

A L S AUSTRALIAN LINGUISTIC SOCIETY

Annual Conference

The University of Newcastle, Australia 10 - 12 December 2014

Abstracts



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BRILL







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In particular, we would like to thank Kristy Atkins, Kristy Rocavert and Kara Waite for their assistance

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9-9.30		WELCOME	: – UNH416	
9.30-10.30		PLENARY – Dr Pia Lane, Ur	niversity of Oslo - UNH416	
10.30-11		MORNING TE	EA – 4th Floor	
	UNH419	UNH421	UNH416	UNH241
11-11.30	F. Cox et al	J. Bednall & R. Sitorus	W. Arka	E. Mayer
	Is there evidence for region	With many roles come many	Categorial multifunctionality in	From <i>lo</i> to <i>le</i> : Spanish clitic
	specific vowel variation in /hVd/	responsibilities: language	Flores languages: Descriptive,	systems on the move
	word list data from AusTalk?	centres and the implementation	typological and theoretical issues	
		of school and community		
		language programs		
11.30-12	G. Docherty et al	C. Bow	J. Moodie	A. Diez de Aux
	Variability in the realization of	Shoehorning Yolŋu language	Word-classes in Lopit – some	Second Language Acquisition of
	vowels in West Australian	names into the ISO 639-3	adjectives can be anything	the French clitic system
	English	standard.		
12-12.30	S. Kingstone	L. Green	B. Palmer	H. Peters
	A first look at the perceptual	'A living archive: celebrating	Marked absolutive or topic?	'Come dine with me': How do
	dialectology of Australian English	linguistic, biological, and cultural	Case and clefts in Mono-Alu.	Jamaican learners of French
		diversity through a botanical		express verb of movement
		garden'		constructions?
12.30-2		- HUNCH	4th Floor	

Wednesday 10 December - Morning

	UNH419	UNH421	UNH416	UNH241
2-2.30	D. Osgarby	S. Richard	B. Kelly et al	E. Piñeros
	The dative and genitive cases in	"And the next minute ":	The use of speech acts in	The phonological weight of
	Ngarnka and Wambaya: Another	Some sociolinguistic insights into	Murrinhpatha language	Spanish syllables
	case of demonstrative	the narrative uses of the Aust.	socialisation	
	encliticisation	Eng. present perfect		
2.30-3	R. Pensalfini & F. Meakins	J. Rendle-Short	L. Davidson	A. Herrero de Haro
	Gender bender: Disagreement in	Dispreferred responses when	The interactional significance of	Does /e/ split into four vowel
	Jingulu noun class marking	texting: Delaying that 'no'	repetition in children's	phonemes in Western Almeria?
		response	Murrinhpatha	Effects of /s/, /r/, and /θ/
				deletion in this variety of Eastern
				Andalusian Spanish
3-3.30	C. Bonnin	W. Chor	J. Vaughan & G. Wigglesworth	M. Delicado Cantero
	Intonation, prosody and the clitic	Epistemic modulations and	Codes and classrooms: The	The derivation of Spanish
	in Yukulta (Tangkic)'	speakers stance in Cantonese	interaction of home and school	preposition-complementizer
		conversations	language(s) in four Aboriginal	'conglomerates'
			communities	
3.30-4		AFTERNOON T	EA – 4th Floor	
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4-4.30	M. Carroll	S. Beer	M. Ellison & N. Fay	C. Travis
	Markedness vs. defaults: A note	Marriage of methods: Using	Morphological complexity	What do post-verbal subject
	on an organising principle of	Corpus Linguistics to inform	responds to multilingualism not	pronouns do in discourse?
	morphology. The case of stem	Discourse Analysis	age-of-acquisition	
	selection in Ngkolmpu.			
4.30-5	B. Collins	S. Alzahrani	M. Mathew et al	J. Hajek
	Squib on Polish Yers: An	Zahrani Spoken Arabic: Tense or	The use of prosodic gestures	To ISC or not to ISC – that is the
	overview of what we know, and	Aspect	during parent-child discourse	question. On allomorphy in so-
	how we got there		interactions	called –IRE verbs in Italian

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9-10	PLENA	RY – Professor Paul Smolensky, Johns Hopkins Univ	ersity - UNH416
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10.30-11	L. Stirling et al.	T. Ennever	R. Hendery
	The preposition <i>at</i> from a spatial	"We can't stop and we won't stop": A closer	Simulation of creole genesis: do we need the
	language, cognition, and information	look at the phonetic variation of Gurindji	concept of 'prestige'?
	systems perspective	obstruents	
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	Now and then in Australian languages:	Variation in fricative production by young adult	Contact-induced change in an Oceanic
	A semantic typology	Kriol speakers from Barunga NT	language: the Tok Pisin-Paluai case
11.30-12	7. Vo	R. Robinson et al	H. Koch
	An NSM approach to QUAN HË	Perception of intervocalic consonants in first	Reconstruction of kin terms in the Victorian
	('Relationships') and THÚ' BẬC	language by speakers of an Australian	languages
	('footings') as cultural schemata in	Aboriginal language and speakers of Standard	
	Vietnamese interactions	Australian English	
12-12.30	C. Goddard	F. Low et al	
	The lexical and grammatical semantics	Comparing the Acoustic Space of English and	
	of words for "surprise" and "interest"	Australian Languages using the Long-term	
	in English	Average Speech Spectrum	
12.30-1.30		LUNCH – 4th Floor	
1.30-2		Poster Session	

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	UNH416	S. Greenhill & N. Evans Dronoun paradiams concretism and	language phylogeny.	- -)		R. Mailhammer & M. Harvey	Towards Proto-Australian:	Gunwinyguan-Iwaidjan sound	correspondences		S. Kalyan	Intersecting subgroups in Indo-	European		1th Floor	UNH416	C. Chambers	Mixing middle men: The language	mixing practices and the expression of	possession in the medieval account	books of London trade guilds	A. Severin	When good linguistics goes bad:	Radical descriptivism on the internet		ı floor	416	avatorium of Music
	UNH421	S. Mandal et al Derceiving markedness: Dichotic	listening and hemispheric	integration in perceptual	processing	M. Wu	Perception of Cantonese tones	by native Mandarin Speakers:	the Influences of Native	Properties	T. Boyd	Literate adults and real word	lexical stress identification	outside minimal pairs	AFTERNOON TEA – Z	UNH421	L. Clark	Recency effects on word-medial	/t/ in New Zealand English			N. Kwon	The frequency code hypothesis	in counter-universal magnitude	symbolism	Book Launch – 4t	ALS AGM - UNH	Conference Recention – Conse
	UNH419	C. Travis & A. Lindstrom Subiart everaccion in snoken English:	Testing hypothesized genre differences	5		W. Marron	Online dating profiles of gay Asian men	and gay white men: Linguistic	expressions of identity, ethnicity, social	and sexual health.	S. Sherwood	The social distribution of potential	suffix allomorphs in Japanese verbs			UNH419	B. Palmer et al	Towards a typology of linguistic	expressions of spatial Frame of	Reference		J. Lum & J. Schlossberg	Computer-based elicitation games in	the field: The Virtual Atoll Task				
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10.30-11	Q. Hussein et al	N. Fay & T.M. Ellison	I. Mushin
	Do temporal and spectral measures	Human communication systems evolve via	Clause-initial or turn-initial?: Grammar,
	differentiate the contrast between Punjabi	cumulative cultural adaptation: an empirical	conversation and the Garrwa particle ngala.
11-11.30	A. German et al	E. Round & J. Macklin-Cordes	B. Collins
	Perceptual analysis of epenthetic 'r' in	Next-generation typological variables: from	Aspectual variation in Ngandi narratives
	linking and intrusive contexts in Australian	theory to practice, and back again	
	English		
11.30-12	J. Clothier	A. Schembri et al	K. Horrack
	Heading south: a comparison of the	Directionality in British Sign Language is not	Benefactives and external possession in
	phonetic realisation of word final -er	obligatory: The importance of corpus data	Wubuy: Marking the affectedness of
	between Anglo-Celtic and Lebanese heritage	when considering "agreement"	alienable possessors
	groups in Melbourne		
12-12.30	B. Volchok	S. Ishihara	R. Nordlinger
	Intergenerational vowel change in several	A Comparative Study of Likelihood Ratio	Incorporation and polysynthesis in the Daly
	Russian-English speakers	Based Forensic Text Comparison in	
		Procedures:	
12.30-2		LUNCH – 4th Floor	

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2-2.30	C. Patterson & W. Steed	A. Azkarai & M. del Pilar Garcia Mayo	I. Giblin
	Cans from Cairns: Australia's latest	L1 use/functions by child EFL learners during	Prosodic disambiguation of in-situ wh-
	phonological development	task-based interaction	phrases
2.30-3	J. Mansfield	N. Yoshimura et al	G. Windschuttel
	The integration of English phonology into	Binding in L2 English infinitives revisited	Switch-reference and the subject in Yagaria
	Murrinhpatha		
3-3.30	E. Round et al	S. Alqahtani	A. Naess
	Yidiny final deletion is not conditioned by	The effect of motivational strategy training	Topic, focus and theme: Two levels of
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		behaviours	
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	Acoustic correlates of stress in Kaytetye	Threshold concepts in linguistics: a case	Verbal "arts of memory" in south-eastern
	words	study	Australia: Retracing the poetics of song in
			the Hunter River-Lake Macquarie language
4.30-5	F. Cottet et al	W. Steed & W. Pearce	C. Grant
	Lectal variation in the pronunciation of	Phonological awareness for linguistics	Vital signs: Adapting language vitality &
	prestopped nasal phonemes in Kaytetye	teaching	endangerment tools to assess music
			endangerment

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Presenters

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Plenary sessions

Indefinite NPs in Austronesian languages: specificity, referentiality and mood.

Isabelle Bril (LACITO-CNRS, LABEX EFL)

Indefinites have to do with types of referential status in discourse. Strategies for indefinite reference generally differ along the parameter of specificity. Some languages encode reference to kind, generic and other non-specific indefinite entities with bare nouns, others restrict bare nouns to kind and generics, and use distinct ±specific indefinite articles for other types of indefinites. Reference to real world existence is another parameter at work; existential predication commonly introduces specific indefinite referents (especially subject NPs) in discourse; some languages also display a distinct paradigm of non-referential pronouns or determiners referring to unknown, unexperienced entities with uncertain existence.

Whatever the strategies used, reference to kind and non-specific indefinites remains distinct from specific indefinites. Non-specific indefinite articles often correlate with mood (in irrealis, conditional, future, imperative, optative clauses), and with unasserted propositional content in interrogative, negative or negative existential clauses.

Indefinite pronouns ('somebody/thing') display mixed strategies using an array of markers, interrogative WH- pronouns or ontological nouns together with existential constructions, non-specific articles, or general classifiers. As for free choice pronouns and determiners ('any X', 'WH-ever), they create a distributive scale with scope over a set of variables expressed by plurality, universal quantifiers, and various other strategies such as reduplicated WH-pronouns, distributive markers, reinforced by inclusive-additive scalar morphemes ('even, too'), or by disjunctive markers which create sets of alternate variables.

Since free choice forms and non-specific indefinites operate on free variables and potential referents, they often associate with epistemic or irrealis morphemes.

A typology of the various strategies expressing indefinite NPs will be outlined.

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Catch me if you can: Minority language standardisation, variation and codification

Pia Lane (University of Oslo)

Developing a standard for a minority language is not a neutral process; this has consequences for the status of the language and how the speakers relate to the new standard. An inherent problem with standardisation is whether speakers will accept and identify with the standard chosen (Gal 2006, Lane in press). Standardisation changes the conditions and scope for human agency, and therefore, social actors are key factors when standardising minority languages. In order to address how minority language speakers relate to standardisation processes I will analyse the role of users in the standardisation of Kven, a Finnic minority language spoken in Northern Norway. Kven got recognised as a language in 2005. Influenced by the global focus on language revitalisation and the new status of Sámi and minority languages in neighbouring countries, many Kven now wish to reclaim their language, and currently, a written standard is being developed. An analysis of social practices show how speakers embrace, accept and contest discourses of revitalisation and language standardisation to varying degrees and for a wide range of reasons (Lane 2011, in press).

Drawing on Woolgar (1991) I will argue that users get inscribed in standards though the choices made by those who are involved in the design and production of standards and that these choices both set constraints on likely future actions of users and open up scope for future actions. A written text can be seen as the material outcome of a standardisation process and a result of a chain of actions made by several social actors. By focusing on the material outcomes of some of the linguistic choices made by the actors involved in the standardisation process and how potential users relate to the standard, we see how users are configured through the standardisation process and also how they in turn may influence and shape standardisation processes, through embracing, resisting and even rejecting (aspects of) standardisation.

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Gradient symbolic representations governed by soft-constraint grammars

Paul Smolensky (Johns Hopkins University)

Grammars defined by "soft" or violable constraints have proved useful within the cognitive science of language, especially in areas related to phonology. Soft-constraint grammatical frameworks are based in neural network models, where connections between abstract neurons encode knowledge in the form of such soft constraints. I have thus argued that the brain has an essential role in explaining the form of grammatical knowledge. Until recently, however, potential implications of neural networks models for the form of linguistic *representations* have not been pursued. In this talk I will describe Gradient Symbolic Computation, situating it with respect to current soft-constraint grammar formalisms, Optimality Theory (Prince & Smolensky, 1993/2004) and Harmonic Grammar (Legendre, Miyata & Smolensky, 1990 et seq.). I will illustrate the new approach with a rather extensive analysis of the well-studied liaison phenomena of French phonology. The new proposal is that certain ('liaison') consonants are gradient segments, only weakly present in lexical forms, entailing that they will only appear in surface pronunciations in special environments that provide additional activation to these segments. This proposal accounts for a wide range of core and peripheral liaison phenomena that has not previously been explicable within a single theory. It accomplishes this coverage by deploying gradience to blend two competing previous approaches into a single account. The novelty in the general approach is that it centrally deploys symbolic structure while allowing symbols to be only partially present, and to be blended at a single structural position. The notion of gradient phonology being developed is related to, but entirely distinct from, gradience in phonetics.

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General sessions

The effect of motivational strategy training on Saudi EFL teachers' motivational behaviours

Saleh Alqahtani (Newcastle)

Empirical investigations into possible changes in teachers' behaviours as a result of training in the implementation of some foreign language (FL) learning motivational strategies over others are a recent trend in the field of FL learning motivation. The present study examines the effects of motivational strategy training on teachers' verbal and non-verbal immediacy, motivational teaching style, and credibility behaviours. The present is only the second investigation of this kind conducted in the Saudi context. The participants were 10 English as foreign language (EFL) teachers. Two instruments were used to assess the EFL teachers' motivational practices before and after an 8-week treatment: a classroom observation protocol and a post-lesson evaluation. The teachers in the experimental condition were trained in the implementation of pre-selected motivational strategies. The ANOVA and ANCOVA results revealed that a significant positive change occurred in the non-verbal and verbal immediacy, teaching style, and credibility behaviours of the teachers in the experimental group. This change has also resulted in significant differences in these behaviours between the teachers in the experimental group and those in the control group at the end of the treatment period. The results may have implications for teacher training and the research design of future investigations into the effects of the motivational strategies deployed by teachers on student motivation and FL proficiency.

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Zahrani Spoken Arabic: Tense or aspect

Salih Alzahrani (Newcastle)

It has been argued that Arabic verbs show aspect (see, e.g., Bateson, 2003; Fischer, 2002; Wright 1859/1996). Some other linguists such as Aartun (1963), Wightwick and Gaafar (1998) and Benmamoun (2000) suggest that the Arabic verbal system is time-based and argue for the presence of tense in Arabic regardless of the type of tense.

I suggest that Zahrani Spoken Arabic (ZSA), a Saudi dialect spoken in the southern region of Saudi Arabia, shows to contain aspect. ZSA shows perfective/imperfective aspect.

- (1) a. *Ali katab risa:lah* Ali write.3SGM.PFV letter.SGF 'Ali wrote a letter' OR 'Ali has written a letter.'
 - b. *Ali jimkin katab risa:lah* Ali may.MOD write.3SGM.PFV letter.SGF 'Ali may have written a letter.'
- (2) a. *Ali ji-ktub risa:lah* Ali 3SGM.IPFV-write letter.SGF 'Ali writes/ is writing a letter.'
 - b. *Ali ka:n ji-ktub risa:lah* Ali BE.3SGM.PFV 3SGM.IPFV-write letter.SGF 'Ali was writing a letter.'
 - c. *Ali jimkin ka:n i-ktub risa:lah* Ali may.MOD BE.3SGM.PFV 3SGM.IPFV-write letter.SGF 'Ali may have been writing a letter.'

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Categorial multifunctionality in Flores languages: Descriptive, typological and theoretical issues

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This paper discusses descriptive, typological and theoretical issues raised by the categorial multifunctionality of words in Flores languages, Indonesia. The languages of Flores are all typologically isolating, with those in western-central Flores like Rongga, Ngada, and Keo being extremely isolating. Categorial multifunctionality is pervasive and observed at the broadest level (e.g. in the distinction of nouns vs. verbs vs. adjectives) and also at lower levels within certain classes (e.g. intransitive vs. transitive verbs). For example, the same word form *ka* in Rongga and Keo is used predicatively meaning 'eat' (as a verb) and nominally to mean 'food'. In other AN languages with rich morphology, such as Indonesian, the nominal/referential function would require morphological derivation; e.g. with *-an* (<PAN): *makan* 'eat' \rightarrow *makan-an* 'food'). The same form *ka* is also used in adjectival/modifier functions, as in *meja ka* 'dining table' (for which a language like English would require categorial derivation). This phenomenon, while perhaps expected to be the hallmark of isolating languages, poses descriptive, typological and theoretical challenges in linguistics.

On the descriptive-typological level, the paper will discuss the traditional notion of word classes and typological/language-specific criteria used for this in Flores languages. The paper will argue for the following points: i) Flores languages do have major word classes, at least nouns vs. verbs, despite lack of morphological evidence; (ii) multifunctionality is a lexical and language-specific property; and (iii), related to (ii), typologically, Flores languages do not They organise word classes, including categorial a homogenous group. form multifunctionality, differently. For example, unlike Rongga and Keo, the cognate form ka in Lio is strictly a verb, as in (1a). It is not multifunctionally used as a noun, because it must be analytically nominalised by the particle *ola* if it is used referentially to mean 'food', as in (1b). In addition, a property- denoting word like 'small' is an adjective in Lio and Ngadha but a verb in Keo and Lamaholot, and the word meaning 'new' is a noun in Lamaholot (Nagaya 2011:176), but it is a different word class in other Flores languages. The differing categorial organisation of equivalent words in neighbouring languages of the same genetic affiliation raise intriguing questions about the history of these languages, a point not discussed in this paper.

On the theoretical level, the paper will address the implication of the empirical points just described for grammatical theory in relation to the nature, conception and role of categorial information in the phrase structure of Flores languages and beyond. For example, assuming a modular parallel-based model of grammar as in LFG (Bresnan 2001, Dalrymple 2001), the question to address is to what extent we allow categorial underspecification and mismatches in terms of categorial information in syntax and the lexicon, and how analytical nominalisation of the type exemplified in (1b) from Lio can be precisely analysed. The proposed analysis will adopt a version of X-bar theory in syntax which allows the optionality and categorial underspecification of lexical heads, enabling us to capture a range of mismatches, especially in nominal structures, consistent with Foley's work (Foley 2008, 2014).

(1)	a.	Aku	ka	are	b	Каи	wiki	ola	ka	aku	(Lio)
		1SG	eat	rice		2SC	take	NOML	eat	1SG	
		'I eat	rice			'Yo	u take	my	foo	d.'	

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L1 use/functions by child EFL learners during task-based interaction

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Research on second language (L2) child task-based interaction has shown that, as adults, children also receive many opportunities to negotiate for meaning and feedback on their production, which leads them to modify their output (Oliver 2002). The majority of these studies has been mainly carried out in English as second language (ESL) settings but little is known about the potential benefits of task-based interaction among young learners in English as foreign language (EFL) contexts, where the hours of exposure to the target language and the opportunities to practice it outside the classroom are scarce (García Mayo and García Lecumberri 2003). Although task- based interaction has been shown to promote L2 learning, some teachers are still reluctant to allow their students to work in pairs or small groups, as they feel they are going to make use of their shared first language (L1). When L2 learners share an L1, it is highly likely that they will make use of it, but research on both ESL (Storch & Wigglesworth 2003) and EFL settings (Azkarai & García Mayo 2014) has shown that a balanced L1 use has positive effects for L2 learners. Research on EFL children and L1 use is, however, basically non-existent.

Thus, the main aim of this paper is to explore L1 use and the functions the L1 might serve considering possible differences related to age and task-repetition. The participants in this study were 74 Spanish EFL young learners (ages 7-8, 8-9) who worked in pairs while completing a spot- the-differences task. The data collection took place twice at two testing times (T1 and T2) with a difference of 4 months. Table 1 provides all the details about the dyads. Several L1 functions were identified in the database: clarification request, confirmation check, lack of knowledge, phatics, repetition, task management and vocabulary search, as Table 2 shows. The most common functions the L1 served in both grades and testing times were vocabulary search and clarification request. The least common functions in both grades and times were confirmation check and lack of knowledge. Significant age- and task-repetition effects were found: regarding the former, at T1 4th A students employed their L1 significantly more than 3rd A students. The analysis of task-repetition effects showed that 3rd B students and 4th grade students employed their L1 more frequently at T1 than at T2, that is, the amount of L1 use decreased over time, especially among the older population of these students. However, as detailed in Table 3, only a few age- and task-repetition differences were found with respect to the functions the L1 served and only at T2.

