in conversations, which forms a critical part of social interactions (Corps et al., 2018). With the purpose of exploring whether cultural factors impact on turn-taking patterns, Stivers et al. (2009) investigated universals of response latency. By examining ten languages, Stivers et al. (2009) conclude that their findings support the idea of underlying universal patterns in turn-taking. Specifically, Stivers et al. (2009) claim that all of the tested languages demonstrated a strong avoidance of overlapping talk as well as minimisation of silence between turns in conversation. Apart from seemingly similar turn-taking patterns, they found more significant differences in inter-turn intervals (Stivers, et al., 2009). Out of the ten languages sampled, Danish was found to demonstrate the slowest response time with an average of 469 milliseconds (ms) (Stivers, at al., 2009).

This qualitative study replicates and expands on Stivers et al.'s (2009) study, by examining turn-taking patterns between two native Danish speakers and

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comparing it to turn-taking patterns between a native English and a native Danish speaker. As such, this essay will explore whether the significant response delay in Danish can be reaffirmed, and whether Danish speakers maintain their conversational turn-taking strategies when speaking in a second language (English) with native English speakers.

II Literature Review

The rapid switching between comprehending an interlocutor's utterance and giving an appropriate response is one of the most salient abilities in social interactions (Corps et al., 2018). Studies have shown that across languages, minimal gaps between turns are preferred (Stivers et al., 2009; Corps et al., 2018). In Stivers et al.'s (2009) study, the average inter-turn interval was found to be 200 ms across ten languages, seemingly suggesting that listeners are likely to prepare their responses before the utterance completion of the interlocutor. More recent theories have thus drawn attention to response preparation strategies (Levinson, 2016; Corps et al., 2018). Speech acts, such as questions, offers or requests, are often encoded at the end of turns, making it hard for listeners to recognise a speech act early in the turn (Levinson, 2016). Yet, studies have also identified early speech-act encoding signals in a sample of languages across the world — for example, questions were found to be marked by utterance-initial pitch (Sicoli, Stivers, Enfield & Levinson, 2015). It is undeniable that prediction plays a significant role in turn-taking strategies, ie, the listener's ability to predict when a turn ends and what response is required (Levinson, 2016). Turn preparation thus occurs before vocal output, approximately halfway through the incoming turn (Levinson, 2016). Comprehension of or interest in the interlocutor's utterance is often accompanied by gestural cues (eg, head movements) as well as brief vocalised tokens of acknowledgments (Drummond & Hopper, 1993; Mondada, 2007). Such interactional components can then also be classified as turn-preparation strategies (Levinson, 2016).

Vocal face-to face interactions are the core use of language and occur as early as in infant-directed speech, particularly between infants and adults (Roberts, Torreira & Levinson, 2015). Additionally, vocalisations produced by infants require emotional responses from their caretakers, stimulating turn-taking techniques (Roberts et al., 2015). Though cultural factors have an impact on turn-taking patterns, there is evidence that all languages rely on similar exchange principles (Stivers et al., 2009, Roberts et al., 2015; Levinson, 2016). To clarify, while turn-taking characteristics differ among languages and cultural groups, both non-verbal and verbal turns are universally integral to human communication (Levinson, 2016). As such, turn-taking is partly instinctive and partly learned, informed by different cultural factors (Levinson, 2016). The argument of turn-taking as part of our

innate behaviour is further strengthened by comparative primate evidence (Levinson, 2016). Primates have demonstrated vocal turn-taking behaviour, which, as with human infants, seems to be instinctive to an extent and fostered by interactions with elder primates (Levinson, 2016).