Like previous research conducted with adult EFL learners, the findings in this study suggest that a balanced L1 use could assist these young learners during task-based interaction and help them move the task along. Also, the findings seem to indicate that repeating a task might make young learners aware of the need to use the target language (English, in this case) instead of their L1.

Grade	Age	Group	T1	T2	Number of	AoA English
					dyads*	(Mean)
3 rd	7-8	А	StD Cowboy - 4 differences	Same task as in T1	11	4.5
		В	StD Cowboy - 4 differences	StD Child - 4 differences	5	4.82
4 th	8-9	А	StD Cowboy - 5 differences	Same task as in T1	10	4.15
		В	StD Cowboy - 5 differences	StD Child - 5 differences	11	4.22

Table 1. Group details and task information

Note. StD = Spot-the-differences; AoA = Age of Acquisition

* Groups were comparable as the differences between groups were analysed on the basis of the proportion of total number of utterances containing L1 produced to the total amount of utterances produced per group.

			3 rd Grade			4 th Grade			
		Α	В	TOTAL	Α	В	TOTAL		
Total number	T1	510 (46.36)*	303 (60)	813 (50.81)	646 (64.6)	622 (56.54)	1268 (60.38)		
of utterances	T2	566 (41.45)	272 (54.4)	838 (52.37)	608 (60.8)	781 (71)	1389 (66.14)		
T 1	T1	142 (27.84%)	87 (28.71%)	229 (23.08%)	232 (35.9%)	177 (28.46%)	409 (32.25%)		
L1 utterances	T2	158 (27.91%)	46 (16.91%)	204 (24.34%)	164 (26.97%)	156 (19.97%)	320 (23.04%)		
T	T1	1:37:57	0:43:59	2:21:56	1:17:46	1:18:30	2:36:16		
l esting time	T2	1:23:34	0:29:17	1:52:51	1:23:01	1:36:40	2:59:41		
Clarification	T1	45 (31.69%)	16 (18.39%)	61 (26.64%)	68 (29.3%)	39 (22%)	107 (26.16%)		
request	T2	39 (24.68%)	15 (32.6%)	54 (26.47%)	47 (28.66%)	46 (29.5%)	93 (29.06%)		
Confirmation	T1	7 (4.93%)	1 (1.15%)	8 (3.49%)	7 (3.02%)	9 (5.08%)	16 (3.91%)		
check	T2	4 (2.53%)	1 (2.17%)	5 (2.45%)	9 (5.48%)	11 (7.05%)	20 (6.25%)		
Lack of	T1	6 (4.22%)	2 (2.3%)	8 (3.49%)	10 (4.31%)	-	10 (2.44%)		
knowledge	T2	7 (4.43%)	2 (4.35%)	9 (4.41%)	4 (2.44%)	4 (2.56%)	8 (2.5%)		
	T1	10 (7.04%)	14 (16.09%)	24 (10.48%)	27 (11.6%)	25 (14.1%)	52 (12.71%)		
Phatics	T2	7 (4.43%)	1 (2.17%)	8 (3.92%)	6 (3.66%)	7 (4.49%)	13 (4.06%)		
D	T1	5 (3.52%)	4 (4.6%)	9 (3.93%)	17 (7.33%)	15 (8.47%)	32 (7.82%)		
Repetitions	T2	9 (5.7%)	3 (6.52%)	12 (5.88%)	18 (10.98%)	9 (5.77%)	27 (8.44%)		
Task	T1	7 (4.93%)	10 (11.49%)	17 (7.42%)	8 (3.45%)	14 (7.91%)	22 (5.38%)		
management	T2	21 (13.29%)	4 (8.7%)	25 (12.25%)	12 (7.32%)	19 (12.2%)	31 (9.69%)		
Vocabulary	T1	62 (43.66%)	40 (45.98%)	102 (44.54%)	95 (40.9%)	75 (42.4%)	170 (41.56%)		
search	T2	71 (44.94%)	20 (43.5%)	91 (44.61%)	68 (41.46%)	60 (38.5%)	128 (40%)		

Table 2. Total number of utterances, L1 use, testing time and functions the L1 served in both grades and testing times

* Numbers in brackets in these rows indicate the average of total number of utterances per group

Table 3. Summary of significant findings

Age effects	Task-repetition effects
T1: $4^{th} A > 3^{rd} A$	3^{rd} B & 4^{th} grade: T1 > T2
	3^{rd} B & 4^{th} grade: T1 > T2
	3^{rd} A: T2 > T1
	Age effects T1: 4 th A > 3 rd A

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With many roles come many responsibilities: language centres and the implementation of school and community language programs

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Aboriginal Language Centres play a unique role in the Australian linguistics community, interacting between academic linguistic research and community-based language revitalisation and maintenance efforts (Sharp & Thieberger 2001, p. 325). A fairly generic mission statement of many language centres is 'to document, revitalise, maintain and advocate on behalf of Australian Aboriginal languages'; an ambitious objective that necessitates the delivery of a diverse set of projects and programs.

The area of language revitalisation and maintenance is particularly complex and requires language centres to make strategic decisions to best suit the language community in question. This paper seeks to continue the discussion of language revitalisation and maintenance strategies undertaken by Australian language centres (cf. Dixon & Deak 2010; Marmion 1994; Olawsky, forthcoming; Truscott, forthcoming), addressing the duties of language centres in designing, organising, implementing and supporting language revitalisation and maintenance strategies in the contexts of community-directed programs, as well as school-based programs under the direction of the Department of Education and Training (DET).

Taking the Bundiyarra – Irra Wangga Language Centre (BIWLC) as a case-study, we consider the responsibilities that language centres have in the delivery of community-directed language revitalisation strategies, and how these can be realistically achieved; and what roles language centres have in assisting language programs implemented by the DET, including how they can be further involved in the curriculum design process to provide knowledge and expertise that is freely available for other LOTE subjects. These topics will be discussed in consideration of the pressures of staffing and budgetary restraints, and the complex and delicate issue of having to cater to the many different (and often conflicting) priorities and opinions held by various people and organisations in the local and wider communities.

In this paper we make a number of recommendations for the efficient organisation and implementation of community and school-based language programs that best prioritise the limited resources of language centres; and pose some difficulties faced, based on programs that are either currently being utilised or are in the process of being implemented at BIWLC. We suggest that many of the issues faced by language centres in establishing and running language revitalisation programs can be alleviated by establishing mutually beneficial and collaborative relationships with multiple individual and corporate bodies, and by establishing the language centre as the apparent and *de* facto central reference point for language-oriented activity in the community.

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Marriage of methods: Using corpus linguistics to inform discourse analysis

Samantha Beer (Monash)

This paper discusses the use of corpus linguistics methods to inform discourse analysis. The advantages of this combinatory methodology are discussed in the context of a project analysing discourses around indigenous education policy in the Northern Territory. This project attempts to analyses a large number of texts from various genres, within the period 2008-2014. Using corpus linguistics methods, it is possible to systematically compare core groups of texts to a reference corpus of Australian web-based writing about education, and to each other. Without this methodology, the man-hours required to deal with such a large quantity of data would be prohibitive. This methodology provides a quantitative basis for further detailed qualitative analysis. This research is ongoing.

Corpus linguistics methods have been used within a discourse analytical framework previously by Baker et al. (2008) to investigate representations of refugees and asylum seekers in the UK press, and a host of others (see Wang 2013). Corpus linguistics methods were generally employed to identify representative texts for further analysis.

This project builds on this approach by incorporating texts from different genres. This paper compares newspaper articles to those from web-based independent media such as Crikey, New Matilda and The Conversation. This choice of genres was partly informed by The Media and Indigenous Policy Project (McCallum et al. 2012; Waller 2013, 2012a, 2012b).

The program used to conduct this research is AntConc (Anthony 2011), which includes useful tools for language analysis. Word list and keyword list compilation allows for quick access to most commonly occurring, and most distinctive words within a corpus. Concordance and collocate finding assists with contextualising and verifying the significance of results. AntConc also includes an option for file view, where results can be seen in the original text file within the program. This capability means that more detailed analysis can feasibly be conducted within this program.

Within the group of articles from The Australian newspaper, the words failed, failing and failure all have relatively high keyness values. Looking at collocates for failed, which has a keyness value of 93.975 and a frequency of 56, can give useful insights into the way in which social actors are being portrayed. Most frequently it is the 'system' or aspects of the system such as 'parliamentary representatives', 'teachers', even 'billions spent' that have *failed*. This complicates previous observations that aboriginal people are constructed as failures in mainstream media (Goodall & Jakubowicz 1994). However, bilingualism and bilingual schools also failed. Additionally, 'children' and 'indigenous eight-year-olds' failed once each, 'students' failed twice, but were also 'being failed' once. 15 instances of failed occur in the writing of Nicholas Rothwell, seven of these in one article entitled 'The Failed State' (Rothwell 2009) referring to the Northern Territory. This indicates that the article is a good candidate for more detailed analysis. Comparatively, in the corpus of independent media, *failed* has a much lower keyness value of 25.789, occurring only 18 times despite the corpuses being of a similar size. This indicates that The Australian is more likely to construct events in terms of failure than independent web-based media. This brief overview of results related to the key word *failed* gives an insight into how corpus methods assist in carrying out discourse analysis.

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Intonation, Prosody and the Clitic in Yukulta (Tangkic)

Cicely Bonnin (Queensland)

In this paper I present observations about intonation in Yukulta (Tangkic), based on the first such study to use modern instrumental techniques. Instrumentally-based characterisations of Yukulta pitch contours are very similar to Keen's (1972) impressionistic analyses of the same recordings. I then use modern Autosegmental-Metrical Theory (Ladd, 1996) to develop hypotheses on the tonal inventory and prosodic hierarchy, as well as on the phonological status of the clitic in this language.

A simple high (H*) pitch accent is generally non-prominence lending. When it associates with the first unit of an utterance (1), it consists of a rise from the onset of the initial lexically stressed syllable to a pitch peak within that syllable or the next (a delayed high, marked as "<", after Bishop & Fletcher (2005)). In non-initial position, this tone is downstepped (!H*) (1). The vast majority of simple high pitch accents have a very narrow pitch range. However, a downstepped simple high tone with a contrastive expanded pitch range appears to mark focus in phrase-final position (2).

The simple upstepped (^H*) pitch accent can associate with any prosodic phrase besides the first in an utterance (3). Utterances with this accent never contain more than one; the accent always occurs with an expanded pitch range. Each token marks relatively high semantic weight. This is a case of culminativity, suggesting that the simple upstepped pitch accent associates with the most prominent unit in the utterance, and that this prosodic unit is the head of the unit by which it is dominated.

At least two types of boundary tones are distinguishable, with a low boundary tone marking the right edge of utterances regardless of syntactic structure. A high boundary tone can mark the right edge of an intonational phrase coterminous with a fronted and topicalised subordinate clause (3). The evidence suggests Yukulta has at least four prosodic constituency levels above the level of the word, a clitic group, phonological phrase, intonational phrase and utterance (3).

Phonological tests to distinguish clitics from independent words are frequently unreliable (Zwicky, 1985). Cross-linguistically, clitic elements tend to be treated for stress assignment as belonging to either the same phonological word or the same phonological phrase as the host to which they attach (Nespor & Vogel, 1986). In Yukulta, utterance-final clitics of 1-2 syllables can associate with prominence or non-prominence lending pitch accents (with pitch peak aligned with the first syllable) or with no pitch accent. Lexical stress alignment in clitics is unclear, but I propose solutions, making reference to stress assignment in Warlpiri suffixes (Nash, 1980) and Round's (2014) new morphological analysis of the Yukulta clitic.

Intonation in Australian languages has received little detailed attention (Bishop & Fletcher, 2005). Studies on prosody and prosodic typology are rare more generally (Jun, 2005). Observations on pitch accents and prosodic properties of the Yukulta clitic enrich this scant literature, and cast light on prosodic patterns in language and their phonological basis.

Figures

(1) *Gamburija=nyi.* 'You're talking.' (KEEN_S06-1701A, 29.4s, spect. 0-5000 Hz)



(2) Guya=nyi wurlankurlu? 'You got

spect. 0-5000 Hz)

tucker?' (KEEN_S06-1154B, 1080.7s,

(3) *Dathina=ngga danggara wirdija, ngaga dathinma dangga?* 'That man sitting over there, who's he?' (KEEN_S01-1153B, 964.1s, spect. 0-5000 Hz)



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Shoehorning Yolyu language names into the ISO 639-3 standard

Cathy Bow (Charles Darwin)

The identification and naming of languages is a highly contested issue. While standardisation is a useful goal to provide consistency and facilitate discoverability, any system chosen is unlikely to adequately capture the many distinctions and naming practices in existence. The appointed international standard ISO 639-3, which forms the basis for the OLAC recommendation on language identification in language resource description, is used by many archives and language documenters. Its simple flat structure is useful for many purposes, yet it also masks a number of complexities, and in some cases creates problems. Different users may have different requirements to suit their own purposes, and will often seek to reflect the nomenclature and distinctions used by the particular speech communities in focus. There are avenues for proposing changes to the ISO standard, however the lack of transparency involved in the assessment of these requests has provoked criticism of the registered authority (e.g. Morey at al, 2013).

The complexity of situations such as that of the Yolŋu languages of North East Arnhem land is not well reflected in the current ISO 639-3 standard. Yolŋu languages are often grouped according to the word used for 'this' (e.g. Dhuwal, Dayi, Djangu, etc), of which 7 have codes in the ISO standard. Three languages which are widely used and taught in schools (Gupapuyŋu, Gumatj, Djambarrpuyŋu) also have their own ISO codes, however these languages belong to the wider groupings (i.e., Djambarrpuyŋu is a Dhuwal language; Gumatj and Gupapuyŋu are Dhuwala languages). Other languages which have descriptions and published literature do not have their own codes, and are subsumed under the higher level languages – for example both Wangurri and Warramiri come under the ISO code of Djangu [dhg]. The widely accepted name used for the collection of these languages – Yolngu Matha – also does not have its own code.

The rich set of literature that is being digitised and made available online in the Living Archive of Aboriginal Languages (<u>www.cdu.edu.au/laal</u>) includes a range of books in many of these smaller languages which do not have their own ISO codes. Ideally users should be able to search or browse for itemsusing a broad term such as Yolngu Matha, a collective term such as Dhuwal, or a specific name such as Liyagawumirr, however the limitations of the ISO 639-3 standard do not allow this. Requests to change the codes in ISO 639-3 have so far proven unsuccessful.

This paper will present an outline of Yolyu language naming practices, and some of the issues that have arisen in the attempts to manage this complexity in the context of a multilingual digital archive. It will explore efforts to reach an agreed standard which is functional not just for the Living Archive project but more widely for people working in this area, as well as adequately and accurately representing how speakers of these languages view this typology

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Now and *then* in Australian languages: A semantic typology

Eliza Bowen (Western Australia)

This paper proposes a semantic typology of temporal morphemes in six Australian Indigenous languages. These morphemes cover meanings expressed by the English adverbs *now* and *then*. Previous research on two unrelated Australian languages, Panyjima (Ritz et al., 2012) and Jaminjung (Ritz & Schultze-Berndt, 2012), suggests that these languages possess temporal morphemes which cannot adequately be translated as either *now* or *then* in English, but rather combine features of both *now* and *then*. They are capable of introducing temporal progression, contrast, and new topics, and of coinciding with time of speech as well as any other established time.

Temporal morphemes encoding the meanings of English *now* or *then* in different ways have been described for a number of languages. For example, Korean has two words corresponding to English *now: cikum* and *icey*. These had previously been seen as interchangeable, but Lee and Choi (2009) make a case that in a discourse context *cikum* signals elaboration (with no temporal movement; 1a), while *icey* introduces temporal progression and implies contrast (1b). The implication of contrast is also relevant in distinguishing the three Russian adverbs translated as *now: teper'* suggests contrast to a previous time, *nynče* to some unspecified time, and *sejčas* lacks any sense of comparison (Gladkova, 2012). Likewise, for Norwegian's two *then* words, temporal progression differentiates *så* ('and then') from the temporally overlapping *da* ('at that time'; Fretheim, 2006).

These languages show cross-linguistic variation in morphemes corresponding to English *now* and *then*, but the Panyjima and Jaminjung morphemes suggest yet a different sort of variation. In Korean, Russian, and Norwegian, as in English, words for *now* are distinguished from words for *then* by the primarily deictic function of the former (Hunter, 2012:371). In Panyjima, however, the clitic =*rru* is glossed as *now* but can combine with all tenses (Ritz et al., 2012:70; 2). A similar clitic in Jaminjung, =*biyang*, shows no preference for any tense once data are adjusted for overall tense frequency (Ritz & Schultze-Berndt, 2012:12).

These data suggest that it is of interest to further explore *now* and *then* morphemes in Australian languages to establish how they encode temporal information and discourse progression. In order to find out any patterns and differences between languages, this paper builds on work carried out on Panyjima and Jaminjung, proposing a typology of these types of morphemes. Data will be taken from published grammars and narrative texts for six such languages, selected to represent a range of families and geographical regions: Bardi (Bowern, 2012), Jiwarli (Austin, 1997), Kuku Yalanji (Patz, 2002), Mawng (Singer, 2006), Ngiyambaa (Donaldson, 1980), and Warlpiri (Swartz, 1991). As discourse context is crucial in analysing *now* and *then* morphemes (Lee & Choi, 2009:92), the availability of materials also influenced the choice of languages. Morphemes translated as *now* or *then* will be categorized using the following parameters:

- the tenses they combine with;
- whether they can express temporal progression or temporal overlap;
- whether they are used to introduce or maintain topics; and
- whether they regularly imply a contrast or not.

This paper will report on the results and discuss them within the broader context of the semantics and pragmatics of temporal morphemes.

(1) a. *Swuhye-nun amwu soli-to tuli-ci anh-ass-ko casin-i* Swuhye-TOP no sound-also be heard-NEG-PST-and self-NOM

> *cikum ttuy-ko iss-ta-nun nukkim-cocha tul-ci ahn-ass-ta.* **now** run-PRG-DEC-RL feeling-even enter-NEG-PST-DEC 'Swuhye could not hear any sound and could not even feel that she was **now** running.'

b. *Minswu-nun say os-ulo kalaip-ess-supnita. Ku-nun* Minswu-TOP new clothes-into change-PST-DEC he-TOP

icey wancenhi mosup-i pakkuy-ess-supnita. **now** completely appearance-NOM be changed-PST-DEC 'Minswu changed into new clothes. **Now** his appearance had changed completely.' (Korean: Lee & Choi, 2009:94, 96)

- (2) a. *nyinta ngarlungu kati-nha wila-ngka-rru*... 2sgNOM bottle.ACC take-**PAST** shoulder-LOC-**NOW** 'You carried the bottle on your shoulder [*-rru*].' (past tense)
 - b. *tharni-wali nyinta yana-ku-rru*? where-ALL 2sgNOM go-**PRES-NOW** 'Where are you going **now**?' (present tense)
 - c. *kutiya-la-layi* wilarra-la wanmartarri-ku-**rru** mana-**rta** other-LOC-TAS moon-LOC puppies-ACC-**NOW** get-**FUT** 'In another month, we'll get puppies **now**.' (future tense)

(Panyjima: Ritz et al., 2012:50, 54, 56)

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Literate adults and real word lexical stress identification outside minimal pairs

Talisha Boyd (James Cook)

Studies have determined that it is possible for native and non native speakers of English to determine lexical stress, given spoken stimuli (Cutler & Clifton, 1985; Patel & Watkins, 2007; Slowiaczek, 1990; 1991; Wang, 2008; Yu & Andruski, 2010;). These studies primarily rely on perceiving contrasting stress patterns; that is, whether an example is correct or not, or which of a minimal pair is being presented. Other studies test methods of teaching non-native speakers to recognise and produce contrastive lexical stress in English (for example Arslan, 2013; Bissiri, Pfitzinger, 2009; Jarmulowicz, Taran & Seek, 2012). Despite this, the evidence on the abilities of native speakers, particularly Australians, to identify lexical stress when presented with written stimuli is minimal.

University students were tested on their ability to segment words into syllables, in order to establish their awareness. From this baseline, their ability to identify the lexical stress in a real polysyllabic word was tested. Participants were asked to mark the syllable that was the most prominent in words segmented into syllables. Unambiguous words of different lengths (two to four syllables) that were not minimal pairs, and using several different stress patterns, were used.

This study shows that literate adults have some difficulty identifying the lexical stress of real words when presented with written stimuli. This highlights the need for further study including longitudinal studies of the childhood ability to identify lexical stress through development into adulthood, and whether speech pathologists are able to accurately identify lexical stress. The best methods for teaching lexical stress recognition to native speakers of English are still unclear.

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Defaults vs. markedness: A note on an organizing principle of morphology. The case of stem selection in Ngkolmpu

Matthew Carroll (ANU)

In this paper I explore the role of two related linguistics concepts, defaults and markedness, in morphological theory. By examining data relating to the system of stem selection in Ngkolmpu, a little known Yam Family (Morehead-Maro) language of southern New-Guinea, I demonstrate that the usual notion of morphological markedness is problematic as various diagnostics give contradictory results. I then demonstrate that by assuming a system of defaults we are able to capture the generalisations of markedness without any of the contradictions.

The use of defaults has a long history in linguistics particularly in theories of morphology (Zwicky 1986). The vast majority of current morphological theories make use of some notion of default either through the application of the elsewhere principle or through the fundamental architecture of the formalism, i.e.: Network Morphology (Brown and Hippisley 2012). The notion of defaults is related to a much more pervasive notion in linguistics, that of markedness. The usefulness of the role of markedness in linguistic theory has been much debated, Haspelmath (2006) argues that authors using this term have yet to provide an explicit universal definition of the phenomena and that linguists should avoid its use.

The system of verbal stem selection in Ngkolmpu provides an ideal case study for these concepts. In Ngkolmpu, verbs have up to three stems which correspond to interactions between verbal number and aspect exemplified by the verb for 'to follow' in table 1. As a basic notion of morphological markedness often presented in introductory textbooks, i.e. Croft (2003), I assume that markedness entails three properties as follows.

- 1. The form associated with unmarked features will be the least formally elaborated.
- 2. The form associated with unmarked features will display more paradigmatic distinctions.
- **3**. The form associated with unmarked features will appear in more grammatical environments.

Considering the set stems in table 1 there is an immediate a contradiction in that property 1 is in conflict with properties 2 & 3. According to the above notions of markedness the stem *merkntn*, is the most formally elaborated (marked) yet is also the stem which displays the greatest distributional range (unmarked). Logically and empirically, we can show that there is no necessity for the least formally elaborated to be display the widest distribution. Instead, a system of defaults assumes that the features which demonstrate the broadest distribution, i.e. *merkntn*, is the default case and are over ruled by more specific features. In such a model there is no assumed connection between formal elaboration and distribution of features, as such it should be the preferred model on the basis of empirical coverage.

Much of the literature on markedness examines not only morphological features but semantics as well. Previous work on defaults is often restricted to formal systems and to date has largely ignored semantics. In this paper I discuss how to apply the notion of defaults to the semantics of plurality and aspect in the verbal stem features allowing an opportunity to explore correlations between morphology and semantics.

	Momentaneous Aspect	Neutral (No Aspect)	Imperfective
Non-Plural	merba	merk	merkntn
Plural	*	merkntn	merkntn
	C	1	

Table 1. Summary of stem assignment of omerkntnai 'to follow'

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Mixing Middle Men. The language mixing practices and the expression of possession in the medieval account books of London trade guilds.

Charlotte Chambers (Queensland)

This talk considers the potential influence of French in the development of English possessive constructions in the Middle English period (1100 - 1500 AD). I examine the language practices of the mercantile class in the medieval account books of London trade guilds. The account books of the Worshipful Company of Grocers (1345 - 1463 AD) are an important resource for this study, portraying the shift from the use of Anglo-Norman, the British Isles' variety of French, to Middle English as the language of account-keeping in medieval English society.

Previous research into the French influence on Middle English genitives has concentrated on clerical texts, including translated texts, produced by scribes of the church (Myers 2009, 2011, Gatelais and Toupin 2012). This study provides a new perspective on the analysis of French influence, by examining the records of the Grocers' archive which contain large passages of French-English mixing. The Grocers' archive reveals examples of prepositional code-mixing, between English 'of' and French 'de', examples (1) and (2), and English 's' genitives appearing in French matrix texts, as shown in (3).

(1) Also Resseyved **de** Auustyn Hawskyn for a fyne for wyghtes (c.1426)

'Also received of Austyn Hawskyn for a fine of weights'

(2) Summa of Forfeturs (c.1399)

'Sum of forfeiters'

(3) Un serjant **del** Mayres (c.1413)

'A Sergeant/Servant of the Mayor's'

These examples of code-mixing point to new potential language contact hypotheses for the development of the genitive in Middle English. Previous research comparing French- to-English translated texts has not been able to demonstrate a clear case for the influence of the French 'de' preposition on the extension of the English 'of' preposition (Myers 2011: 436). These data from the Grocers' archive, however, overtly show the possibility of alternation between the 'of' and 'de' possessive constructions in code-mixing. This alternation provides insight into the mechanism of language change, in the extension of the English 'of' preposition into domains that were previously held by the 's' genitive.

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Epistemic modulations and speaker stance in Cantonese conversations

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In the previous decade, the scope of evidentiality studies has been expanded to see what other functions evidential markers can serve beyond its original understanding – to acknowledge the source of information. For instance, some recent studies have shown that epistemic modality and evidentiality are closely related, with evidential markers often used in conversations as discourse-pragmatic markers to modulate the strength of the speaker's epistemic claim and to help externalize his or her stance (Kim 2005, 2011). Complementing previous research on evidentiality and stance marking, the present study focuses on how native speakers of Cantonese use different strategies to modulate (i.e. upgrade or downgrade) the epistemic strength of their claims when they are challenged or disaffirmed by their addressee(s). In particular, this paper puts more emphasis on how the whole range of grammatical strategies, such as evidential markers, discourse markers, utterance particles as well as grammaticalized epistemic phrases, can work together to externalize the speaker's subjective mood and to calibrate his epistemic claims in interactional contexts.

Based on data obtained from 15 interview recordings that involve descriptions of pictures of different attractions (15 minutes each on average), this paper aims at uncovering the range of strategies that speakers might use to upgrade or downgrade their assertions when their claims are queried or challenged. In the interviews, the interviewees are asked to talk about where they think the pictures were taken, and to support their claims with reasons. Our analysis reveals that speakers make use of a range of strategies to upgrade or downgrade their assertions, including (i) epistemic modals (e.g. *jing1goi1* 'should', *jat1ding6* 'must'), (ii) epistemic adverbials for a revised conclusion (e.g. *kei4sat6* 'in fact', *si6sat6soeng6* 'in fact'), (iii) explicit evidentials (e.g. *ngo5 gu2* 'I guess', *ngo5 gok3dak1* 'I feel', *ngo5 zi1dou3* 'I know') and implicit evidentials (e.g. *hou2ci3* 'seems', *jau5 ho2nang4* 'likely'), (iv) sentence final particles with weak epistemic strength (e.g. *ge2, gwaa3, za1maa3*) or strong epistemic strength (e.g. *wo3, gaa3*), (v) discourse-pragmatic strategies (e.g. keep silent, provide a reason, use of redressive language). Our study suggests that the use of these different epistemic modulators forms an essential part of politeness in social interactions.

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Recency effects on word-medial /t/ in New Zealand English

Lynn Clark (Canterbury)

When we talk, we have a strong tendency to repeat language structures that we have recently produced or heard (Bock (1986), Bock and Loebell (1990), Branigan et al (2000)). This phenomenon is known as 'recency', 'persistence' or 'priming', and it shows that where variation exists in language, an alternative form, once used, persists in working memory and has a greater chance of reuse next time. The vast majority of research on whether, how and why speakers repeat linguistic material in quick succession has come from an experimental paradigm, with a particular focus on grammatical variation. The question of whether *phonological* priming can be thought to affect variation in *natural* speech has received much less attention (although see recently Clark (2014) and Tamminga (2014)). Here we present early results from a study exploring the role of recency in accent variation.

The data for this study come from a new corpus of New Zealand English monologues: the UC QuakeBox corpus (Walsh et al 2013). The QuakeBox corpus is a collection of 723 earthquake stories told by people recounting their memories of the devastating Canterbury earthquakes of 2010-11. This is a collection of monologues, on a single topic, in which the speakers are unusually engaged. This collection is therefore uniquely suited to this research because we can explore genuine priming behavior by avoiding phonetic and phonological convergence between interlocutors, or repetition for other reasons such as an association of a particular topic with a particular linguistic form (Hay & Foulkes (forthcoming)).

Here we examine variation in the realization of word medial, intervocalic /t/. This is a variable which is currently undergoing change in New Zealand English (Hay & Foulkes (forthcoming). Except in the onset of a stressed syllable, this phonological environment provides a wide range of allophonic variation, including [t], [ts], [s], [d] and [r]. Recent studies of this variable in New Zealand English have focused on the change from voiceless variants (T) to voiced variants (D) and so we replicate this method here in order to facilitate comparison between studies.

5825 tokens of word medial, intervocalic /t/ were extracted from 163 speakers in the corpus. Because this corpus is time-aligned, time-codes for each instance are automatically generated, as is additional information stored in the corpus about the frequency of each lexical item, the speech rate of the utterance, and social information about the speaker. If structural repetition takes place in natural speech at all, we should expect a speaker's realisation of a variable to be somewhat predictable from their previous realisation of the same variable. When we correlate each speaker's realization of medial /t/ with their previous realization of medial /t/ using a generalized linear model (incorporating random intercepts for speaker (Baayen et al (2008)), we find a significant relationship between the two. This relationship remains significant even when additional factors known to constrain this variable in NZ English are included in the model (p = 0.02). There is an additional boost to the priming effect when the prime word has just appeared immediately before hand (p = <0.00). This is supported by discussions of 'lexical boost' in the experimental priming literature (Jaeger and Snider, 2013). Finally, there is an interesting interaction between the sociolinguistic effects of age, gender and lexical frequency which suggests that this repetition effect is primarily found in clusters of high frequency words, especially among young males, who are also leading the change towards the voiced variant (see Hay and Foulkes forthcoming). These results therefore provide evidence that:

1. phonological priming does affect variation in natural speech

2. phonological priming interacts with social factors known to constrain language change.

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Heading south: A comparison of the phonetic realisation of word final –er between Anglo-Celtic and Lebanese heritage groups in Melbourne

Joshua Clothier (Melbourne)

Despite the diverse ethno-cultural composition of Australian society, features of ethnocultural Australian English (AusE) speech remain under-described. One of the largest non-English language heritage groups is "Arabic", comprising 1.4% of the Australian population, and within that group of speakers, a substantial proportion share Lebanese heritage. Features of Lebanese AusE (LAusE) have been described by Cox & Palethorpe (2011) who show timing differences in VC rhymes between "Standard" AusE and LAusE. Further, Kiesling (2005) found that LAusE speakers tended towards a more backed, lengthened variant of /ə/ in word final –*er*. As a marker of non-Anglo AusE more generally Warren (1999) also reports /ə/ realising as a more open vowel, [v], in word final –*er* and Clyne, Eisikovits, and Tollfree (2001) report it being realised as [ε] in other contexts.

Recent studies of linguistic variation in ethnic minority groups have been modelled using an approach derived from social psychology, termed *ethnic orientation* (EO) (e.g., Hoffman & Walker (2010). Under this model, research seeks to compare the use of particular linguistic variables with "...a loosely connected cluster of thoughts, feelings and behaviours pertaining to a person's orientation towards their ancestral ethnic group..." (Noels, 2014, p. 89).

This paper aims to examine and compare the realisation of the vowel produced in word final -er in two speaker groups – those with Lebanese heritage and those with Anglo-Celtic heritage. Further, it aims to examine the results for the former group – the LAusE speakers – with reference to their responses to an EO questionnaire. The research questions are:

- 1. Are there differences in F1, F2, and duration between LAusE and Anglo-Celtic AusE speakers (ACAusE)?
- 2. Is there a relationship between LAusE speakers' production of this vowel and their EO responses?

Five LAusE males performed a standard word list task using the stimuli from the AusTalk project (see, e.g., Estival, Cassidy, Cox, & Burnham, 2014). For the ACAusE group, data for 5 males previously recorded for AusTalk were selected. All speakers were from greater metropolitan Melbourne. Three tokens per speaker¹ of 12 word final *–er* words were extracted from the corpora, resulting in a total of 354 tokens. These were segmented and analysed, with F1, F2, and duration measured using Praat (Boersma & Weenink, 2014).

The results show that, For F2, there is little difference in mean values, with 1290.8 Hz for the ACAusE group and 1283 Hz for the LAusE group, thus showing little difference in backness. Contrastingly, similar to previous findings the LAusE group demonstrate a higher F1 (624 Hz, compared to 581.5 Hz), suggesting a more open articulation of the vowel in word final – *er*. However, as can be seen in Figure 1, there is also substantially greater variation for F1 in the LAusE corpus. In terms of duration, the LAusE group's mean is longer, but again the variation within the corpus is much higher (see Figure 3). This paper discusses this variation in terms of the variation seen in the EO results for the LAusE speakers, which varies from 3.1 to 4.3 out of 5. Further, it reports findings using mixed effects modelling to account for differences found within and between the two groups. This paper contributes to an elaborated understanding of the features of LAusE and the ways in which these features interact with EO in Melbourne and Australia.



Figure 1. Boxplots comparing F1 (Hz) of -er for ACAusE (Left) and LAusE (right) speakers

Figure 2. Boxplots comparing duration of -er for ACAusE (left) and LAusE (right) speakers

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^{1.} Except for one ACAusE speaker, for whom only 2 tokens per word were present in the existing corpus

Squib on Polish yers: An overview of what we know, and how we got there

Brian Collins (Utah)

Slavic languages in general have phonological phenomena of vowel-zero alternations. This phenomenon has been of great interest in Polish, because it does not only occur in a few suffixes and words of Proto Slavic origin where those vowels were historically reduced vowels (known as *yers*), but also occurs in many recent loanwords. The phenomenon can be demonstrated in chart 1.

This squib puts various explanations of Polish vowel-zero alternations to the test, compares them, and critically analyzes some of the assumptions the explanations use. Many newer analysis are decreasing the number of *yers* assumed exist in the UR (Szpyra (1992) proposes only one yer), despite the fact consonants behave differently depending on whether the vowel surfaces or not in some words, but not others as in chart 4.

Some widely accepted approaches, such as the one created by Kenstowicz and Rubach (1987) are based on a particular ordering of rules; the allomorph of the Polish comparative suffix on chart 2 is applied, to break up a consonant cluster. If one assumes *yers* delete after the allomorphic rule applies, it results an erroneous SF. This lead to a conclusion by Szpyra (1992), that *yers* are not underlyingly vowels. However, if one rearranges the rules as on chart 3, the correct surface form is achieved without need of such assumptions. Another approach analyzed by this paper is a relatively novel analysis of *yers* in the scope of Optimality Theory by Jarosz (2005) where *yers* are underlyingly assumed to be marked, and are ranked in such a way that they only vocalize to repair complex codas in words, thus words with complex codas simply do not have *yers* in the UR.

1)	Yer kliw <u>e</u> r 'jib-nom-sg' kliwra 'jib-gen-sg'	Full Vowel rower 'bicycle-nom-sg' rowera 'bicycle-gen-sg'	Consonant Cluster manewr 'maneuver-nom-sg' manewru 'maneuver-gen-sg'
2)	UR $\emptyset \rightarrow ej / *C - \$1 COM$ Yer deletion Surface	/peven/+/ş/+/I/ P /pevenşI/ /pevnşI/ *[pevnşI]	
3)	UR Yer deletion $\emptyset \rightarrow ej / *C - \1 COMP Surface	/peven/+/ş/+/ı/ /pevnşı/ /pevnjejşı/ [pevnjejşı]	
4)	Nominative:piesGenetive:psa [[p ^j es] <i>sen</i> [sen] więzień psa] <i>snu</i> [snu] więźnia	$ [v_i \tilde{z}_j en_i] $ $ [v_i \tilde{z}_j n_i a] $

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Aspectual variation in Ngandi narratives

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Ngandi is a Gunwinyguan language spoken in south-eastern Arnhem land, NT. Like other Gunwinyguan languages, there is an obligatory aspectual distinction in how past events are expressed in Ngandi, with Past Punctual (PPun) contrasting with Past Continuous (PCon). According to Heath's broad definitions, the aspectual distinction here is perfective/imperfective; potentially related to foregrounding and backgrounding. In this paper, I provide an analysis of these past tense markers in Ngandi narratives using Segmented Discourse Representation Theory (SDRT), and show that their aspectual functions are more complex than these definitions suggest. Principally, I show that the aspectual functions of these markers appear to interact with verbal Aktionsart, and that clausal aspect is not communicated by inflectional morphology alone.

Heath's grammar of Ngandi briefly mentions the variation between PPun and PCon in narrative texts, and defines PPun as being 'typical for isolable events' and PCon 'for prolonged activities or states' (Heath, 1978, p. 105). As can be seen from these definitions, PPun can be generally aligned with perfectivity (example 1), while PCon is generally aligned with imperfectivity (example 2). This study compares selections of narratives from texts in Heath's 1978 corpus, applying the SDRT approach to examine the functions of these markers in narrative contexts. The SDRT approach was outlined in detail by Asher and Lascarides (2003), and has been further developed by a wide range of authors including Stirling (2012). Stirling's work provides a clear indication of how the SDRT framework can be successfully applied to gain insight into the function of tense/aspect morphemes in an Australian narrative context, and her methodology has been adapted here.

Results show that most Background clauses align with a predicate carrying a PCon inflection, and most Narrative clauses align with a PPun inflected predicate (examples 1&2). The alignment of Backgrounded clauses with imperfective-like inflections is not unexpected, however this scenario does not occur for every PCon inflection. Throughout the texts analysed, there are a number of situations where the aspectual inflection does not align with the expected discourse relation: example 3 illustrates a situation where a Narrative clause, introducing a new event in the chronology of the narration, takes PCon (unexpected), while subsequent Elaboration clauses take PPun (expected). Disruptions from the anticipated patterning of narrative structure serve to illustrate that Ngandi aspectual interpretation depends on interactions between these markers and other elements, including (but not exclusive to) the Aktionsart of the inflected predicate.

Gaining further insight into the nature of aspectual expression of Ngandi provides fertile ground for further research into aspectual expression in the Gunwinyguan language family as a whole.

Example 1: (Heath 1978:265)

rnijalangwatinyrniwoloyungrnijarrayungrniHarryNeilyungrni-jalang-wati-**ny**rni-wolo-yungrni-jarra-yungrni-HarryNeil-yung3MSG-JUST-die-**PPUN**NI-that-ABS3MSG-whatsit-ABS3MSG-Harry Neil-ABS'he died now, that whats-his-name, Harry Neil' {clausal unit 28: classified as Narrative}

Example 2: (Heath 1978:264)

bulukihyung rnakih ngiyung bitjarra ngarnii Alice Springs bulukih-yung rnakih ngi-yung bitjarra nga-rn-**ii** Alice Springs also-ABS there 1SG-ABS whatsit 1SG-sit-**PCON** Alice Springs 'as for me, I was staying there (near) Alice Springs' {clausal unit 1: classified as Background}

Example 3: (Heath 1978:265-6)

rninijagurrhwarrdhungi rnini-ja-gurrhwarr-dhu-**ngi** 3MSG/3MSG-NOW-shoot-AUG-**PCON** *'he shot him' {clausal unit 9: identified as Narrative}*

rnakihyung rnigarudhudhungihguh rninigurrhwarrdh-i rnakih-yung rniga-rudhu-dhu-ngi-hguh rnini-gurrhwarr-dh-**i** there-ABS NI-SUB-RDP-go-PST.CON-WHILE 3MSG/3MSG-shoot-AUG-**PPUN**

gujarrathu	ganyjuh	gutwentytwodhu
gu-jarra-thu	ganyjuh	gu-twentytwo-dhu
OII 1 (') DIOT	EN (DII	

GU-whatsit-INST EMPH GU-rifle-INST

'as he was walking along there he shot him with a twenty-two' {clausal unit 10: classified as Elaboration}

bulukih	rnigaridhi	rnigugabennginy
bulukih	rniga-ridh-i	rnigu-ga-benngi-ny
also	NI-SUB-RDP-go-PST.PUN	3MSG/GU-SUB-step.on-PST.PUN

gurlupuhyung rninirnahgurrhwarrdhi malkyapanh gurlupuh-yung rnini-rnah-gurrhwarr-dh-**i** malk-yapanh

this.way-ABS 3MSG/3MSG-STILL-shoot-AUG-**PST.PUN** TIME-two 'he (Harry Neil) went on, stepping on (the ground), in this direction. He (the owner) shot him again, a second time' {clausal unit 11: classified as Elaboration}

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Lectal variation in the pronunciation of prestopped nasal phonemes in Kaytetye

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Kaytetye, like a number of other Arandic languages, has a phonemic contrast between plain and prestopped nasals, e.g. *anenke* [v'nengə] 'sit' and *atnenke* [v'^tnengə] 'stand' (Koch 1997:274). The language is highly endangered (ca. 200 speakers) and there appear to be some significant changes in the speech of younger speakers. Most Kaytetye speakers are bilingual in a neighbouring Arandic language as well as in Aboriginal English.