There has been less focus on turn-taking strategies deployed by speakers in their second language (Ross, 2018). However, Ross (2018) claims that turn-taking can be viewed as an interactional competence which needs to be mastered in order to successfully participate in conversations. He goes on to argue that recent studies have reinforced the idea of turn-taking as a distinct dimension of second language speaking proficiency (Ducasse & Brown, 2009; Galaczi, 2014; Ross, 2018). Steensig (2001) compared turn-taking methods between Danish speakers and Turkish speakers. He argued that in both languages conversational participants seem to be able to predict turn completion of interlocutors from an early point in the utterance. In Danish, syntactical constructions allow interlocutors to predict turn completion, while Turkish grammar does not contribute to such projection. From this, Steensig (2001) claims that different methods must be employed in these languages. In his findings, Steensig (2001) argues that grammatical relations in Danish enable the listener to predict possible completion of a turn; he further notes that this also applies to the English language. In addition, prosodic methods were utilised by Danish speakers to indicate turn completion, in particular when there was a lack of grammatical and pragmatic completion. This would prompt us to think that both English and Danish response time may be quick. However, as briefly outlined in the introduction, Stivers et al. (2009) found Danish to have the slowest response time compared to nine other languages. This, along with other previous findings, will be tested and potentially contested in this study.

III Methodology

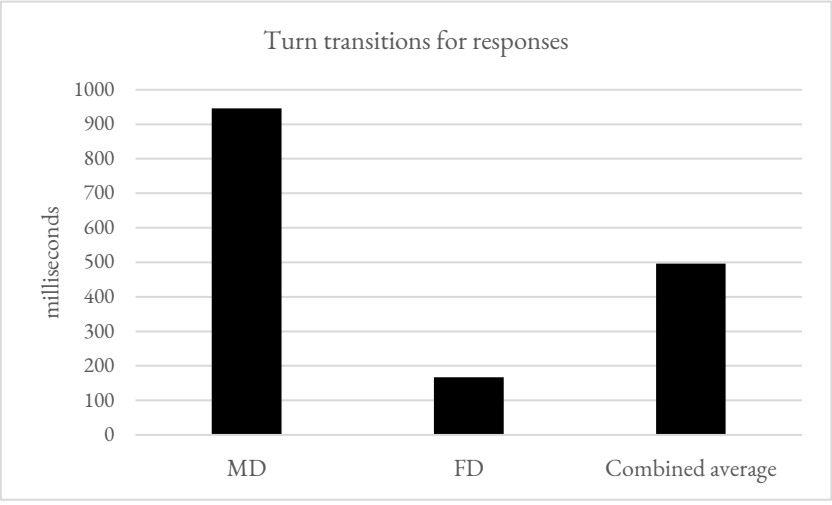
For the purpose of this study, three participants were recruited for video recordings: two native Danish speakers, one male and one female; and one native female English speaker. The two Danish speakers were recorded first, followed by a recording of the male Danish speaker and the native English speaker. The duration of each of the two video recordings was approximately half an hour. No conversational topics were suggested to participants, in order to collect natural conversational data. Participants were provided with snacks to create a comfortable and casual environment. During the recording, no one else was present, to further foster authenticity. Interlocutors were familiar with each other, however not on a personal level. Both conversations were transcribed, and the Danish transcript was also translated into English. The transcriptions include overlaps and interruptions indicated by a '/', and pauses are represented by a '-'. Furthermore, word fillers and vocal tokens of

acknowledgements are indicated by 'mm' or 'um'. Minor non-verbal cues have been transcribed such as 'laughing' and certain speech-accompanying gestures. To respect the participants privacy, the Danish male participant is referred to as 'MD', the female Danish participant is referred to as 'FD' and the Australian female participant as 'FA'. In order to measure pause lengths, a programme named ELAN was utilised. Only response lengths between questions and answers were measured, excluding self-directed questions, ignored questions, non-vocal responses, and when the respondent was naturally hindered in response due to eating or taking a sip of water. Data between the two video recordings was compared to investigate any striking similarities or differences.

IV Results

The overall turn transition time average for responses between the two Danish speakers was measured to be 496 ms, which is slightly longer than in Stivers et al.'s. (2009) findings for Danish. However, by individually measuring transition times between turns, MD was found to have an average of 940 ms, while FD's average was only 167 ms (see figure 1). Hence, while the male Danish speaker's response delay significantly exceeded the average in Stivers et al.'s (2009) study, even for Danish, the female Danish speaker falls well within the response time average measured across languages (Stivers et al., 2009).