Variation in the production of prestopped nasals has been observed in the field for Kaytetye and other Arandic languages. For many lexical items, both plain and prestopped pronunciations are recorded in dictionaries of Kaytetye (Turpin & Ross 2011) and Alyawarr (Green 1992). In some varieties of Anmatyerr, there is no phonemic contrast between plain and prestopped nasals (Green 2010:xii). Furthermore, plain nasals may also show brief prestopping in Arrernte, although this is auditorily distinct from the contrastive prestopping in the language (Henderson 1998:26).

This paper considers whether the variation in prestopped nasal phonemes in Kaytetye correlates with socio-linguistic factors. It compares the acoustic properties of the plain nasals (Figure 1a) against the prestopped nasals (Figure 1b) and correlates these with age and degree of Anmatyerr influence on the speakers. The data comes from recordings for a study on Kaytetye coronals (Harvey et al 2013). The target words were in a $/#a'_V/$ context and in a carrier phrase. A total of 864 tokens consisting of 504 plain nasals (N) and 360 prestopped nasals (TN), elicited from 10 female speakers were analysed.

We found variation in the pronunciation of prestopped nasals in relation to voicing, and oral closure. Segments realized with a shorter duration tend to be produced with voicing throughout, whereas in longer segments voicing ceases during the initial closure. We suggest that this variation is phonetically driven. Other features, such as the variation in presence of oral closure (i.e. plain nasals realized with an initial closure and prestopped nasals realized without a complete initial closure, Figure 2) correlates to some degree with high exposure to neighbouring Anmatyerr; but not age. We found that some tokens with a phonemic plain nasal were realized with an initial oral-nasal closure and conversely, some phonemic prestopped nasals were produced without an initial oral-nasal closure, such that the surface form was similar to a plain nasal. A question arising from this is whether Kaytetye prestopped nasal phonemes have merged with plain nasals for these speakers, as they have for some varieties of Anmatyerr, or whether their variation is a reflexion of Anmatyerr as their primary language. That is, the variation in oral closure for these speakers may have been the result of the speakers' conscious efforts to sound Kaytetye.

Further research, including recordings of more naturalistic tasks, is required to determine whether Kaytetye is losing the nasal/prestopped nasal contrast, at least for speakers who have a strong Anmatyerr influence. Studies of other 'stronger' Arandic languages would also help determine whether the variation is related to the status of Kaytetye as a minority language, or whether it is a more widespread pattern of variation.

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Frequency (Hz)



Figure 1 (a) plain nasal (no initial closure)



Figure 2 Phonemic prestopped nasal realized without initial oral closure (8% tokens of S11)



(b) prestopped nasal (initial closure)

Is there evidence for region specific vowel variation in /hVd/ word list data from AusTalk?

Felicity Cox, Sallyanne Palethorpe, Kelly Miles & Benjamin Davies (Macquarie)

There is a long held belief in the literature on Australian English (AusE) that regional phonological variation is quite restricted in this country (Cox & Palethorpe 2007) and confined to two types: firstly, the number of speakers in a region taking their vowel types from proportionately more or less of the Broad, General or Cultivated forms, and secondly the proportion of speakers who use a region-specific marker. Few region-specific markers have been empirically identified for AusE including the realisation of certain vowel phonemes, probabilistic incidence of vocalised /l/, and pre-lateral/pre-nasal vowel effects (see e.g. references in Cox & Palethorpe 2007). Many of the regional variation analyses have been relatively limited in scope either through lack of resources or lack of access to a sufficiently diverse corpus of speech data. Large-scale data acquisition is expensive and logistically challenging. We are fortunate that researchers now have access to the extensive AusTalk database (Burnham et al. 2011).

The AusTalk project (Burnham et al. 2011) was undertaken between 2010 and 2014 to create a large-scale corpus of audio and video data collected using a range of speech data acquisition tasks via standardised elicitation protocols and recording environments from speakers across the country. This new resource provides an exciting opportunity to explore issues related to regional variation. In this paper we present our analyses of the standard /hVd/ word list data from AusTalk to establish a baseline for further exploration of phonological regional variation. AusTalk participants under 35 years who had completed all of their primary and high school education in the selected city were chosen: Sydney (17 males, 17 females), Melbourne (8 males, 17 females), Adelaide (13 males, 12 females) and Perth (12 males, 15 females). Those speakers who produced a minimum of two tokens for each vowel were included in the analyses. 12 monophthongs (1553 tokens from males and 1815 from females) and 6 diphthongs (893 tokens from males and 1152 from female) were examined.

Audio data were first processed using the MAUS automatic aligner (Schiel et al. 2011) for which a new AusE model is now available through development based on AusTalk training data. Upon orthographic and associated auditory input data, MAUS returns Praat textgrids containing phonemic labels time aligned to delimit individual phonemes. The automatically generated textgrids were hand corrected and target events manually identified by the authors following standard criteria. Textgrids were imported into Emu (http://emu.sourceforge.net/) for formant checking and data extraction in R (www.r-project.org). Formants were automatically tracked using the ESPS/Waves (12th order LPC analysis with a 25 ms. raised cosine window and a frame shift of 5 ms). Vowel duration and F1 and F2 at the vowel target(s) were identified. Formant data were speaker normalised using procedures outline by Lobanov (1971) to reduce the potential effect of individual vocal tract size. The analysis reported here excludes /1ə/ and /e:/.

Results of a mixed model analysis for F1 and F2 of males and females separately revealed minimal spectral difference between the speakers according to city. However a few highly significant differences based on a stringent p value of .01 were apparent. Figures 1 to 4 illustrate the following significant Bonferroni corrected posthoc effects: For monophthongs Perth males produced phonetically lower /I/ than those from the other cities, and Sydney males displayed a fronter /I/ than Perth and Adelaide males. For Adelaide males, /o/ was significantly raised. Perth females displayed a fronter /3:/ than female speakers from the three

other cities. For the diphthongs the major effect was for $/\vartheta u$ / which had a more retracted first target closer to $/\vartheta$ / for Adelaide females than for Melbourne and Sydney females but did not differ significantly from Perth females. Adelaide males showed a similar effect but the difference was only significant between Adelaide and Melbourne. In line with a more phonetically raised $/\upsilon$:/, Adelaide males and females produced a raised first target of /ae/ compared to other cities. These results confirm that regional variation in the standard /hVd/ phonetic context is quite restricted in Australia. Nevertheless, some regionally significant variation has been revealed even in a course-grained analysis such as this where sociodemographic differences between speakers has not been controlled. This analysis provides a platform for more targeted examination of contextual effects (in both formal and informal elicitation tasks) that may prove fruitful in characterising regionally specific variation in AusE.



Figure 1. Monophthong vowel space plots for males.



Figure 2. Monophthong vowel space plots for females.



Figure 3. Diphthong trajectories for /əəu/ (hode) and /ae/ (hide) for males for the four cities.



Figure 4. Diphthong trajectories for /əəu/ (hode) and /ae/ (hide) for females for the four cities

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The interactional significance of repetition in children's Murrinhpatha

Lucinda Davidson (Melbourne)

This study investigates the use of linguistic repetition by children acquiring the polysynthetic Australian language, Murrinhpatha. It examines instances of repetition in spontaneous interactions between children aged 2 to 7 years. I argue that this aspect of children's speech plays an important role in the development of conversational competence.

Repetition, also referred to as 'sound play', 'speech play' or 'verbal play', is a common feature of children's talk, regardless of language and culture (Evans & Demuth 2012). Kaqchikel Mayan speakers in Guatemala refer to children as 'little parrots' (Reynolds 2008), and the Kaluli in Papua New Guinea describe their children as talking like 'birds' (Schieffelin 1983). While the pervasiveness of children's linguistic repetition is not debated by researchers, its role within the acquisition process is. For some, repetition is developmentally inconsequential; it is "not required behaviour for learning to talk" (Bloom et al 1974:387). For others, adults' linguistic repetition offers children direct assistance in deciphering the structure of a language (Brown 1998).

Irrespective of the precise role that repetition plays in language acquisition, imitation is often actively encouraged by adults. Caregivers in a wide variety of cultures engage in 'prompting routines' (Brown 1998), using a direct elicitation command, equivalent to "Say X" (e.g. Demuth 1986; Schieffelin 1990). This is thought to foster both linguistic and social competence in children (Demuth 1986:78). Child-directed speech in Murrinhpatha exhibits a similar practice, with use of the directive, '*thama!*' ('you (sg) say/do it'). Such prompting routines may also influence children's spontaneous repetition.

In this study, I draw on longitudinal data collected in Wadeye, Northern Territory, to examine the speech of six Murrinhpatha children, aged between 2 and 7 years. This paper addresses repetition through an interactional lens, tracking children's conversational skills through their repetitive speech play. The linguistic repetition displayed by the youngest children in this study (2-3 years old) consists predominantly of direct imitations of their older siblings' speech, as in (1). I propose that these utterances work as dialogic place-markers. They are a way for young children to enter into conversations; to become conversational participants. Older children are able to engage in repetition routines with more overt and varied communicative functions. An example of this can be seen in (2). In this short interaction between two siblings, aged 4 and 5, the same phrase, 'the the terert', is produced five times. Through the manipulation of intonation and discourse markers, the two boys manage to assert, question, and clarify. I suggest that the repetitive foundations of dialogues such as this help young children participate in meaningful interactions, in that they are able to focus more on conversational strategies than on lexicon.

The repetitive verbal play that young children engage in amongst themselves provides a window onto their interactional skills. Furthermore, while its function in acquiring the structure of a language is uncertain, repetition appears to play an important role in the development of conversational and pragmatic competence. This study's interactional, rather than grammatical, approach brings a new perspective to existing research in the area of repetition in child language acquisition, as does the Murrinhpatha data itself.

(1) Child A is 7 years old; Child B is 3 years old.

Child A:	<i>ngarra rup?</i> On the (?)?
Adult:	<i>yu ngarra rup</i> Yes on the (?).
Child B:	<i>ngarra rup?</i> On the (?)?
Adult:	yu ves

(2) Child A is 5 years old; Child B is 4 years old.

1. Child A:	the the terert ant many NOUN ADJ 'Lots of ants'	4. Child B:	the the terert ne? ant many isn't it NOUN ADJ INT Lots of ants, aren't there'
2. Child B:	ku thithay? animate honeybag NC NOUN 'Is it honeybag?'	5. Child A:	the the terert ant many NOUN ADJ Lots of ants'
3. Child A:	the the terert ant many NOUN ADJ 'Lots of ants, here look'	nga hey INT	

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Variability in the realization of vowels in West Australian English

Gerard Docherty (Griffith), Simón Gonzales (Newcastle), Nathaniel Mitchell (Griffith) & Paul Foulkes (York)

The acoustic properties of AusE vowels have been progressively analysed in ever more depth over the past 20 years revealing patterns of variability and change associated with a range of linguistic and social factors (e.g. Horvath 1985, Harrington et al 1997, Cox & Palethorpe 2001, 2010, Kiesling 2005, Loakes et al 2010, Billington 2011, Butcher 2012). This paper presents findings from a project which is the first study of phonological variation and change within West Australian English. The project is designed to investigate social-indexical phonetic variation within the performance of speakers from the Perth metropolitan area and to contrast that variability against what is known about other varieties of AusE.

Following a description of the corpus of speech recordings generated by this project, findings are presented for the speech performance of 60 young (aged 18-22) male and female West AusE speakers, recorded while reading lists of isolated words and phrases. The recordings have been analysed auditorily and acoustically in respect of a range of consonant and vowel variables. In this paper, the focus is placed on four of the latter: two short monophthongs (TRAP and KIT) and two diphthongs (GOAT and NEAR). The findings are discussed in light of existing work on phonological variation and change in AusE and on the balance of social, stylistic, contextual, and lexical factors which correlate with the observed variability.

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Morphological complexity responds to multilingualism not age-of-acquisition

T. Mark Ellison (ANU) & Nicolas Fay (Western Australia)

Lupyan & Dale (2010) show that a number of morphological features in languages, as recorded in WALS, are responsive to categorisation into **esoteric** languages with few adult learners, and **exoteric** languages with many adult learners. Exoteric languages are more likely to: be isolat- ing rather than concatenative, have little or no inflectional morphology, use fewer cases, have no agreement features on verbs, and mark tenses morphologically, to name a few of the features they identified. This result is explained (p8) using the Linguistic Niche Hypothesis, arguing that mor- phological over-specification assists child acquisition while concatenative transparency aids adult learning. Thus if most speakers learn the language as a child, the selectional pressures will overall favour morphological richness, while if the majority of learners are adults, then overall selectional pressures will bias changes that make adult learning easier, by increasing compositionality and morphological simplicity.

In this presentation, we argue on the basis of laboratory experimentation that age differences are not needed to explain the disparity in morphological richness between the two categories of language.

Experimental semiotics (see Galantucci & Garrod 2011 for an overview) uses experiments to investigate the human ability to form and use representational systems. Participants in experiments are often tasked with creating new representational systems in a novel domain, or using a novel medium, or both. Where the participants' goal is to communicate with each other, they rapidly and easily form conventionalised representations that are both highly symbolic but also efficient.

In experiments reported by Fay et al. (2008, discussed further in Fay & Ellison 2013), the all-adult participants established graphical representational conventions in pairs, but then changed partners. In the new pairings, each partner possessed an unshared convention for representing the concepts, and so had to negotiate new communicative conventions in order to solve the communicative task.

The conventions formed by participants who had to change their conventions differed markedly from those developed by participants paired who engaged in the same amount of interaction but did not change partners. While the resulting representations were of equal complexity, those developed through multi-conventional interactions were faster to learn, and faster to use, due to retained iconicity.

We argue that morphological transparency is a linguistic analogue of iconicity in graphical communications. Given this premise, the experiment studies suggest that it is not the age of the learners which leads to morphological differences between exoteric and esoteric languages. Instead it is the process of a speakers negotiating a new representational system beyond their existing one, that results in reduction of morphological complexity. In short, multilingualism rather than adult learning simplifies languages.

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'We can't stop and we won't stop': A closer look at the phonetic variation of Gurindji obstruents

Thomas Ennever (Queensland)

Australian languages have long been noted as remarkable for their widespread phonological and phonetic homogeneity (Dixon, 2002, p. 547), one aspect of which is their stop inventories. Phonologically, most languages have a single series, though forty or so languages have a second series, with various phonetic realisations (Butcher, 2004). Phonetically, stop phonemes are reported to have fricative and approximant allophones in a number of languages (see Mansfield, 2014 for a recent example). However, the question remains whether this is the full extent of variation. I argue for an expanded typology of variation in Australian obstruent systems by investigating the phonetic realisations of stops in Gurindji, a Pama-Nyungan language of the VictoriaRiverDistrict.

Quasi stops A surprising finding is that intervocalic stops in Gurindji are rarely realised as true phonetic stops, fricatives or semivowels; countering Dixon's (2002) claim that these are the common obstruent allophones for Australian languages. Instead, I present intensity and spectrographic evidence for a closure type that is neither fully closed (plosive) nor primed for turbulent flow (fricative), yet not open enough to sustain vowel-like intensitylevels (semi-vowel). I propose a term 'quasi-stop' to identify these phonetically distinct 'clusives' (1, 2). My phonetic results correspond with 'stopless stops' reported in American English at a 'suballophonic level' by Crystal and House (1988) and Shockey and Gibbon (1993). As well as degree of aperture, another feature that can differentiate quasi-stops from canonical phonetic stops in Gurindji is the lack of a release burst, especially in the case of velars (2). This phenomenon has been reported in American English (Lavoie, 2002), however it has not previously been identified in Australian languages.

Very short stops Further phonetic variation is also present in stop tokens appearing in homorganic nasal clusters. Nasal-stop clusters in Gurindji have previously received attention at a phonological level by McConvell (1996) who reports two processes of nasal stop cluster dissimilation (NCD). Phonetic investigation reveals further variation. Stops vary phonetically on a spectrum: from canonical closures; to 'quasi-stops', to phonetically reduced and elided forms. (3) illustrates a common realisation where the phonemic stop lacks even a short period of typical stop-like closure, a burst being the only visible spectrographic cue.

Affricates I also find that the prepalatal stop /j/ is realised as an affricate across the board, although, once again, incomplete closures are also found (4, 5). Phonetic affricates are not unprecedented in Australian languages, cf. Alpher (1991, p. 7) who reports that palatal and velar stops in Yir Yoront 'tend to be produced as affricates or spirants'. However, phonetic affricates remain largely unreported in the Australianist literature. This finding nevertheless reflects the universal tendency for affricates, if they appear anywhere, to predominate in the pre-palatal place of articulation (Maddieson & Disner, 1984).

Implications for theory I argue that quasi-stops can be categorised as an articulatory weaker (or a more 'lenited') variant of canonical stops, on the basis of their higher intensity and more open aperture. I consequently relate these phonetic findings to two current theories of lenition; effort reduction (Kirchner, 1998) and the reduction of intensity differences in the speech stream (Kingston, 2008). The type of variation I have found is likely conditioned by a number of factors, not only those that are typically described for phonological or allophonic variants (cf. Lavoie 2002). With this in mind, future, more specialised phonetic studies promise to shed light on the range and conditioning of this kind of variation previously underdescribed in Australian

languages.



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Human communication systems evolve via cumulative cultural adaptation: an empirical demonstration

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Cultural evolutionary processes drive the evolution of human communications systems. For example, the rate of lexicon and grammar change is a function of usage (Lieberman et al. 2007; Pagel et al. 2007). The question of whether language evolves in a functionally adaptive manner is controversial (Berwick et al. 2013; Christiansen & Chater, 2008; Pinker & Bloom, 1990; Tamariz et al. 2014). We report an experiment that 1) shows human communication systems evolve for adaptive use, and 2) explains some of the mechanisms unpinning this adaptive change.

Experimental-semiotic studies indicate that human communication systems evolve adaptively; over repeated interactions signs become more accurate and more efficient at picking out their referents (Fay et al 2010; Garrod et al 2007). Furthermore, sign optimization is stronger in larger populations on account of greater sign variation (Fay & Ellison 2013; Fay et al. 2008). To investigate the process by which new communication systems arise and evolve these studies require participants to communicate in a novel modality (e.g., by drawing). It is therefore not clear if these findings extend to natural language.

We examine if natural language demonstrates a similar pattern of cumulative functional adaption using a simple instruction task. The 408 participants were organized into 8-person transmission chains. The task was to communicate the route on a map to a partner who tried to reproduce the route on their map (see Figure 1). This is an unscripted cooperative task, the goal of which is to align one's privileged conceptual state with an uninformed partner. Two conditions were tested. In the **Interactive** condition the Instruction-Follower could interact with the Instruction-Giver. Using a text-chat tool they could ask questions, seek clarification of route descriptions etc. In the **Non-Interactive** condition the Instruction-Follower was restricted to passively processing the Instruction-Giver's instructions as they appeared on the chat screen. The task was completed in pairs. Once completed the Instruction-Giver and a new Instruction-Follower was added. The new Instruction-Giver then communicated a new route to the new Instruction-Follower. This process was repeated until each member of the 8-person chain had completed the task.

Task performance (fidelity of route reproduction) improved across generations 1-8 in both conditions, but was higher in the Interactive chains compared to the Non-Interactive chains. Content analyses indicated a very different process across the conditions. Interactive chains generated a more varied set of route descriptions (e.g., position, distance, shape descriptions) compared to Non-Interactive chains, and only in the Interactive chains did route description diversity predict task performance. In the Noninteractive chains, participants changed how they packaged information: across generations, information was organized into larger 'packets' (operationalized as the number of Instruction-Giver words per transmission episode), and only in the Non-Interactive chains did packet size predict task performance. We interpret this as the evolution of a narrative style (from a dialogic style) in the Non-Interactive chains.

In conclusion, the cumulative adaptive evolution of communication systems was observed in both conditions (but stronger in the Interactive chains). In addition, different processes underpinned this adaptive evolution in the Interactive and Non-Interactive

transmission chains.



Figure 1. An Instruction-Giver (a) and -Follower (b) map (adapted from Anderson et al., 1991). Route reproduced by a Generation 1 (c) and Generation 8 (d) Instruction-Follower for the same map (sampled from different Interactive transmission chains).

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Perceptual analysis of epentheic 'r' in linking and intrusive contexts in Australian English

Amy German, Ivan Yuen, Felicity Cox, Linda Buckley & Katherine Demuth (Macquarie)

Word pairs like 'lore/law' in Australian English (AusE) are homophones in citation, but differ in connected speech, especially before a vowel. Speakers often realise a linking-r in 'lore' or insert an intrusive 'r' in 'law' to avoid producing two contiguous vowels (hiatus). The linkingtype has an orthographic representation, whereas the intrusive-type does not. A recent corpus study of vowel hiatus in AusE (Cox, Palethorpe, Buckley & Bentink, 2014) reported various strategies that speakers use to manage hiatus, including epenthetic 'r' and/or glottalisation. These strategies tended to be in complementary distribution with choice contingent on prosodic structure. In this study we are interested in the role that stress plays in triggering either 'r' or glottalisation in hiatus contexts. We hypothesised that prosodic structure would operate in the intrusive context to prevent the occurrence of two adjacent vowels, as in the linking context discussed by Cox et al. (2014). The presence of 'r' and the presence of glottalisation would therefore be in complementary distribution. We also expected 'r' to occur in hiatus contexts in the absence of a perceived boundary, particularly when a weak vowel occurred on the right edge of the hiatus (Cox et al., 2014).

The productions of 22 adult participants were recorded to explore this phenomenon. Here we report analyses from five female speakers from Sydney whose parents were born in Australia (Mean Age = 21.6 yrs.). Participants generated sentences in two standard carrier phrases via a picture-naming task presented through a series of three-slide sequences. The first slide in each sequence contained an image of the target object, 'paw', 'claw' (intrusive), 'door' or 'floor' (linking). The second slide depicted an associated object, e.g. bear, crab, car, barn. The participant named the pictures on these slides using the carrier phase: 'This is a X'. The third slide in the sequence contained both of the previously presented images and the participant was asked to describe the relationship between the two using a new carrier sentence: e.g. 'This is the paw (of) the bear'. In the third slide, we manipulated the preposition following the target word to investigate the effect of a following weak/strong vowel. Three prepositions ('of', 'above', 'under') were used to form the prepositional phrase embedded in the carrier sentence: e.g. 'This is the floor under the house'. In the 'above' and 'under' conditions, the pictures were oriented to reflect the phrase to be elicited. The items were pseudo-randomised and the order counterbalanced across participants. Three practice items were used for familiarisation. Responses were audio-recorded for off-line analysis. Two items were excluded due to omission and speech error, resulting in 178 items.

A trained AusE-speaking adult perceptually coded the data for the presence/absence of 'r', glottalisation, and boundary without reference to spectrographic information in line with Cox et al. (2014). Twenty percent of the data were randomly chosen for reliability validation by another trained coder. Overall reliability for perceived 'r' was 96% and perceived glottalisation was 93%. As predicted, there was a significant difference in the distribution of 'r' and glottalisation $[\chi^2 (1, N=178) = 116.691, p < .0001]$ in the linking context; $[\chi^2 (1, N=178) = 107.459, p < .0001]$ in the intrusive context) as illustrated in Fig. 1. On the whole, there were more occurrences of perceived 'r' preceding the preposition 'of' than preceding 'above' and 'under' in both linking and intrusive contexts and this pattern did not differ between the two contexts ($\chi^2 (2, 233) = 3.599, p = .17$). This is illustrated in Fig. 2. However, the effect of 'preposition type' on the presence of perceived 'r' differed between the two contexts. A repeated measures ANOVA using 'r' presence as the dependent variable showed a significant effect of 'preposition type' (F (2, 8) = 6.588, p = .02) in the linking context;

whereas no significant effect of 'preposition type' was found in the intrusive context (F (2, 8) = 2.389, p = .15). In the linking context the weak vowel in 'of' elicited more 'r' percepts than the weak vowel in 'above' and the strong vowel in 'under', but this is not the case in the intrusive context. Perhaps the percept of 'r' might be related to the degree of reduction in the following vowel. Further acoustic analysis is required to determine the extent of stress-vowel interaction which might inform the representation of 'r' at the lexical level.



'r' three with presence/absence of glottalisation

Fig. 2. Counts of perceived 'r' across prepositions in linking and intrusive contexts

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Prosodic disambiguation of in-situ *wh*-phrases

Iain Giblin (MIT)

We show how *wh*-in-situ languages disambiguate the scope of embedded *wh*- phrases with prosody. Recent research links prosody with feature-driven movement (Richards 2010, Constant 2013), & with in-situ *wh*-phrases (Deprez et al 2010, Ishihara 2003), broadly proposing that, instead of *wh*-movement, *wh*-in-situ languages must place *wh*-phrases and the C^0 where they take scope into one phonological phrase. This requires altering any intervening material's phrasing. Japanese (1), for example, de-accents words between the *wh*-phrase & C^0 .

Telugu (Dravidian | SOV; C follows TP), as a *wh*-in-situ language, shows ambiguity when embedding *wh*-phrases: they may take scope with the C⁰ of the matrix (MX) or embedded (EM) clause. The declarative version of (2) shows DPs have rising prosody, while the phrase has a final fall. An EM *wh*-object extends a prosodic domain rightward, creating phrasing linking it to its respective C⁰. If the *wh*-phrase has EM scope (dotted line), the domain reaches EM C⁰, flattening the EM verb, but leaving the utterance-final fall. With MX *wh*-scope (solid line), the domain extends to the null MX C⁰, flattening all the utterance after the *wh*-phrase.

Khmer (Cambodian | SVO; C precedes TP) mirrors Telugu, showing *wh*-domains may extend leftward. In a declarative, Khmer words are accented by prosodic dips (3). A *wh*-domain which phrases an utterance final *wh*-object with a C^0 to its left flattens these. *Wh*-scope is disambiguated now by the de-accenting of the MX subject & verb arising with MX *wh*-scope.

American Sign Language associates *wh*-phrases with a non-manual gesture (eyebrow raising). With an embedded *wh*-phrase, the gesture lasts for the embedded clause, or for the whole utterance (underlined in (4)), effecting interpretation (Aarons 1994) in line with our proposal: the gesture should be seen as a means of phrasing *wh*-phrase with its C^0 .

We make the case that prosody disambiguates *wh*-scope, and that our data and observations support work that proposes prosodic linking of *wh*-phrases to C structure.

(1) [[naoya-ga **nani-o** nomiya-de nonda_{TP}] **no**?_{CP}] Naoya-NOM **what-ACC** bar-LOC drank **Q** 'What did Naoya drink at the bar?' (Ishihara 2003)



(2) [kaljaani [naraajana {gaarelu / jemi} wandeedu ani] anukondi_C] Kalyaani.F Naraayana.M {doughnuts / what} cook.3M C think.3F (C) EM: 'K. wonders what N. cooks' or MX: 'What does K. wonder N. cooks



(4) [c Teacher wonder [c pass test who]] EM: 'the T. wonders who passed the test' MX: 'who does the T. wonder passed the test?'

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The lexical and grammatical semantics of words for "surprise" and "interest" in English.

Cliff Goddard (Griffith)

This presentation has two main parts. The first is concerned with lexical semantics. I will present semantic explications, using the NSM methodology of reductive paraphrase (Goddard 2011; Goddard and Wierzbicka 2014), for two groups of English adjectives that are both connected, loosely speaking, with reactions to things new and unexpected: (i) *surprised*, *shocked*, *amazed*, *startled*, and (ii) *interesting* and *boring*. For the "surprise-related" items, the analysis builds and improves on previous NSM work in this area (Goddard 1997; Wierzbicka 1999). The lexical semantics of "interest-related" words has not been previously explored, despite the fact that the word *interesting* is arguably a cultural key word of Anglo English. The semantic templates, i.e. schematic structure of the explications, is of key interest for the second part of the talk.

The second part concerns an aspect of grammatical semantics, namely, how to capture the relationships between agnate word-sets such as: *surprised, surprising, to surprise; shocked, shocking, to shock; interested, interesting, to interest;* i.e. the relationships between past participial adjective, present participial adjective, and verb, respectively. In the NSM approach relationships of this kind are dealt with via mappings between the semantic templates for words of the respective sub-classes.

An added dimension of interest is provided by two psychological angles, which can be touched on only briefly. The first is the status of "surprise" and "interest" as supposed basic emotions and the relationship between them, which has long been debated in psychology (e.g. Ortony and Turner 1990). The second is a brief comparison with a leading componential approach to the psychology of emotions, i.e. the GRID approach developed by Scherer and colleagues (cf. Ye 2013).

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Vital signs: Adapting language vitality and endangerment tools to assess music endangerment

Catherine Grant (Newcastle)

Based on a prototype tool for language vitality assessment, this presentation outlines a means to assess the vitality and viability of music genres.

Particularly since the early 1990s, language maintenance has been high on the sociolinguistic agenda; the maintenance of other forms of intangible cultural expressions has more recently begun to attain international attention. Music genres, like languages, are facing considerable challenges on a global scale, as underscored by a major study carried out for UNESCO by the International Music Council (Letts, 2006). Recognition of this situation has lately fuelled considerable ethnomusicological interest in maintaining and revitalising music genres (e.g. Schippers, 2009; Titon, 2009; Marett, 2010; Grant, 2012), and has contributed to the development of various local and international initiatives aiming to help communities protect and promote their endangered musical heritage.

Fundamental parallels between language and music – both forms of intangible cultural heritage affected by similar forces within the local and global environment, such as demographic shifts, industrialisation, technological developments, political attitudes, and environmental challenges – mean that language maintenance holds significant potential to inform the development of tools to help sustain endangered music cultures (Grant, 2014). In many ways, the field of language maintenance is considerably further advanced than that of applied ethnomusicology in its research, development, and implementation of initiatives directed towards maintaining and revitalising endangered cultural heritage.

For example, as yet, no standardised tool exists to gauge musical endangerment, whereas many exist for languages (e.g. Fishman, 1991; Edwards, 1992; Grenoble, 1998; Lewis, 2010). The lack of a systematic way to identify and assess music endangerment is a major gap in current approaches to support endangered genres. Such a tool is important for at least three reasons: 1) to enable diagnosis of situations of music endangerment, and to determine the urgency to implement initiatives towards sustainability; 2) to ensure the right remedial action is taken, since assessing the factors causing endangerment will help establish focus and priorities for action; and 3) so that the efficacy of any efforts to maintain or revitalise the music genre may be subsequently evaluated in a consistent way.

In 2002-2003, UNESCO invited an international group of expert linguists to develop a framework for determining the vitality of a language, in order to assist in policy development, identifying needs, and implementing appropriate maintenance measures. This led to its landmark concept paper *Language Vitality and Endangerment* (UNESCO, 2003). It is this tool that I take (for reasons I will outline) as the basis for developing a comparable tool for identifying and assessing music endangerment, the *Music Vitality and Endangerment Framework* (MVEF). In this way, this presentation provides a specific example of how the field of language maintenance may advance the theory and practice of 'safeguarding' for other kinds of intangible cultural heritage.

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A Living Archive: Celebrating linguistic, biological, and cultural diversity through a botanical garden

Lydia Green (Newcastle)

This paper explores a proposal by representatives of a community of speakers of an endangered language to build a botanical garden. This proposed garden would serve as a living archive of linguistic, biological, and cultural diversity on a 10-acre site within their royal lands. It was suggested in response to the author asking what kinds of outcomes of the research they would like to see, beyond just a PhD thesis and a corpus of documentation. The project is community-controlled, community-driven, and supported by the linguist's work documenting the fast-disappearing, specialist knowledge within the community.

Linguists documenting Language as it is spoken or signed celebrate through their research the world's incredible linguistic diversity; and they regularly include in their work documentation of cultural and biological diversity. Threats to each of these are well-known to biologists, linguists, and anthropologists alike, who may be motivated to move beyond preservation and into active encouragement of their ongoing sustainability. Traditional outputs for a language documentation project include academic material (e.g. a corpus of texts, dictionary, and/or grammatical description) and material deemed to be more relevant to the speakers themselves (e.g. storybooks, pedagogical grammars, recordings in a usable format). Materials are regularly deposited in archives with a goal of long-term curation, preservation, and (appropriately managed) accessibility.

This author argues that these outputs, although valuable and important, are still often limited by institutional value-systems and tend to be dominated by the researchers' perspectives. (And even the best-intentioned linguist may still find producing the right type of written materials for language maintenance to be difficult.) An alternative model would be grounded within a framework of participatory collaboration (such as proposed by Leonard and Haynes 2010), in which the inputs and expertise of all involved are given equal voice from the beginning of the project's design.

In contrast to the idea of preserving knowledge in a book or an academic institution, the idea of building a botanical garden would create an educational resource which is a *living archive* of linguistic, biological, and cultural diversity, celebrating and honouring the specialist knowledge of local experts. Without requiring any academic literacy, the information would be locally accessible as a sustainable and culturally-appropriate resource. Visitors can see the plants, learn the name in the endangered language along with its taxonomical name, learn how the plant is used, and learn about sustainable harvesting practices, all while providing economic benefit to the local area and encouraging dialogue about the value of such diversity. The land set aside for the garden will be a conservation site of indigenous plants in a country where deforestation is a serious ongoing threat to the local plant, animal, and fungal species.

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Pronoun paradigms, syncretism and language phylogeny.

Simon Greenhill & Nick Evans (ANU)

The manifold Papuan languages and the difficulties in finding cognate vocabulary and grammatical morphemes between them, requires us to develop new methods if we are to make significant advances in understanding their historical relationships. There is growing interest in the use of typology in historical linguistics. One particularly promising approach is to investigate relationships between tightly organised subsystems of language as distinct and manageable proxies for overall relationships. A prominent suggestion has been that personal pronouns are particularly stable over time and between languages (e.g. Nichols 1992) and especially for New Guinea (Ross 2005). Here we focus on this one linguistic subsystem that is found in all spoken languages and explore its usefulness for language comparison.

In this paper we will outline a new approach we are developing, based on patterns of syncretism in pronoun paradigms, and apply it to a significant subset of Papuan languages as a heuristic trial of its usefulness, including Trans-New Guinea and half a dozen other language families. Our method is to quantify and compare the architecture of attested pronominal systems. We develop a diachronic typology of the stepwise pathways between them, and then harness this to a phylogeny to infer the most parsimonious historical scenarios relating pronominal systems across a series of languages.

To get the right balance between informativeness and comparability, we focus on four (potentially) distinct forms of each personal pronoun: those for the three core grammatical relationships (A, S and O) and for the possessive pronoun (of course many languages will neutralise some of these distinctions). These four values then combine with the system of person/number combinations as well as other categories such as gender to give a paradigm (Figure 1). Within any pair of cells in the paradigm we code a number of relationships ranging from totally distinct (e.g. *we* and *our* in English), total syncretism (e.g. A=S in English *he*, S=O for Nen $b\ddot{a}$ 'he/she'; sg=du=pl in English *you*) to formal overlap *me* and *my* in English) to formal increment (e.g. Nambo 1stsg ergative *yndo* from Nambo 1st sg absolutive *ynd*). Taken together, these factors then give a vast 'architectural design space' formed by the product of all featural paradigms (in terms of feature combinations) with all formal relationships between all cells within them.

Diachronic pathways between possible paradigms in the design space can then be modelled by assuming they are achieved by (a) adding or subtracting features or combinations thereof neutralising inclusive/exclusive, or developing a distinct ergative form) (b) changing the formal relationship between any two cells (e.g. from formal increment to formal overlap, or from distinct to total syncretism). Once the set of possible pathways has been exhaustively elaborated, we can give the evolutionary distance between any two paradigms by calculating the number of transformational steps needed to get from one to another. We can then use computational and phylogenetic methods to infer a set of phylogenies based on the most parsimonious set of changes across the whole population of paradigms (Greenhill et al 2010).

This method will be tested against existing classifications of well-known language families (Indo-European, Austronesian) to determine its reliability, and then trialled as a heuristic classification for Australian and Papuan languages (Trans-New Guinea and Morehead-Maro, plus selected outgroups). We will characterise how paradigms are constructed between different language families (Figure 2), describe the global aspects of paradigm architecture, and quantify the effects of areal diffusion and substrate influence on paradigm aspects.

	A	S	0	Poss.
1st (excl) Person Singular	ynd	ynd	ynd	tande
1st (excl) Person Dual	yndbem	ynd	ynd	tbende
1st (excl) Person Plural	yndbem	ynd	ynd	tbende
1st (incl) Person Dual	yndbem	ynd	ynd	tbende
1st (incl) Person Plural	yndbem	ynd	ynd	tbende
2nd Person Singular	bm	bm	bm	bende
2nd Person Dual	bmbem	bm	bm	bbende
2nd Person Plural	bmbern	bm	bm	bbende
3rd Person Singular Gender 1	ymam	bă	bā	yande
3rd Person Singular Gender 2	ymam	bā	bā	yande
3rd Person Dual	ymabem	bă	bä	ybende
3rd Person Plural	ymabem	bā	bä	ybende

Figure 1. Full pronoun paradigm of the language Nen (South Central Papua New Guinea)



Figure 2: Star plot showing common distinctions in pronoun paradigms across 15 different language families, and some English-lexified creoles. Size of slices represent the relative strength of the distinction e.g. the orange slices show whether a language differentiates Dual from Plural (Pama-Nyungan, Daly, Gunwinyguan, Sepik and Skou do distinguish, while Dravidian and Indo-European do not).

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Simulation of creole genesis: do we need the concept of 'prestige'?

Rachel Hendery (ANU)

Agent-based simulations are models in which individual 'agents' are given simple rules for interaction, placed in a network, and left to 'evolve'. The aim is to see what complex states or behaviours can emerge from such a network, in order to gain understandings of economic, social, or biological networks.

Jansson et al (2013) proposed an agent-based model for the evolution of creoles in which agents follow extremely simple rules about talking to each other and updating their lexicon to 'learn' new words from each other during interactions. They tested this model for various combinations of founder languages, and found that it successfully predicts the lexifier language in the resulting creole. The basic model is diagrammed in Fig. 1. The idea behind such a simulation is not to include *all* possible factors in language change, but to pare them down to the minimum needed to get a realistic outcome. This shows us which elements are most important in language change.

A model such as this one has the advantage that it does not need to factor in the prestige of each language in the founder community in order to get these results. The lexical make-up of the resulting creole is entirely predictable from the percentages of each language in the founding population. Jansson et al. consider it desirable to exclude prestige from the model because it is a difficult concept to quantify. However, this group's algorithm fails to account for creoles in which a language spoken by only a tiny percentage of the founder population comes to be the lexifier language.

In this paper I consider whether we can develop an agent-based model which, like Jansson et al's, does not require the concept of prestige, but nevertheless successful predicts the occurrence of creoles with the lexicon derived primarily from a minority language. The specific language which I attempt to model is Palmerston English, which arose on a small island in the Cook Island group after this island was settled by an Englishman, a Portuguese creole speaker, and a small group of Cook Islanders (Hendery 2013, Hendery & Ehrhart 2013).

I will show that when we talk about the 'prestige' of a certain linguistic variety in a multilingual or multidialectal community, this is often a proxy for the position of the speakers of that variety in the social network. If speakers of one variety are better connected in the network than speakers of another variety, the lexicon of the first variety will come to dominate, even given simple updating rules such as Jansson et al's, where each interaction results in the speakers having the same chance of learning a word from each other. (See Fig. 2). This means that, first, it is possible to model the development of a variety such as Palmerston English without stipulating that English was considered more prestigious than Cook Island Maori. And secondly, it suggests that the lexicon of a mixed-origin language can hold important clues to the historical social structure of its community.

Figure 1: Schematic of an agent-based model of creole simulation as in Jansson et al.



The simulation continues to run until all agents can communicate with each other 100% of the time

Figure 2: a different configuration, a plausible network on early Palmerston Island due to marriage and kin relationships. Such a network would give different results from that in Figure 1, even with the same lexicon updating algorithm.



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Benefactives and external possession in Wubuy: Marking the affectedness of alienable possessors

Kate Horrack (Melbourne)

Possession is generally divided into two semantic types: inalienable and alienable. While inalienability signals "an indissoluble connection between two entities", alienability encompasses "relationships of a less permanent and inherent type" (Chappell & McGregor 1995:4). For most Australian languages, the distinction between these semantic categories is reflected in the distribution of grammatical constructions that express possession. Alienable relationships are generally expressed with an Internal Possessor Construction (IPC) that codes the possessor as a modifier of the possessor Construction (EPC) that treats the possessor as an argument of the clause (Dixon 2002:138; Meakins & Nordlinger 2014:205-206; Morphy 1983:122). However, Wubuy, (a.k.a. Nunggubuyu (Heath, 1984)), a polysynthetic head-marking language from South- East Arnhem Land, does not follow this typological tendency. This paper shows that it is within the domain of external possession that alienability affects the distribution of Wubuy possessive constructions, and when speakers wish to highlight the affectedness of an alienable possessor, they use the benefactive in a way that has not been identified by previous work on the language.

Building upon earlier accounts of possession in Wubuy (Baker et al. 2010; Horrack, 2010), this paper finds that the Wubuy IPC can be used regardless of the alienability of a possessive relation, as shown by examples (1) and (2). In this IPC, the possessor occurs as a modifier of the possessum, taking the genitive case marker *-yinyung* ~ *-nyinyung* (see *ngarrugalij* 'dugong' in (1) and *munanga* 'white person' in (2)), while the possessum is crossreferenced on the verb as a core argument and receives direct (unmarked) case (see *yarrga* 'flipper' in (1) and *marrya* 'food' in (2)). Most other Australian languages only use this kind of construction for alienable possession, with inalienable relations generally expressed through an EPC that juxtaposes the possessor and possessum without marking them morphologically (Dixon 2002:138; Morphy 1983:122).

However, alienability *does* influence the distribution of EPCs in Wubuy. When an inalienable possessor takes part in an EPC, it occurs in direct case and receives verb agreement as a core argument instead of the possessum (see *ngarrgu* 'kangaroo' in (3) and *wuluru* 'acacia species' in (4)). The possessum, on the other hand, is realised as an oblique function, taking either locative case (as with *lhuganda* 'shin' in (3)) or a relational noun class prefix (as with *manjarr* 'leaves' in (4)). These EPCs have been described and analysed in Baker et al (2010) and Horrack (2010), albeit with somewhat different approaches and terminology.