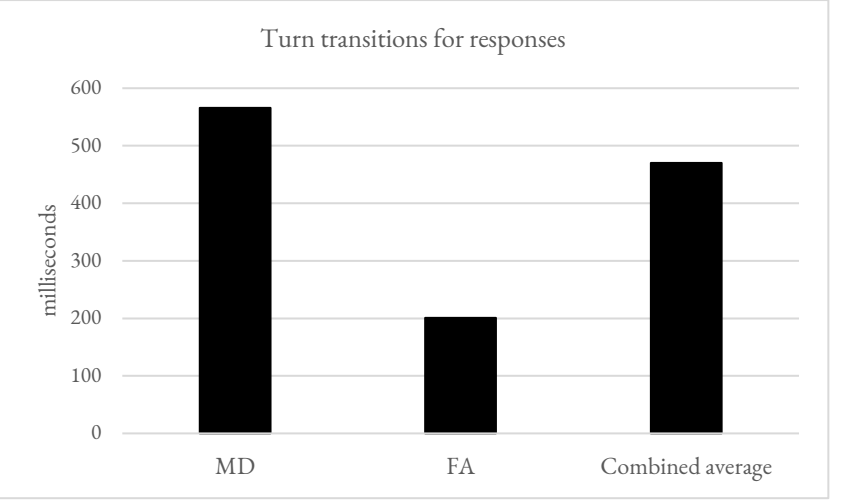
Figure 1 'Turn Transitions for Responses between MD and FD'



The combined turn transition time average for responses measured between FA and MD was 470 ms, which is only slightly faster compared to the findings between

the two Danish speakers. However, once again the individual response time average for the MD was 567 ms and for FA, 201 ms (see figure 2). Again, the FA's average response time lies within the norm according to Stivers et al.'s (2009) study.

Figure 2 'Turn Transitions for Responses between MD and FA'



These findings may in part lead back to gender differences and will be investigated in the discussion. It is also interesting that MD's response time was quicker when speaking in his second language. This may hint at a potential turn-taking adoption strategy; this will also be explored in the discussion.

A *Overlaps*

Overlaps were found to occur only 5% of the time across Stivers et al.'s (2009) language samples. This aligns with the findings of the recordings in this study between the two Danish speakers. Interestingly, a significantly higher amount of overlaps was recorded between the Danish and English speaker. Specifically, the English speaker appeared to not only speak at the same time as the Danish speaker, but also interrupt herself. This can be demonstrated in these examples:

Example (1) (00:03:14):

> FA: / were they arrogant? (MD begins to speak) / cause I hear that CBS is usually

Example (2) (00:12:43):

> FA: is it easy to do commerce at RMIT? (MD: mm) / cause my cousin struggled with it - actually, she did finance and economics

Example (3) (00:12:54):

> FA: that's good — she found it difficult — she's like 'uh' / but she did finance and economics, just because she thought it was easy (MD: yeah I ...) she didn't know what she wanted to do so

In examples (1) and (2) in particular, it appears that FA is not only interrupting MD but adding more information to her question, since MD does not respond immediately. This leads to FA speaking at the same time that MD is initiating his response. Throughout the recording, MD and FA's utterance timing appear to be uneven, mostly due to the slow response time of MD and the relatively quick responses of FA. In contrast, while FD also responds significantly quicker than MD, overlaps are mostly avoided and the speaking tempo seems to be more in agreement between the two Danes. In general, FD's and MD's pauses between turns are longer, and longer silences are tolerated by both FD and MD.

B *Avoidance of Silence*

As Stivers et al. (2009) argue, English conversationalists do not wait for pauses to begin their turn. This can be observed in the conversation between MD and FA, and may further explain the high rate of overlaps. In order to avoid long silences, the English speaker often continued speaking, rephrased or repeated questions and sentences, when a non-immediate response from the Danish speaker was initiated. This may be interpreted as strategies to minimise the silence between turns. In the conversation between the two Danes, this phenomenon occurred less frequently since silences did not seem to trouble either of the Danes.

Example 1 (00:07:13):

FD: 'Men jeg ved ikke med ... jer hvordan gør i det?'

men	jeg	ved	ikke	med	jer
but	I	know	not	with	you.pl acc

'But I don't know about you guys ...'

hvordan	gør	i	det
how	do	you.pl nom	it

'How do you do it?'