In contrast to this, when the affectedness of an alienable possessor is to be highlighted, Wubuy speakers use the benefactive derivation in a way that is reminiscent of an EPC. In previous descriptions of the Wubuy benefactive (Heath 1984:377-381; Horrack 2010:49-53), the only attested function of the derivational prefix aG- is as a valency-increasing operation that introduces a beneficiary into the argument structure of the verb. This argument takes the dative case marker $wuy \sim -guy$ and is crossreferenced on the verb as object, as shown in (5). However, new data shows that the Wubuy benefactive has an additional function, which is to flag an alienable EPC. In (6), it can be seen that although the alienable possessor *na-wirri-nyung* 'boy' takes the genitive case marker, it is coded on the verb as object, indicating that it is a verbal argument. This function of the benefactive has never before been described for this language, and it bears similarities to the 'oblique possessive construction' in Bilinarra, a construction which has only been observed in a handful of Australian languages (Meakins & Nordlinger 2014:213).

- (1)¹² *ngawu-nagii-na ana-yarrga yii-ngarrugalij-inyung* 1SG/3NEUTA-cook-PRS NEUT.TOP-flipper FEM.OBL-dugong-GEN 'I'm cooking the flipper (NEUT) of the dugong (FEM)' (Horrack, 2010:27)
- (2) marrya yamba yaa-ni nanggu-dhalaliga-yn food because PROX.DEM-RESID 3RESID/1PLA-interest-PP warra-munu-munanga-yinyung PL-RDP-white.person-GEN
 - 'Because this food (RESID) of white people (3PL) interested us' (Heath, 1980:428)
- (3) *ana-ngarrgu nga-ra-ng a-lhuganda-rruj* RESID.TOP-kangaroo 1SG/3RESIDA-spear-PP NEUT.OBL-shin-LOC 'I speared the kangaroo (RESID) in the lower leg (NEUT)' (Baker et al., 2010:67)
- (4) niinima-yirr-ma-ngi mana-wuluru
 1MDUEXCL/VEGA-leaves-get-PC VEG.TOP-acacia.sp
 mana-ma-manjarr-gadhuwa
 VEG.TOP-VEG.REL-leaves-new
 'We two got new acacia (VEG) leaves (NEUT)' (Baker et al., 2010:66)
- (5) ngarra-ma<u>n</u>i-nyung nguna-a-jaalibu-mana na-doctor-wuy F-woman-HUM.SG 3FSG/3MSGA-BEN-cough-PRS M-doctor(English)-DAT 'The woman coughs for the doctor'
- (6) *nguna-ag-iynga-na na-wirri-nyung-jinyung anawu-biiba* 3FSG/3MSGA-BEN-finish-PRS M-child-HUM.SG-GEN NEUT.TOP-paper(Kriol) 'She finishes the boy's (3MSG) homework (lit. paper (NEUT))'

¹ Unless otherwise specified, the data presented here comes from my fieldnotes from fieldwork carried out with Wubuy speakers in Darwin and Numbulwar during February-April 2014.

² The following abbreviations are used which are not covered by the Leipzig glossing rules: F – female gender; FEM – feminine noun class; HUM – Human; M – male gender; NEUT – neuter noun class; – past punctual; RDP –

reduplication; REL – relational form of noun class prefix. There are two series of pronominal agreement prefixes on verbs (represented by A and B subscripts), both of which have intransitive and transitive forms, and these are distributed according to the tense/aspect/mood (TAM) and polarity of the verb. In transitive prefixes, the subject gloss precedes / and the object gloss follows. Also note that the treatment of gender and noun class used in this paper differs slightly from Heath (1984). See Horrack (2010) for further details.

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Do temporal and spectral measures differentiate the contrast between Punjabi retroflex and dental stops?

Qandeel Hussain (Macquarie), Mark Harvey (Newcastle), Michael Proctor (Macquarie) & Katherine Demuth (Macquarie)

Languages which make use of three or four-way place contrasts in coronal obstruents are relatively rare (Ladefoged & Maddieson, 1996). Different acoustic cues have been shown to be associated with different coronal places of articulation: (a) retroflexes are characterized by shorter closure and burst durations (Tabain, 2012), (b) lower frequency burst spectra (Stevens & Blumstein, 1975) and (c) characteristic F2-F3 convergence near the vowel offset (Hamann, 2003), compared to dentals.

Cross-linguistically, retroflexes are avoided in the context of high front vowel /i/ (Bhat, 1973; Steriade, 2001b). It is therefore not clear how retroflexes are produced in the context of a preceding /i/ vowel in Indo-Aryan languages. Ohala & Ohala (2001) argue that Hindi retroflexes are characterized by F2-F3 convergence following high front vowel /i/, but do not provide any quantitative analysis. Dave's (1977) study of Gujarati and our recent study of retroflexes in Punjabi found no evidence of F2-F3 convergence in the preceding /i/ context. The goal of the present study is therefore to investigate which acoustic cues Punjabi speakers use to differentiate the contrast between retroflex /t/ and dental /t/ across a range of preceding vowel contexts (/i a u/). We predict that temporal (closure and burst duration) and spectral moment analysis (centre of gravity (COG), variance, skewness, and kurtosis) will reliably differentiate the retroflex and dental contrast with all three preceding/i au/vowels.

Nineteen male Punjabi speakers (22 to 30 years of age, M=26.3 years) participated in an elicited imitation task. They were presented with nine CVt and nine CVt real Punjabi words, preceded by the vowels /i a u/, all words matched with a picture. The stimuli were embedded in a pre-recorded Punjabi carrier sentence [kɛ_ədʒ] 'say____today', randomized, and presented in eight different blocks (18 x 8 = 144 items per speaker). All utterances were recorded at 44.1 KHz and downsampled to 22 KHz. Closure and burst durations of 2683 tokens were measured by manual identification of spectra and waveforms. Spectral moments of stop bursts were measured in FFT spectra over sliding 20ms Hamming analysis windows.

We used repeated-measures ANOVA with closure duration, burst duration and four spectral moments (COG, variance, skewness, and kurtosis) as dependent variables, place (retroflex vs. dental), and preceding vowels (/i/-/a/-/u/) as within-subject factors. In all three vocalic environments, there was a significant effect of place on both closure duration and burst duration (Table 1). The analysis of spectral moment showed that only variance (2nd spectral moment) reliably differentiated the retroflex and dental contrast in all three vocalic environments. COG (1st spectral moment) did not differentiate retroflex and dental contrast in the /i/ context but it did in the /a/ and /u/ contexts. Skewness (3rd moment) distinguished the retroflex and dental contrast in the /i/ and /a/ contexts but not /u/. Kurtosis (4th moment) only provided a reliable cue for the retroflex and the dental contrast in the /u/ context but not in the /i/ and /a/ contexts (Figure 1a-f).

Our findings suggest that closure duration, burst duration and spectral variance are the acoustic cues most correlated with the retroflex and dental contrast in Punjabi. In the /i/ context, all of the acoustic cues (except COG and kurtosis), reliably differentiated the retroflex and dental contrast.

Table 1. Statistical results of the retroflex and dental contrast in three different preceding vowels.* shows statistical significance with the alpha value of 0.05.

Acoustic Measures

Contrast	Vowel						
Retro vs. Dent	/i/	.001*	.001*	.516	.001*	.001*	.094
	/a/	.001*	.001*	.029*	.001*	.007*	.426
	/u/	.001*	.001*	.001*	.001*	.474	.053*



Figure 1. Average closure duration (a), burst duration (b), and 4 spectral moments (c-f) in three different preceding vowels.

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A comparative study of likelihood ratio based forensic text comparison in procedures: Multivariate kernel density with lexical features vs character-based N-grams

Sunichi Ishihara (ANU)

In this empirical study, we compared the performances of two different procedures for calculating likelihood ratio (LR) for forensic text comparison (FTC). One was a multivariate kernel density (MVKD) procedure with so-called lexical features. The MVKD procedure has been successfully applied to various types of forensic evidence [1-3], including texts [4]. The other was the procedure based on character N-grams. N-gram is a widely-used, robust probabilistic language model [5]. The effectiveness of character N-grams has been reported in authorship analysis [6]; however, to the best of our knowledge, it has not been applied to LR-based FTC. Thus, we don't know yet which procedure works better in FTC.

The likelihood ratio (LR)-based analysis of evidential strength is the standard framework of DNA profiling [7]. Following DNA profiling, other forensic comparison sciences, including fingerprint [1], handwriting [8], voice [3], and many more, have adapted the LR-based framework for analysing and presenting forensic evidence. The LR framework is the legally and logically correct frame- work, and its use has been advocated in the main textbooks on the evaluation of forensic evidence [9] and by forensic statisticians [10, 11]. Despite the increasing prevalence of the LR-based frame- work in various fields of forensic comparative science, LR-based studies on forensic authorship analysis are conspicuous in their absence [12, 13]. The LR is the probability that the evidence would occur if an assertion is not true [9]. The relative strength of the given evidence with respect to the competing hypotheses (prosecution vs. defence) is reflected in the magnitude of the LR. The more the LR deviates from unity (LR = 1), the greater support for either the prosecution hypothesis (LR > 1) or the defence hypothesis (LR < 1).

In this study, the performances of the above-mentioned two procedures were objectively compared using the same text data. We used an archive of chatlog messages (http://pjfi.org/), which is a col- lection of real pieces of chatlog evidence used to prosecute paedophiles, to assess the performances of the two procedures. As of August 2014, the archive contains messages from more than 580 criminals, but 115 authors (= criminals) were used for this study. In order to assess the performance of an FTC system, two types of comparisons, namely same-author (SS) and different-author (DS) comparisons, are necessary. In SA comparisons, two groups of messages produced by the same author are compared and evaluated with the derived LR. Given the same origin, it is expected that the derived LR is higher than 1. In DA comparisons, *mutatis mutandis*, they are expected to receive an LR lower than 1. We created two non-contemporaneous groups of messages from each of these 115 authors so that we can conduct SS and DS comparisons by simulating an offender-suspect situation. The 115 authors were divided into mutuallyexclusive test (39 authors), background (38) and development (38) databases. The test database is used to assess the performance of the FTC system; the background database is used as the reference database for calculating LRs, and the development database is to calculate weights for calibrating the derived LRs. From the test database of 39 authors, 39 independent SA and 1482 independent DA comparisons were possible. We used 500 words (more precisely characters appearing in 500 words) in order to model the attributes of each message group. The performance of the FTC system was assessed using the loglikelihood-ratio cost (Cllr) and the magnitude of the derived LRs (including factual and counterfactual LRs) was plotted by means of Tippett plots. Cllr is based on information theory; any value less than 1 means that the system is giving you information. The lower the Cllr value, the better the performance of the system.

The result shows that the procedure based on the MVKD (Cllr = 0.682) outperformed the procedure based on character N-grams (Cllr = 0.807). The Tippett plots given in Figure 1 show the superiority of the MVKD procedure to the character N-gram procedure in that the overall magnitude of the factual LRs is greater in the former procedure than the latter while the magnitude of the counterfactual LRs is smaller in the former than the latter. The implications of this result to real casework will be discussed as well in this paper.



Figure 1: Tippett plots showing calibrated LRs for the MVKD procedure (panel a) and the character N-gram procedure (b). In the Tippett plots, the LRs, which are equal to or greater than the value indicated on the x-axis, are cumulatively plotted separately for the SA (the black curve rising to the right) and DA (the grey curve to the left) comparisons. Log10 scale is used for LRs, in which case the neutral value is 0. The crossing point of the two curves, which is indicated by an arrow, is equal error rate (EER).

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Variation in fricative production by young adult Kriol speakers from Barunga NT

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Existing research into current forms of North Australian Kriol and related varieties suggests that the pronunciations of cognate words in Kriol varieties and Australian English tend to differ systematically in vowel formant targets and trajectories, the extent and implementation of voicing contrasts, and in stop-fricative variation and variation among fricatives (Butcher, 2008; Jones, Meakins & Buchan, 2011; Jones & Meakins, 2013, Baker, Bundgaard-Nielsen & Graetzer, 2014). Kriol varieties are observed to differ regionally. With a few exceptions, however, relatively little recent, detailed research has examined the speech patterns and typical variability among adult speakers of Kriol in different regions. In this talk we present inprogress research into the phonological-lexical nature of the Kriol variety spoken at Barunga, NT. In the context of a broader project to chart children's development in Kriol and English, we present initial results regarding the variability in the form of Kriol spoken by young adults at Barunga. Speech recordings were made of five young women, who were audiorecorded by local community members in conversation and story-telling using a casual, modified 'sociolinguistic interview' style approach in a home or community setting, for 20-30 minutes per speaker. The recordings were then orthographically transcribed, and target words transcribed phonetically. In addition to these auditory categorisations, the tokens were analysed acoustically using durational and spectral measures. Within words, we focus on describing the extent and patterns of variation in fricative production (such as in place and voicing) as well as the variation between fricatives and stops or affricates.

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Intersecting subgroups in Indo-European

Siva Kalyan (ANU/Northumbria)

A central tenet of the Comparative Method is the principle of subgrouping by shared innovations. If two or more languages share a set of developments which are not found elsewhere in the family, then it is concluded that these languages all descend from a uniquely-shared proto-language, and that they thus form a subgroup. It is usually expected that the subgroups in a language family form a nested pattern, and that the history of the language family can thus be represented with a tree diagram.

However, there are many cases where shared innovations (and hence subgroups) do not form a nesting pattern, but rather intersect, forming chains or networks. In particular, this is what we find in the case of language families that evolve out of dialect networks (what Ross 1988:8 calls a *linkage*). In such cases, the family-tree model is inadequate as a representation of language history.

Kalyan and François (forthc.; see also François 2014) proposed a new computational method, Historical Glottometry, for analysing and representing linkage situations. This method differs from the computational methods that are typically used for subgrouping, in that all of the following conditions are satisfied:

- 1. Each subgroup is posited on the basis of a set of shared innovations;
- 2. A subgroup may be "stronger" or "weaker" (as a function of how many innovations confirm or disconfirm the grouping);
- 3. Subgroups may overlap.

This talk presents an application of Historical Glottometry to the higher-order subgrouping of Indo-European, a language family which has long been recognised as having evolved out of a dialect network (Schmidt 1872; Meillet 1903; Bonfante 1931; Porzig 1954; Garrett 2006). The glottometric analysis is based on a dataset consisting of the 384 innovations shared across Indo-European branches that are listed in Porzig (1954).

This systematic investigation of patterns of shared innovation leads to some unexpected results. For example, not only is there strong evidence for an Italo-Celtic subgroup; there is even stronger evidence for an Italo-Germanic subgroup—and these two subgroups exist simultaneously. Furthermore, it can be shown that the major Indo-European languages (with the exception of Hittite and Tocharian) fall into two "diffusion areas" (see Figure 1), showing a rough east-west split, yet following a hitherto-undescribed pattern.



Figure 1.

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The use of speech acts in Murrinhpatha language socialisation

Barbara Kelly, John Mansfield, William Forshaw, Lucinda Davidson, Rachel Nordlinger, Gillian Wigglesworth & Joe Blythe (Melbourne)

This paper examines first-language input and socialisation in Murrinhpatha, a polysynthetic language of northern Australia. The study reported here is the first investigation of child-directed speech (CDS) in Murrinhpatha, and one of very few studies of CDS in Indigenous Australia.

The study of language socialisation (Ochs & Schieffelin 1984) entails an understanding that language is a fundamental medium in the development of children's social and cultural sensibilities. Socialisation research assumes that children are encultured into local practices via language and that this occurs both in the language directed to them and the language that surrounds them (Ochs 1986).

The current study examines the types of speech acts evident in caregiver speech to young children, with a particular focus on ways that carers encourage children to speak. It addresses the following research questions:

- 1. What speech acts are evident across each of the caregivers?
- 2. Is there a difference in caregiver speech act input to children of different ages?
- 3. What strategies do caregivers favour to encourage children to speak?

Data for this study comes from forty hours of carer-child interaction recorded for the Language Acquisition in Murrinhpatha Project (LAMP). Three primary carers and six children at different ages (2;7–6;0) were recorded across multiple time points.

Findings for the study indicate that speech acts play an important role in children's socialisation in Murrinhpatha. Results for research question (1) indicate the following to be salient types of speech acts used in Murrinhpatha CDS: *prompts* (where the carer provides the child with a model for what should be said); *directives* (where the carer directs the child to action); *questions* (interrogative constructions, with various functions); *statements* (utterances with propositional content). While findings for the second research question (2) suggest that carers use more *prompts* in addressing younger children, it is yet to be determined whether this is replicable across a wider range of child–carer dyads. Results for research question (3) show a range of strategies for encouraging children's communication. Each of the caregivers makes use of questions not just for information seeking but also as "display questions", asking about topics for which they already know the answer, in line with Moses and Yallop's (2008) findings for Walmajarri/Kriol speakers.

This study raises questions regarding the types of speech acts evident in Indigenous communities. It shows that speech acts such as direct questions and "display questions", which have hitherto been considered to be disfavoured by Indigenous language users (Bavin 1992; Eades 1982; Harris 1984; Reeders 2008), are a primary part of children's language socialisation in Murrinhpatha.

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A first look at the perceptual dialectology of Australian English

Sydney Kingstone (ANU)

Perceptual dialectology is dedicated to the formal study of folk linguistic perceptions. Folk perceptions serve as an important aspect social identity formation, particularly in reference to correlations between group stereotyping and linguistic factors (Preston 2002:41). The linguistic subfield, pioneered by Dennis Preston (1989, 1999), has predominantly focused on gathering folk perceptions of regions known for high areal and social linguistic diversity. Little work has been conducted on more recently developed language varieties that contain less explicit language variation. While Australian English (AE) has traditionally been viewed as a homogeneous variety (Bernard 1989; Blair1993), regional variation is slowly becoming more apparent in linguistic studies (Bradley 1989; Bryant 1989; Horvath 1985; Horvath and Horvath 2001). This paper presents the findings of the first perceptual dialectology study conducted in Australia. Seventy- three native AE speaking students took part in the study, modelled after Preston's studies of American English dialect perceptions (1989, 1999). To qualify for the study, respondents had to be native Australian English speakers raised in Australia and between the ages of 17 and 25. The respondents completed a questionnaire in which they were asked (i) to mark and label dialect areas on a map of Australia; (ii) to rate the eight states on five evaluative dimensions: how different, correct, pleasant, broad, and slow they imagined speech to be; and (iii) to answer a series of open-ended questions regarding AE speech variation. Results indicated statistically- significant differences across the five scales for perceived regional speech distinctions. The maps data also reflected perceived regional dialect differences across Australia, both in terms of perceived linguistically distinct dialect areas (phonetic, lexical, syntactic, and stylistic distinctions, i.e. the Queensland tag 'eh'); as well as perceived socioculturally distinct dialect regions (broad country accents in north/west Australia vs refined city accents in south/east Australia). Additionally, respondents reported urban-rural, ethnic, educational, socioeconomic, indigenous, gender, and occupational variation in AE. Preliminary analysis therefore suggests that young AE speakers perceive AE dialects to be linguistically and socioculturally more diverse across a number of factors than previously reported, warranting further exploration in the area.

Sample Tables



Respondent means (n=73) for correctness (0=incorrect, 4=most correct) and broadness (0=not broad, 4=most broad)

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Reconstruction of kin terms in the Victorian languages

Harold Koch (ANU)

What can be known about the prehistory of kin terms in the Indigenous languages of Victoria? At least 11 distinct languages are recognised (Blake et al. 2011). A number of these can be classified into closely related subgroups; the most probable genetic groups are the Kulin languages, Yorta- Yorta and Yabula-Yabula, the Gippsland languages, and possibly Bungaditj and the Warrnambool language. Kin terms have been recorded since the 1860s. But many of the older sources present difficulties in interpretation with respect to: what language they describe, the phonetics of the terms, and the exact meanings of the kin terms (is brother/sister elder or younger; is son/daughter of a man or a woman; is aunt father's or mother's sister; is grandmother/grandfather maternal or paternal; is father-in-law a man's or a woman's; what is meant by step-son, etc?) The problems of relating source documents to the currently recognised languages is aided by the producers of "consolidated accounts" (e.g. Bowe and Morey 1999, Blake et al. 2011). Phonetic interpretation is aided by modern recordings by Hercus (e.g. 1992). The morphological structure of kin terms (e.g. inflection for the personnumber of the possessor) is clarified by recent grammatical descriptions. Semantic details can be gained from the detailed descriptions of two kin systems by Dawson (1881). Using these aids, we compare kin terms across the Victorian languages and attempt to determine: what terms are can be reconstructed within each genetic group (e.g. proto-Kulin *wawa 'brother'; what terms are diagnostic of putative subgroups; whether any terms are common to all the Victorian languages; how do the Victorian terms compare to kin terms reconstructed for other Australian languages (e.g. **mama* 'father', see Hendery and McConvell 2013)?