This question is followed by a 1900 ms silence and illustrates the typical turn taking pattern between MD and FD. FD does not attempt to avoid the longer silence between turns.

Example 2 (00:14:54):

> FA: 'Wait what are you planning to do in commerce actually? Or you don't know yet?'

The second example demonstrates FA's attempt to avoid a gap between turns, by adding to her initial question, to both predict and facilitate MD's response.

In the majority of turn transitions for responses, all speakers did however make use of so-called 'filler words' (Carletta, Caley & Isard, 1995) to indicate hesitation and to signal that they needed more time to think about what to say next. Furthermore, visual cues form an important part of turn-taking methods but will only briefly be outlined here. In almost all instances, FA was looking at MD when asking a question, while neither FD nor MD appeared to hold the gaze when asking questions. The avoidance of gaze when asking questions might take the pressure off the listener to respond immediately. Distinct gestural features deployed by Danish interlocutors have been the subject of various studies (Paggio & Navarretta, 2011; Paggio & Navarretta, 2017), however this aspect will not be explored within the premises of this study.

V Discussion

The results of this qualitative study reaffirm that Danish speakers appear to have a higher tolerance of gaps between turns (Stivers et al., 2009). In addition, and by contrast, low tolerance with respect to silences was observable in the native English speaker, supporting the findings of previous studies (Stivers et al., 2009). However, FD demonstrated a very quick response time average, while MD's response time was significantly slower. This advocates for differences not only across cultures but within cultural groups.

Furthermore, gender differences may play a role concerning this observation. Maltz and Borker (1982) explored different conversational patterns between male and female speakers. They argue that women tend to ask more questions, which can be supported by the findings of this study, and may potentially impact on the average response time, since the male speaker was responding to more questions than the female speakers in both recordings. The tendency to ask more questions was viewed as a strategy to facilitate social interaction and the flow of conversation (Maltz & Borker, 1982).

In Roberts et al.'s (2015) study, sex was found to be somewhat important when investigating turn-taking systems. Male speakers were found to add a response delay of 70 ms to each turn, on average. Furthermore, silence between turns was found to be tolerated more by males as opposed to female interlocutors (Robert et al., 2015). Building on the assumption that male speakers appear to tolerate longer gaps between turns, the findings of this study may reinforce sex differences as a critical factor affecting response time between turns. Hence, the findings might have been completely different, if the conversational partners had been matched according to the same gender. Nevertheless, cross-cultural differences may also be relevant considering that FD seemed to tolerate silences between turns more so than FA. Responses were often initiated with filler words before a full response was delivered. These filler words, extending the language processing time, were often interrupted by the English speaker in interaction with the Danish participant. In contrast, the two Danish speakers accepted such filler words and anticipated the full response rather than adding to or rephrasing the question.

As mentioned in the literature review, syntactic systems of languages do not predict response time patterns. Again, questions in both English and Danish are identifiable from an early stage of an utterance, and thus would allow the listener to prepare responses quicker than in other languages. Yet, this does not appear to affect response time as seen in Stivers et al.'s (2009) analysis, as well as in the findings of this study.

Another striking finding of this study was that MD's response latency was almost 400 ms faster in interaction with the English native speaker. In general, longer gaps between turns have been associated as a typical feature of second language speakers, since the language processing time is naturally delayed (Gardner, 2007). This leaves us to wonder whether this result is random, or whether turn-taking methods, including response time, are assimilated to the one of the native speaker. There has been no research on whether such adaption takes place or affects response time.

However, in Ross' (2018) study on turn-taking between native and second language speakers, the L2 English speaker transferred turn-taking strategies from his native language (Japanese). Specifically, the L2 English speaker demonstrated an oversupply of backchannels. Backchannels can be defined as listener responses to show comprehension or interest, and can both be verbal and non-verbal (Ross, 2018). As such, Ross (2018) concludes that turn-taking methods signal a person's fluency in a language. Therefore, while the Danish speaker appeared to slightly decrease his response time, long silences were generally avoided or interrupted by the English speaker, signalling disagreement of turn transitions. As such, overlaps may have been amplified due to the female speaker's inability to predict the Danish speaker's response time or due to her rejection of long silences. Speakers across

different languages have been found to typically minimise the amount of overlaps in conversations (Stivers et al., 2009; Girard-Groeber, 2015). Overlaps between the Danish and English speaker were frequent, yet often short, which may explain the source of this clash as a result of intercultural communication and to better converse with MD.