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The frequency code hypothesis in counter-universal magnitude symbolism

Nahyun Kwon (Queensland)

Any explanatory theory of sound symbolism may be judged by its ability to explain complex details of fact within its empirical domain. Ohala's (1994) frequency code hypothesis, inspired by observations of nonhuman vocalizations, argues that there is a biological mechanism underlying the association between acoustic frequencies of speech sounds and the use of those sounds in expressing the size of referents. Thus, it is claimed that higher F0 invokes the impression of "small" whereas lower F0 invokes "large", because vocal frequencies correlate inversely with vocal cord size, which in turn relates positively to the overall body size of the signaller. For the same physical reason, the F2 of individual segments also signals impressions of size (Ohala, 1997). This logic explains the extensively observed cross-linguistic use of high front vowels [i I y e] (i.e., high F2, high intrinsic F0) for diminutive concepts and low back vowels [$5 \Lambda a o$] (i.e., low F2, low intrinsic F0) for argumentative concepts (Sapir, 1929; Ultan, 1978). Finally, in the kinaesthetic domain, the symbolic use of vowels also seems related to the magnitude of the oral aperture of a speech sound.

I argue that the frequency code hypothesis gives us more than just this. Indeed, the correspondence between acoustic speech signal, articulatory gesture and auditory perception may also apply, under the right conditions, to the reversal of this near-universal pattern of magnitude symbolism. Languages such as Rengao (Austroasiatic), Nembe (Niger-Congo), and Korean (Altaic) are widely separated yet all share the systematic correlations of HIGH VOWEL = BIG (!) and LOW VOWEL = SMALL in their sound symbolic vocabulary (see table 1). Crucially, these languages are also claimed to share an association between their higher vowels and an advancement of the tongue root (ATR) that expands the pharyngeal cavity (Casali, 2008). Just as oral cavity size is acoustically associated with frequencies of the second formant, so the pharyngeal cavity size is associated with frequencies of the first formant: a constricted pharyngeal cavity leads to a higher F1 and an expanded cavity to a lower F1 (Halle & Stevens, 1969). On this basis, the apparent counterexamples to magnitude symbolism in fact conform the frequency code theory, only in an unusual manner, by hinging on F1/pharyngeal cavity rather than F2/oral cavity. Proceeding from previous literature on the pharyngeal effect of symbolic vowels in Rengao (Gregerson, 1984) and Nembe (Maduka, 1988), for this elaboration of Ohala's theory, I examine Korean, where articulatory correlates of the feature ATR are not as well established as for the other two languages above. This will help to clarify the extent to which our extension of the frequency theory to considerations of pharyngeal cavity size, regulated by \pm ATR, accounts for counterexamples to universal magnitude symbolism.

Language	Sound-symbolic word pairs	Definition		
Rengao	ta?ε / tə?ə chagra / chəgrə	"sight of <i>small/large</i> hand" "sight of <i>small/large</i> prone body"		
Nembe	dɛgɛrɛɛ / degeree gɔrɔrɔɔ . gororoo	" <i>not too low/low</i> house" "straight and <i>narrow/wide</i> "		
Korean	sɛŋkɯl / siŋkɯl toŋkɯl tuŋkɯl	"smiling of <i>small/large</i> person" "round involving a <i>small/large</i> circle"		

Table 1. Apparent counterexamples to magnitude symbolism

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Comparing the acoustic space of English and Australian languages using the Long-Term Average Speech Spectrum

Fiona Pei Tze Low (Flinders), Andrew Butcher (Flinders) & Hywel Stoakes (Melbourne)

Introduction: The long-term average spectrum of speech (LTASS) is a representation of speech energy level relative to frequency. Byrne et al (1994) developed an 'international' LTASS that they claimed is applicable to all languages. They compared the LTASS of speakers of 12 language varieties (including Standard Australian English) and found that the LTASS was very similar across all these languages. They concluded that there was no single language or group of languages that could be regarded as being markedly different from the others. The sound systems of Australian Aboriginal languages (AALs) are, however, remarkably different from the majority of the world's languages, including Standard Australian English (SAE). Stoakes, Butcher, Fletcher, & Tabain (2011) compared the LTASSs of Yolngu Matha and Pitjantjatjara with those of the same speakers speaking Australian Aboriginal English (AAE), and showed small but consistent differences between the AALs and AAE across speakers. Aboriginal languages demonstrated higher amplitudes for frequencies between 750 Hz and 2 kHz and showed lower amplitudes above 2 kHz as compared to AAE. No research has been done to directly compare the LTASS of Aboriginal languages to the 'international' LTASS or to that of SAE. This study compares the LTASSs of Standard Australian English speakers with the AAE and AAL data of Stoakes et al (2011).

Method: Using exactly the same methodology and equipment as in the Stoakes et al (2011) study, 10 male and 10 female monolingual SAE speakers (age range 18-50 years) were recorded in a sound treated room, using an *Edirol R-09HR* digital audio recorder and a *Røde Procaster* large diaphragm dynamic microphone at a 24 bit depth and 48 kHz sample rate. Speakers read the *South Wind and the Sun* passage and also spoke spontaneously for at least 60 s. The LTASS was calculated for each speaker and the results were compared to the LTASSs of Aboriginal English and two Australian languages, Yolngu Matha (9 male, 3 female speakers) and Pitjantjatjara (3 female speakers). On the basis of 60 s portions of recording from which all long pauses (>3 s) and extraneous noise had been removed, LTASSs were produced using the R+ statistical environment.

Results: There was no significant difference between Yolngu Matha and Pitjantjatjara, so data for the two languages were grouped together as 'AAL'; there was also no significant difference between reading and spontaneous speech. However, as shown in Figure 1, there are statistically significant differences between the spectral averages of SAE compared with AAE and AAL, with SAE having higher amplitudes at higher frequencies as compared to the Australian languages. When comparing SAE to AAL, the LTASS of the male SAE speakers is 7dB higher at 3.15, 5, and 6.3 kHz, and at least 3 dB higher at 2, 8, and 10 kHz. For the females, the LTASS of SAE is at least 11dB higher than AAL between 5 and 10 kHz and at least 5dB higher at 4, 12.5, and 16 kHz. Interestingly (except at 3.15 and 6 kHz) the LTASS of SAE is not significantly different from that of AAE for the male speakers. However, for the female speakers, from 1 kHz onwards to 16 kHz (except at 2.5 and 5 kHz) the LTASS of SAE is at least 4dB higher than the LTASS of AAE. As noted by Stoakes et al (2011), there were consistent differences between AAE and AAL, but we found that these were not statistically significant, except at 5 kHz in the female group.

Conclusion: The LTASSs of SAE, AAL, and AAE are notably different from one another, particularly in the higher frequencies, although these differences are not uniform between the two genders. It may be hypothesized that these differences are mainly due to the absence of sibilant fricatives and stop aspiration in AAL and AAE. It has been estimated that up to 70% of the Indigenous population present with a hearing loss of more than 25 dB; and studies have shown that a hearing loss at or greater than this level can compromise a child's ability to perceive important information (Aithal, Yonovitz & Venkatesh, 2008; Massie, Theodoros, McPherson, & Smaldino, 2004). As the type of conductive hearing loss experienced by the Aboriginal population is most severe in the higher frequencies, the results of the present study suggest that Aboriginal languages (including Aboriginal English) may be, on purely acoustic grounds, a more appropriate medium of classroom instruction a



Figure 1: Female (top) and male (bottom) LTASSs of Standard Australian English, Aboriginal English, and Aboriginal languages.

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Computer-based elicitation games in the field: The Virtual Atoll Task

Jonathon Lum (Monash) & Jonathan Schlossberg (Newcastle)

Conventional linguistic fieldwork has tended to prioritise the collection of texts produced naturally within the community such as traditional narratives and conversations. However, it has been recognised that research into specific linguistic domains can often benefit from a more targeted approach to elicitation, through the use of elicitation tasks and games with specific stimulus materials. Examples of such tools include the 'Man and Tree Game', (Levinson et al. 1992), the 'Tinkertoy Matching Game' (Senft 1994), and the 'Frog Story' picture book (Bamberg 1985, 1987). These tasks have been employed to great effect for deeper research into specific linguistic domains, as well as broad cross-linguistic comparison.

While computer-based linguistic elicitation tasks have been frequently employed in psycholinguistic and cognitive linguistic research, they have been uncommon in linguistic fieldwork and language documentation projects for a number of reasons. Informants are often not computer-literate, and many field sites lack the electricity or other practical necessities to run such tasks. However, as modern technology continues to spread into even the remotest of communities, computer-based elicitation games and tasks are becoming increasingly viable for fieldworkers interested in eliciting domain-specific data in a way that is more targeted and cross-linguistically comparable for researchers, and perhaps more fun and engaging for informants.

This paper reports on the authors' experience administering the Virtual Atoll Task (VAT), an innovative elicitation methodology in which two players navigate through a virtual atoll environment (see Figure 1). The task, which elicits spatial language as the participants direct each other through the simulated landscape, aims to provide a more realistic, first-person perspective in comparison to previous 'space games' (e.g., Levinson et al. 1992; Senft 1994; Wilkins 1993). In this paper we discuss the successes and failures of the VAT as an elicitation tool, reporting on pilot studies in Jaluit Atoll in the Marshall Islands and Laamu Atoll in the Maldives. In particular, we draw attention to the successful and efficient elicitation of data on deixis and frames of spatial reference, as well as the potential for similar tasks to be used to investigate other linguistic domains. In addition, we discuss a number of shortcomings of the VAT, including the challenges associated with training informants and the paucity of meaningful data when informants adopt a 'trial and error' strategy to solve the task.



Figure 1: Scene from the Virtual Atoll Task

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Towards Proto-Australian: Gunwinyguan – Iwaidjan sound correspondences

Robert Mailhammer (Western Sydney) & Mark Harvey (Newcastle)

This paper is a first step towards evaluating the Proto-Australian [PA] hypothesis (Evans 2003, Evans 2005), which proposes that all or nearly all Australian languages belong to a single family, according to the standard criteria of the Comparative Method. There has been considerable debate over the applicability of the Comparative Method in Australia, but the most recent analyses agree in supporting its applicability in Australia (Bowern & Koch 2004, Campbell & Poser 2008:145-161, Sutton & Koch 2008).

Following the Comparative Method it has been shown that the great majority of Australian languages, occupying 90% of the continent, are members of the Pama-Nyungan [PN] family (see Map 1 -Alpher 2004, Bowern & Atkinson 2012). The languages associated with the remaining 10% of the continent, are commonly discussed under a negatively defined label - Non-Pama-Nyungan [NPN] (see Map 1). They are currently analysed as a disparate collection of language families and a significant number of isolates, and they appear to show considerable typological diversity. Consequently, examining potential genetic connections between the NPN languages is central to the evaluation of the PA hypothesis. In order to do this, the establishment of systematic sound correspondences is methodologically crucial (Campbell & Poser 2008, Harrison 2003).

We take two proposed NPN families for which there are existing comparative materials: Gunwinyguan [GN] (Harvey 2003), and Iwaidjan. We show that there is a body of shared lexical correspondence sets which establish regular sound correspondences. We demonstrate that the lexical correspondence sets satisfy the standard requirements for reliability and transparency of etymological comparison (Campbell & Poser 2008:162-223, Mailhammer 2014:430-432).

We show further that this higher level comparison can assist in the analysis of problematic issues in lower level reconstruction. There is an unusual correspondence st in Iwaidjan, where a palatal approximant /j/ in Amurdak corresponds to alveolar laterals in Iwaidja /I/, and Mawng /l/ (table 1). This set is currently reconstructed as *I (Evans 2009:162). The corresponding forms reconstructed for GN have lamino-dental *t. However, the reconstruction of dentals for GN involves complex and somewhat irregular dental > alveolar and dental > palatal shifts (Harvey 2003:215-217.

If the Iwaidjan set /j - I - I/ is reconstructed as *t, then the reflexes would involve changes attested elsewhere: Amurdak – stop > approximant lenition; Iwaidja and Mawng – dental > alveolar shift & lateral lenition. Comparison with Iwaidjan data provides a larger database supporting the GN *t reconstruction, thereby allowing for fuller examination of apparent irregularities in reflexes within GN.

A number of these correspondence sets, including those in Table 1, have potential reflexes beyond Gunwinyguan and Iwaidjan in both PN and NPN languages, arguing that further evaluation of the PA hypothesis is warranted. We consider the distribution of these potential reflexes, and the implications of their distribution for fuller evaluation of the PA hypothesis.

Map 1: Pama-Nyungan Language Family (in white) and Non-Pama- Nyungan Languages (shaded) (Harvey 2011:347)



Table1: Gunwinyguan – Iwaidjan laminal correspondences

	Amurdak	Iwaidja	Mawng	*PGN
'stand'	ji	Лi	li	* <u>t</u> i
'thigh'	jara		lari	*tar(V)

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Perceiving markedness: Dichotic listening and hemispheric integration in perceptual processing

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Although the notions of 'markedness' and 'features' have been central to phonological theory since the publication of Sound Patterns of English (Chomsky & Halle, 1968), experimental approaches have rarely been adopted to investigate whether they indeed guide native listening. This may be because traditional accounts of typologically driven markedness (e.g., Maddieson & Disner, 1984) remain ambiguous with regard to perceptual salience of marked and unmarked phones. We address the phonetics-phonology interface experimentally via cross-language speech perception, guided by the Perceptual Assimilation Model (PAM: Best, 1995). This model invokes the concept of perceived similarity: the greater the perceptual similarity of L1 and L2 phones, the greater the perceptual assimilation of L2 categories to L1 categories. Use of this perceived similarity in decoding speech signals, however, could be either featural or articulatory-acoustic. In this project we deploy the dichotic listening paradigm to investigate the nature of perceptual biases and perceptual intrusions in early L2- dominant bilinguals, given that dichotic listening tasks specifically tap into left-hemispheric superiority in linguistic processing by assessing for right ear advantage.

We tested 13 adult L2-dominant Malayalam-Australian English bilinguals with a dichotic listening paradigm using phonologically licit Malayalam and English nonce words. All stimuli were designed to contrast Malayalam labial stops ([p, p^h , b, b^h]) in the attended ear with English labio- dental fricatives ([f,v]) in the unattended ear. The stop-fricative "dichotic competition" was explicitly chosen because of complementary gaps in the English and Malayalam inventories:

English contrasts voicing in stops and fricatives, and makes use of allophonic aspiration, while Malayalam utilizes both voicing and aspiration contrasts in stops but lacks labio-dental fricatives altogether. Two disyllabic nonce words (CVCV, initial stress), one each from English and Malayalam, were presented dichotically, and participants were required to attend to a specified ear in each trial. The ear-to-language orientation was controlled in separate blocks. Target consonants were always word- initial, unaspirated Malayalam stops, and competing English fricatives always matched the voicing of the target stop. Participants were provided with a closed response set representing the Malayalam bilabial stops ([p, p^h, b, b^h]), allowing us to assess whether (a) aperiodic energy in the unattended fricatives intrudes upon the stops, leading to misperceived aspiration, and whether *perceived* similarity is an articulatory-acoustic or featural phenomenon. Relying on PAM, we predicted that the *frication* of the English [f, v] (turbulent airflow due to narrow labial constriction) would intrude into perception of unaspirated Malayalam stops, increasing perception of them as *aspirated* (turbulent glottal airflow), whereas by a featural account the unattended fricatives lack [± spread glottis], hence should not induce any such perceptual intrusion (Table 1).

Participants often maintained selective attention to the specified ear, correctly identifying the unaspirated stops above chance. However, substantial perceptual intrusions were also observed. The response-error patterns revealed that there were significant effects of (i) *right ear advantage (REA)* leading to less intrusion with right-ear attending and (ii) the $[\pm voice]$ specification of the target consonant, with [+voice] inducing more intrusions. Error responses involving a blend of features from the unattended and attended ears are a known

outcome of dichotic listening tasks (Hayden et al. 1979), as are ear asymmetries in this effect (Fikkert, 2011; Tsuji et al., 2014). In our data there is a bias towards perceiving intrusions as the highly marked aspirated voiced stop.

We speculate that marked phones might require more cross-hemispheric processing, leading to integration of information available to both hemispheres of the brain, which in the present task contained blend-able contrastive information. If *only* marked segments are thoroughly specified in the *underlying representation* (Golston, 1996) and *universal grammar* is responsible for determining *possible* attestable forms (Moreton, 2008), we further hypothesize that a grammatically induced bias for such marked segments reflects the requirement that highly marked phones are only licensed in order to preserve phonological contrast. Hence they might carry greater perceptual salience, as well as hemispheric integration in perceptual processing. Such an account is compatible with the monovalent view of features, in which phones that are specified for voicing are *marked* by the presence of the node for the laryngeal feature [voice] and involve an *active* articulatory command. Since speech is invariably shaped by perception of articulated phones, segments involving *active* articulatory commands are more likely to be noticed (intrude) in speech perception.



Table 1: Featural and Acoustic Specifications

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Figure 1. Intrusion of perceived aspiration from unattended English fricative, by ear and by target stop voicing

Attended Ear

Target

— b **—** р

Right Ear

The integration of English phonology into Murrinhpatha

John Mansfield (Melbourne)

If every language has a "phonological system", then where do the boundaries of this system lie? How does the phonology of one language relate to others with which it is in contact, especially where large amounts of vocabulary are being borrowed? (Poplack & Dion, 2012; Poplack, Sankoff, & Miller, 1988; Weinreich, 1953) All Aboriginal languages are now in a situation of intense contact with English and/or Kriol (Meakins, 2014), and in this paper I investigate the phonological outcomes of English lexical borrowing into Murrinhpatha (MP).

Of the English phonological segments and segment sequences that do not match anything occurring in traditional MP, some are now maintained in lexical borrowings, arguably adding new phonemes and phonotactics to the MP inventory. However other aspects of English phonology are adapted to MP patterns. The material regularly maintained (or "imported") comprises:

- (1) Voiceless fricatives /f/, /s/ and /f/ in syllable onsets. (While voiced fricatives are always either devoiced or adapted to stops.)
- (2) One new monophthong vowel /o/, and two diphthongs /ei/ and /ai/. (While other English vowels are merged into these or existing MP vowels.)
- (3) Syllable onset clusters /pl/, /kr/, /st/, /sn/ etc. (While syllable coda clusters are simplified.)

In phonological descriptions it is conventional to set aside material from recent borrowings. However in MP discourse, English-derived phonological material is now imported in many frequent words, and I will argue that it should now be acknowledged as part of MP phonology.

In the case of the mixed language Michif, Bakker (1997) claims that there are *two phonological systems* – i.e. two distinct clusters of phonological material and processes, manifest in Creeand French-sourced lexical material respectively. However such an analysis cannot be sustained for MP, in which the English- derived lexicon, though it creates a new stratum of phonological material, is nonetheless interwoven with existing MP phonological patterns:

- a) The new stop/fricative manner contrasts occur only in syllable onsets, which can be seen as an extension of MP's general lack of obstruent contrasts in syllable codas.
- b) The English stop voicing contrast is imported, but its realisation conforms to MP, rather than English, phonetic patterns.
- c) Diphthong integration is influenced by constraints on MP glides.

In summary, we cannot draw a clear dividing line by which some words are determined by MP phonology, and others by English or Kriol phonology. On this basis I argue that the new phonological material should be treated as part of an expanded contemporary MP phonology.

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Online dating profiles of gay Asian men and gay white men: Linguistic expressions of identity, ethnicity, social and sexual health.

William Marron (Monash)

This study explores issues relating to members of the 'Asian' male homosexual community and their interaction with the broader, predominantly 'Anglo/White' homosexual community in Australia. The data source is online dating profiles (from Manhunt.com), which, by their nature, are ideal sources of natural, and self-composed data that is unsolicited and unaffected by the observer effect.

There have been several decades of linguistic analysis of the personal ad genre. While initial studies focused on syntactic and grammatical features (Bruthiaux, 1994), recent studies have adopted a sociolinguistic approach, exploring differing linguistic strategies deployed by individuals from various communities and groups in the expression of gender, identity, marketisation and commodification of the self and other (Coupland, 1996), and the nexus of language, sexuality and desire (Cameron & Kulick, 2003). More latterly there have been many studies dealing with issues of sexual health related to online dating sites (Rosenbaum, et al, 2013; Smith, 2000).

The advent of online communications has seen reduced stigma, and increased usage of this genre, and it is now estimated that 50% of homosexual men in Australia use the internet to make connections, dates and 'hook-ups' (Murphy et al, 2004). As a potential 'first point of contact' for a majority of homosexual men, dating profiles, and the language used in them, warrant greater investigation and this current study seeks to situate analysis of issues confronting the homosexual community within this context. Given the heterogeneous make up of this community, there exists many sites and topics of tension. One such area is that of ethnicity and race, and its linguistic expression in terms of self and the desired other. As in the wider community there exists many challenges including discrimination, marginalisation, objectification, exclusion and isolation. Different cultural schema, (communalistic versus individualistic) also impact on how individuals negotiate and express intentions surrounding sexual identity, desire, relationships, and sexual health (Jones, 1999; Sanitioso, 1999). Homosexual men identifying with an Asian background, face additional challenges in locating oneself in allegiance to the values of their Asian heritage and the values of the homosexual community, often facing homophobia from the former and racial discrimination from the latter (Teh, 2011). This crisis of fragmented identity (Offord & Cantrell, 1999) can impact deeply on social and sexual health. It has been noted that the Asian homosexual community has one of the highest incidences of HIV infection rates, at 17% of new infection rates as at July of 2014 (acon.org.au/chinesecampaign, 2014). Based on these figures it is evident that greater understanding of the challenges involved is required.