Overall, this qualitative study provokes the need to reconsider Stivers et al.'s (2009) hypothesis of a universal system for turn-taking across languages. Specifically, it provokes the need to consider variation within cultural groups as well as the need to compare turn-taking systems between genders. Most importantly, this study provides ground to explore turn-taking systems of second language speakers. The findings from this study bring about the idea that second language speakers may potentially assimilate to the turn-taking system of the language spoken.

It is important to address the limitations of this study. The results may not be generalised due to the small number of participants. Nevertheless, the qualitative focus of this study is valuable as it is an in-depth analysis. Also, the emergence of a question for further study is a valuable contribution to the discourse.

VI Conclusion

In this study, the response time between two Danish speakers was analysed and compared to turn transitions between a native English speaker and a Danish speaker. The purpose of this qualitative study was to replicate Stivers er al.'s (2009) study of underlying universal patterns of turn-taking. While some of Stivers et al.'s (2009) findings were confirmed, others appear to challenge the assumption of a universal turn-taking system. Individual variation was recorded and analysed and may provoke further research directed at turn-taking patterns between sexes and between second language speakers and natives. The salient question thus emerges: do L2 speakers change or adapt their turn-taking pattern to the pattern used by the native speaker in conversation?

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EAT YOUR WORDS: HOW BRANDS TALK YOU INTO BUYING THEIR CHIPS

Henry Leslie-O'Neill*

We've all been there. You pop down to the corner store. Pick up a tasty packet of chips. Maybe *President's Choice*, maybe even *Cape Cod*. I mean hey, you deserve it. Get back to your room after that wearisome 100-metre walk. Crack open the pack, breathe in that sweet nitrogen. Have a peek into the bag to look at your reward and...

What the hell? It's like, barely even a third full! It's times like this where you just wonder what your money is going towards.

Well, what if I told you that what your money's really buying is something far less tasty, less crunchy, and more conventionalised-representational-system-of-communication-y. That's right folks, it's language.

On average, the more a packet of chips costs, the more words it will have in its description. That amounts to about 17 words per dollar. If you're really in it for the word count rather than the chips, shoot for *Miss Vickie's*, which leads the bunch at almost 29 words per dollar. However, if that's the case, maybe just buy a book – Joyce's *Ulysses* clocks in at over 26,500 words per dollar. If, on the other hand, you'd prefer to leave reading in school where it belongs and just want to maximise your chippage: *Noname* is your best bet, with a mere 8 words to get through.

On top of that, pricier chips tend to have rarer words. The more expensive brands use fancier words like 'robust' and 'lifestyle', while cheaper ones use shorter and more fun words like 'slam' and 'pals'.

Also, cheaper chips talk more about their cooking method whereas pricier chips focus more on the healthiness of their chips, where they were made, and how long they've been making them for.[1]

Of course, these connections might not be fully accurate. Just like how, as much as we might enjoy complaining about corporate greed, all that empty space in the packets is really just there to keep our chippies safe. There probably isn't a Consumer Rights organisation making sure that we get our dollars' worth of words on each chip packet. And it's probably not the case that expensive brands have rarer words *because* they're more expensive (although maybe that extra profit goes into linguistic R&D?). No, however, there is definitely something going on here.

* Originally submitted for the subject Sociolinguistics at the University of British Columbia in 2019, based on a study by Leslie-O'Neill and Elbagarri (2019).

[1] See Figure 1 for a plot of this correlation.

In their book *The Language of Branding*, Lerman, Luna and Morais (2017) talked about the importance of word choice on packaging:

> Packaging is the brand's skin, its outer shell, its face, and its voice to the potential buyer. [...] for packaging, marketers should choose words that are not only clear and succinct but, ideally, also distinctive so that they stand out from the brand's competition. (2017, p. 111-115)

So while there probably aren't direct connections between price and language, there's definitely an indirect one: language choices target different groups of people, and those people have different amounts of money.

A study by Freedman and Jurafsky (2011), which also investigated the language on chip packets, concluded that more expensive brands use fancier words and comparative phrases – like *best in America* or *less fat than other brands* (p. 50) – in order to appeal to upper-class tastes, nabbing those consumers with an extra few dollars to burn. They say:

> More expensive chips thus come wrapped in more complex language, presumably designed to draw a potential buyer into believing that the product is somehow consonant with his or her educational capital. (2017, p. 49)

Cheaper brands, on the contrary, use more common words, easier to read sentences, and alternative spellings like *eatin'* instead of *eating*. This is an effort to engage working-class consumers, who might have lower formal education levels and non-standard accents (Freedman & Jurafsky, 2017).

So, next time you're lamenting the wasted space in a chip packet, ask yourself why you chose this half-empty packet over that other one. Was it because of language?

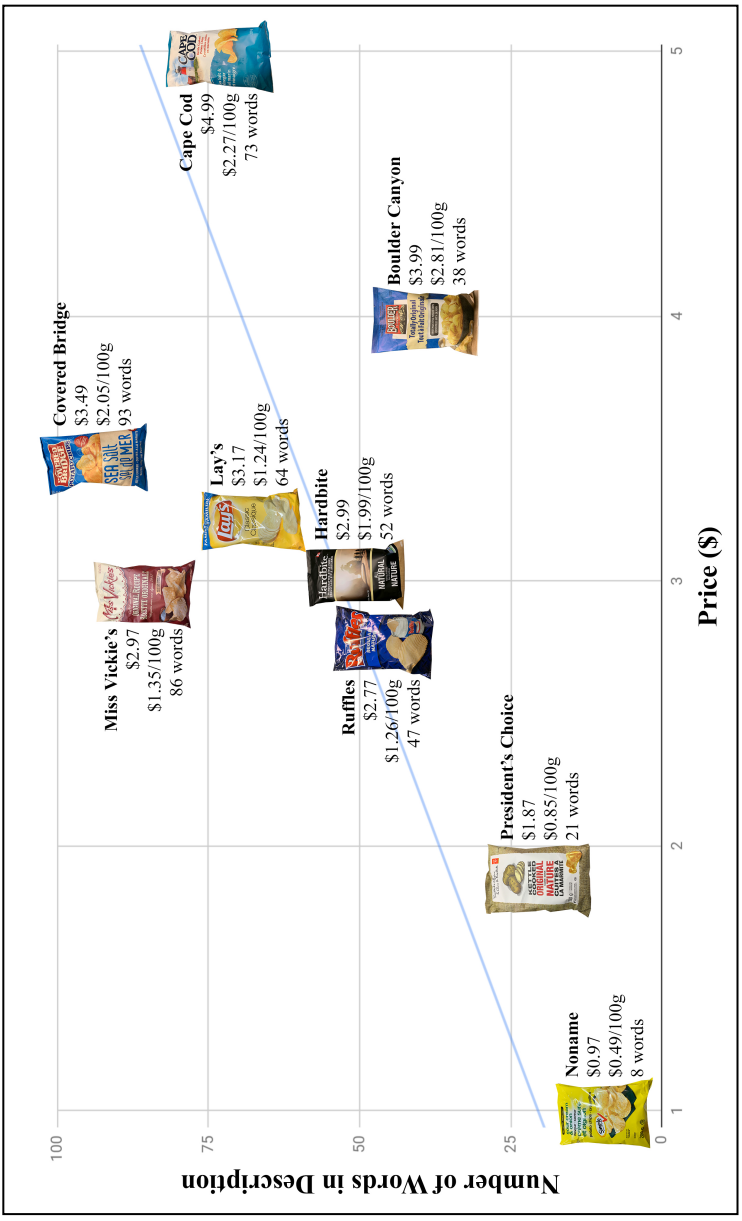

Figure 1 'Correlation between Number of Words and Price of Chips'

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