This paper utilises a combined approach of corpus linguistics and CDA (Baker et al, 2008) and provides quantitative and qualitative analysis of 471 online dating profiles collected from Melbourne, Sydney, and several Asian countries. It situates many of the themes outlined above in the discursive practices utilised in the corpus of personal profiles. Initial results already indicate differences in the two target groups' strategic use of language to express identity, desire, ethnicity and sexual health status, as well as differing cultural attitudes to the disclosure/non-disclosure of personal information, with Asian men's profiles found less likely to explicate ethnicity and HIV status. Such findings may point towards underlying cultural attitudinal differences, and the potential impacts of these on the social and sexual health of individuals will be discussed.

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The use of prosodic gestures during parent-child discourse interactions

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Young children exhibit perceptual and production sensitivity to the prosodic and metrical structure of the ambient language they are learning (Demuth, 1996). Their ability to use prosodic focus in declarative sentences is also reported to emerge between the age of five and seven (Chen, 2011). In the gestural domain, non-prosodic gestures such as iconics and deictics (pointing) have been shown to accompany speech in children (Iverson, 2010). However, little is known about whether beats (bi-phasic gestures which are non-iconic, non-metaphoric and non-deictic) also emerge along with the development of speech prosody in young children.

Previously, McNeill (1992) has suggested that beats may not appear in children younger than 5 years and that these gestures will not be frequently used till the age of 11. A recent study compared the multi-modal narrative abilities of five- and ten-year-old Italian, American and French children (Colletta et al, 2014). Beats were classified as gestures to indicate discourse cohesion and were found to occur less frequently in the narratives of young children. This raises the question of when children will use prosodic beats to accompany their developing prosodic ability and in which grammatical contexts these will be most likely to appear.

Considering the above literature, we hypothesized that children as young as six years of age will produce beats. Participants include five Australian English-speaking children (4 males, 1 females) aged between 5 - 7 years (Mean Age = 6;1 years), with an additional girl being excluded as she did not produce beats. The children completed two tasks: a story narration after viewing a two minute movie clip which served as a warm-up language activity, and an explanation task where the child planned a 'fantasy' family trip. Both these tasks were carried out while interacting with their mothers, with the mother mostly playing the role of a facilitator. The samples were coded for both *speech* (number of turns; nouns, verbs, etc.) and *gestures* (*non prosodic*: iconic, metaphoric, deictic vs. *prosodic*: independent and embedded beats).

The results indicated that children as young as 6 years of age use prosodic gestures in explanation tasks. Out of all the gestures the children produced, 29% were beats, as compared to 38% beats for the mothers (Figure 1). This is comparable to previous reports that 34% of the gestures produced by adults are beats (McNeill, 1992).

Most of the beats (63%) that children produced were found to temporally align with pitch accented words. This is again similar to the finding that gestural prominence aligns with spoken prominence in adults (Loehr, 2004; Shattuck-Hufnagel & Ren, 2012). More than half the prosodic gesture strokes (57%) produced by children were associated with nouns; and 84% of these nouns that aligned with beats were pitch accented. Unlike the children, parents' prosodic strokes (48%) often co-occurred with non-lexical items such as articles 'the' and connectives 'and' etc. (Figure 2). These differences were marginally significant [χ^2 (2, N=71)= 5.783; p=0.056] at an alpha level of 0.05.

The above results suggest that 6-year-old Australian English-speaking children can produce prosodic gestures, consistent with their ability to produce prosodic focus in conversational discourse. The tendency of these gestures to co-occur with nouns, unlike in the case of adults, may suggest that the factors that govern children's production of prosodic focus may change during the process of development. Alternatively, these results may be a function of discourse exchanges that the children were involved in, as these exchanges could have facilitated the frequent use of certain types of grammatical classes, such as nouns.



Figure 1: Percentage of gestures that were prosodic beats



Figure 2: Percentage of beats as a function of grammatical class

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Word-classes in Lopit – some adjectives can be anything

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Haspelmath proposes a methodology to establish prototype word-classes based on roots (as opposed to stems or words). He distinguishes nouns (thing-roots), verbs (action roots) and adjectives (property roots) on the basis of how they tend to behave in the three major propositional-act types of reference, predication and attribution. For example 'true adjectives' can be distinguished in that they are used for modification "without further measures" (Hengeveld, 1992 p. 58) or "attribution without special coding" (Haspelmath, 2012 p. 125). The shaded cells in Table 1 show expressions with no extra function-indicating coding whereas the other cells have some kind of overt marking.

Lopit is an Eastern Nilotic, Nilo-Saharan language which is spoken by around 50,000 people who live in the Eastern Equatoria province of South Sudan. The roots used in this language to express adjectival concepts can, without special coding, be used as adjectives, verbs and nouns.

There are a small number of 'true adjectives' which behave differently to nouns and verbs. They have the typical syntactic functions of adjectives. They can modify nouns as shown in (1) or be used to ascribe a property as a predicate in copula constructions as in (2).

Mostly, adjectival concepts are expressed using verbs in Lopit. I am calling these 'adjectival verbs' and they are used attributively in relative clauses to modify nouns, as shown in (3). They can also be used predicatively as shown in (4).

However, it appears that the roots of true adjectives and adjectival verbs can also be used in other word classes without modification. True adjectives can be used as verbs (5) and nouns (6). Adjectival verbs can be used as adjectives in some circumstances (7). The behaviour of adjectival concept roots is shown in Table 2.

Thus, the root of a word in Lopit does not necessarily provide an indication of word class. This indicates limitations in the application of the methodologies of Haspelmath.

	reference	predication	attribution
thing-roots	WATER	(that) is water	(colour) of water
action-roots	the runn-ing	(it) RUN (-s)	runn-ing (water)
property-roots	The wet-ness	(water) is wet	WET (water)

Table 1: Root-groupings ar	d propositional-act types	(Haspelmath, 2012, p. 124)
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Adjectival	English	True	Adjectival	Noun
concept roots		adjective	verb	
marua	old	yes	yes	yes
saga	tall	sometimes	yes	?
boro	large	no	yes	sometimes
riet	red	yes	no	?

 Table 2: Behaviour of different adjectival concept roots in Lopit

- (1) *a-ieta nang buk ngeju-k* 1SG-have 1SG.NOM book.ABS new-SG 'I have a new book'
- (2) *a-ra buk inang marua-ni* 3SG-be book.NOM this.F old-SG 'This book is old'
- (3) *a-iyen nang tohoni le l-e-boro* 1SG-know 1SG.NOM person REL.M SBO-3SG-be.big 'I know a big man' (I know a man who is big)
- (4) *a-muno* nang 1SG-be.happy 1SG.NOM 'I am happy'
- (5) *e-ngeju-k buk inang* 3SG-be.new-SG book.ABS this.F 'This book is new'
- (6) *a-wolo nang marua-ni* 1SG-see 1SG.NOM old.SG 'I see the elder'
- (7) *a-wolo nang hito i-saga* 1SG-see 1SG.NOM child F-tall 'I saw the tall girl'

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Clause-initial or turn-initial?: Grammar, conversation and the Garrwa particle ngala.

Ilana Mushin (Queensland)

In this paper I present an analysis of the Garrwa particle *ngala*, which in Mushin (2005, 2012) was described as a 'contrastive' clause-connector, typically translated into English as 'but' or 'while'. As noted in Mushin (2005) the grammatical properties of *ngala* presented a challenge for description because it can occur in constructions that look like subordinate clauses, but with some main clause properties. For example the use of *ngala* in (1) appears to introduce a subordinate-like clause because the verb is no longer tensed and the particle *ngala* occupies the slot normally occupied by verbs. There are no other clear features of subordination however. The meaning of the *ngala*-marked clause marks an event ('they were hunting kangaroos') that is relative to the time in the 'main' clause ('I saw them'), and this also supports a subordinate analysis.

(1) najba ngay=i yalu-nya ngala yalu marrkajba warrnguna-nyi.
 see 1sgnom=past 3pl-acc 3plnom hunt goanna(sp)-dat I saw them while they were hunting for goanna. (Mushin 2008 fieldnotes)

However in conversation ngala can also occur initially to introduce what appears to be an independent clause, as in (2) where it is followed by a verb+modal clitic. Note that in unlike (1), in (2) the verb occurs in its canonical position, and is followed by a pronoun.

 (2) Ngala bakarrijba=kiyi yalu yaji set.alight=IMP 3plNOM place They should set the place alight (20.06.08.KS_634)

An analysis of a corpus of Garrwa conversations shows that these uses of *ngala* are all turninitial, occurring at points of speaker change. In conversation, *ngala* thus serves to connect the upcoming turn with some prior turn of talk (not necessarily the immediately prior

turn). In particular, *ngala* serves to project that the upcoming turn is doing an action that is <u>disjunctive</u> in relation to a prior turn <u>by another speaker</u>. It is this disjunctive activity that connects the two grammatical uses of *ngala*. This study is thus an illustration of how we can improve our understanding of the grammar and semantics of linguistic objects through analysis of structure as it emerges across turns of talk in real time.

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Topic, focus and theme: Two levels of pragmatic prominence in Äiwoo word order

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The Oceanic language Äiwoo shows a symmetrical voice system distinguishing at least an actor voice and an undergoer voice (the status of the enclitic =Cä as a circumstantial voice marker or an applicative will not be touched upon in this paper). This alternation is governed by the relative 'thematicity' of the actor vs undergoer argument in the sense of Wouk (1996), who defines a thematic argument as a referent that is a 'focus of attention', i.e. presented by the speaker as prominent and worthy of attention in the discourse context. From a syntactic perspective, since Äiwoo appears to lack a syntactic pivot (Næss 2013, 2014), the voice alternation cannot be described in terms of promoting an argument to pivot or 'subject' status. Instead, the main syntactic effect of the alternation appears to be that, in the unmarked case, the argument selected by the verbal voice appears in preverbal position; that is, basic word order is AVO in the actor voice and OVA in the undergoer voice (ex.1ab).

It is clear that the property of thematicity which governs this alternation is distinct from traditional information-structure concepts such as topic and focus. The preverbal position associated with the thematic argument is not a 'topic' position; for example, it is possible to introduce a new argument in this position (2a), and preverbal arguments may be questioned (2b). Nor is this position associated with argument focus in the sense of Lambrecht (1994); instead, focused arguments appear in clause-final position (3ab).

There are, then, two distinct levels of pragmatic structure which are relevant for word order in Äiwoo. The voice alternation is governed by an overall notion of the relative prominence of participants in the discourse, in the sense that certain participants are framed by the speaker as more central to the unfolding of events than others. The topic-focus distinction, on the other hand, relates to notions of presupposition and assertion in a given proposition – a topic referent "must be part of the pragmatic presupposition" (Lambrecht 1994:150), while focus is defined as "the semantic component of a pragmatically structured proposition whereby the assertion differs from the presupposition" (Lambrecht 1994: 213). This paper will examine how these two levels of pragmatic structure interact in determining the word order in Äiwoo clauses. It will discuss how the notion of thematicity can be defined and distinguished from the better-established notion of topicality, and the relevance of this distinction in the analysis of symmetrical-voice systems more generally.

- (1) a. *Pe-sime-engâ li-epave=to sii=kâ*. COLL-person-DEM.DIST 3AUG-cook.AV=CS fish=DEIC.DIST 'The people cooked fish.'
 - b. *Sii lâ ki-epavi-i=to=wâ*. fish DEIC:DIST IPFV-cook.UV-3AUG=CS=DEIC:DIST 'They cooked the fish.'
- (2) a. *Lu-po-kä-le*, <u>nyâ-nou</u> <u>nyigi</u> *i-te-kä-i-le ki-ko*. 3AUG-go-DIR:3-UA tree-banana one PFV-see.UV-DIR:3-3AUG-UA IPFV-lie 'They went along, and they saw a banana tree lying there.'
 - b. <u>Doo=lâ</u> kiki-mu=wâ? what=DEIC:DIST cry.for.UV-2MIN=DEIC:DIST 'What are you crying for?'
- (3) a. Ngaa i-wâ-ilâ-usi-kä Paelat=to so PFV-CAUS-go.out(UV)-again-DIR:3 Pilate=CS

ngâ lokâpu=kâ <u>Barabas</u>. LOC prison=DEIC:DIST Barabbas 'So Pilate released from prison Barabbas (and not Jesus).'

b. *Dee sii ee ku-wâ-nubo=kâ* <u>iu</u>. this.thing fish DEM:PROX IPFV-CAUS-die(AV)=DEIC:DIST 1MIN 'I am the one who killed this fish'

Abbreviations

AV actor voice, AUG augmented number, CAUS causative, COLL collective, CS change of state, DEIC deictic particle, DEM demonstrative, DIR directional, DIST distal, IPFV imperfective, LOC locative, MIN minimal number, PROX proximal, UA unit-augmented number, UV undergoer voice,

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Incorporation and polysynthesis across the Daly

Rachel Nordlinger (Melbourne)

The languages of the Daly River region of Australia, although not clearly related as a single genetic group, constitute a well-recognised *sprachbund*, sharing a number of grammatical categories and features (Dixon 2002; Evans 2003). One of these shared features is the incorporation of body part nominals, which is found in all languages of the region except for Malak Malak (Dixon 2002: 677). However, while incorporation is found across the region, its properties vary from language to language in interesting ways. In this paper I survey the range of incorporation constructions found across the Daly River languages, focusing particularly on the points of variation. I show that the properties of the construction vary quite significantly across different languages of a single construction type. I further consider this diversity in the context of recent work on polysynthesis (e.g. Fortescue 2013) and argue that the data from the Daly River languages supports a view of polysynthesis as a cluster of features (e.g. Fortescue 1994) that may diffuse and/or develop independently of each other.

Incorporation constructions across the Daly River region vary in a number of ways. Firstly, while all languages (but Malak Malak) allow the incorporation of body part nominals, some allow incorporation of adverbial elements as well, as in (1) from Murrinhpatha and (2) from Marri Ngarr. Secondly, the position of the incorporated body part in the complex verbal word varies across languages. In Ngan'gityemerri (3) the incorporated body part appears in the middle of the complex verb, between the two parts of the predicate (the 'classifier' dangim- and the 'lexical stem' -da) (Reid 1990); in Batjamalh (4) the incorporated body part is attached to the left of the whole verbal complex, before the subject prefixes (Ford 1990); and in Marrithivel (5) there are two possible positions for incorporated nominals, depending on whether the construction is 'lexically' (5a) or 'syntactically' (5b) formed (Green 1989). In the lexicalized construction in (5a), the incorporated body part precedes the lexical stem -pirr- (as in Ngan'gityemerri in (3)), while in the more productive construction in (5b), the incorporated body part follows the lexical stem -wulit-. Other points of variation include the type of nominal that can be incorporated; the grammatical function of the incorporated nominal; and the extent to which incorporated nominals have grammaticalised into other constructions (e.g. Nordlinger (2011) on the development of applicatives from incorporated nominals in Murrinhpatha).

This paper will analyse the properties of incorporation construction types in the Daly River languages, providing the first detailed discussion of the typology of incorporation across the region. Given the central role that incorporation plays in typologies of polysynthesis (e.g. Fortescue 1994), interesting implications arise in the context of recent work on understanding the limits of polysynthesis (Fortescue, Mithun and Evans 2014), and the nature of polysynthesis across northern Australia (Evans 2014). I discuss the variation in incorporation structures across the Daly River languages in the context of Fortescue's (2013) distinction between 'old' and 'new' polysynthesis, and suggest that the incorporation patterns may reflect the diffusion of polysynthesis across the Daly River languages.

- *puddan-wunku-rlarl-deyida-ngime=pumpan* 3pS.29.NF-3PC.O-drop.off-in.turn-PC.F=3pS.GO.NF
 'They were going along dropping them (paucal) off, one by one.' (fieldnotes)
- (2) niwinj yi gudingi-derrkurr-fingi=gawunh
 3DU that 3duS.DI.R.IMPF-sharpen-now=3duS.SIT.R
 'Those two fellas are sharpening their knives now.' (Preston 2012: 39)
- (3) *dangim-ngi-tyerr-da dafi* 3sgS.POKE-1sgO-mouth-itch cheeky 'It's burning my mouth.' (Reid 1990: 210)
- (4) *melŋmelŋ wuŋmarrac mipe-kat-pø-mene-ka*ŋi. cheeky.yam long.yam **eye**-3duA.3ONF-hit-NF 'They found both cheeky yams, long yams.' (Ford 1990: 159)
- (5) a. *ninjsja-wa gan nanj ginn-ing-thenggi-pirr-njsjan* what-PURP here 2sg 2sS.GO.R-1sO-bottom-leave-now(PR)
 'For what purpose are you keeping me here now? (Green 1989: 273)
 - b. *ginj-ing-wulit-thenggi-ya*3sS.NJ.R-1sO-tie.on.clothing-bottom-Pst
 'He tied on the clothing (loin cloth) around my bottom.' (Green 1989: 273)

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The dative and genitive cases in Ngarnka and Wambaya: Another case of demonstrative encliticisation

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Ngarnka is a non-Pama-Nyungan language of the Mirndi family, traditionally spoken in the Barkly Tableland region of the Northern Territory. Ngarnka is closely related to its eastern neighbours, the Wambayan dialects: Wambaya, Binbinka and Gudanji. As such, much of the nominal morphology of Ngarnka appears similar to that of Wambaya.

Chadwick's (1978) description of the case system of Ngarnka conflates the dative and genitive cases under the category 'benefactive-possessive-dative-purposive'. I make a distinction between the two cases due to a formal similarity to the Wambaya dative and genitive allomorphs as described by Nordlinger (1998, 87, 93), and the fact that genitive-marked nominals inflect for gender subsequent to case, whereas dative-marked nominals do not.

In this paper, I overview the form and function of the Ngarnka dative and genitive cases, and compare them with those of Wambaya. Both dative and genitive cases can be used to encode possession. However I conclude that the category of alienability cannot provide grounds for distinguishing these types of possession in the Ngarnka corpus.

I also present a possible historical source for the genitive case marker *-nakan-*. This explanation draws on previous historical accounts of Mirndi gender suffixation proposed by Harvey, Green & Nordlinger (2006). In the same way that demonstrative pronouns were encliticised and reduced, resulting in gender suffixes (1), I propose that possessive demonstratives were encliticised to nouns and adjectives (excluding kinship nouns) giving rise to the genitive case marker (2). The process of grammaticalisation involved the loss of the deictic function, and phonological changes. While there was no phonological reduction at the clitic boundary, the demonstrative undergoes other phonological processes, such as consonant place assimilation and vowel assimilation.

This analysis presupposes that possessive demonstratives existed prior to the existence of the genitive allomorph *-nakan-*. Harvey (2008) reconstructs **-ng* as a genitive suffix in Proto Mirndi. Reflexes of this genitive suffix still exist in Ngarnka for kinship nouns, demonstratives and personal pronouns. However, just as these word classes (excluding kinship nouns) do not bear the innovated gender suffixes described by Harvey, Green & Nordlinger (2006), nor do they bear the innovated genitive suffix *-nakan-*. This is evidence that the genitive suffix arose by the same process of demonstrative encliticisation.

This historical analysis of encliticsed demonstrative pronouns and possessive demonstratives may also shed light on the common Ngarnka discourse clitic =ki. The proximal locational demonstrative root is ki-. Therefore, there may be an analogical process of encliticised locational demonstratives (3) that grammaticalise to discourse clitics (4). However, the Ngarnka corpus does not provide conclusive evidence for the functions of discourse clitics in Ngarnka.

(3)	<i>ngarra kirr-akba=na mirra ki-nbil-a</i> 1SG.DAT 2PL(NOM)-FUT.IRR=EMPHsit here-LOC=NEAR 'You might sit over here with me.' (914B: 13:25, Ngarnka corpus)
(2)	*alak ninakanji > *alak=ninakanji > alak-ngi-nikan-ji child that.POSS.M child=that.POSS.M child-M-GEN-M 'child's (M)'
(1)	*alak jirrika > *alak=jirrika > alak-ji child that.M child=that.M child-M 'child (M)' (Harvey, Green & Nordlinger, 2006, p. 299)

(4) kujarri-wulu wurl-ani mirra(a)=ki
 two-DU 3DU(NOM)-IND sit=KI
 'Those two men are sitting (over here?).' (9601A: 07:21, Ngarnka corpus)

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Marked absolutive or topic? Case and clefts in Mono-Alu.

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This paper examines the particle ga in Mono-Alu (MA) (Northwest Solomonic (NWS), Oceanic). Previously analysed as a preposition assigning absolutive case to an NP, a range of factors undermine this analysis, including its absence with many absolutive arguments, the location of ga-marked object DPs outside the VP, and the presence of ga in contexts where it does not precede a DP. I propose an alternative analysis in which ga is head of a Topic Phrase, with a DP or VP as its complement, the VP occurring in a cleft construction.

MA is traditionally treated as displaying unmarked SV/AOV clause order (Evans & Palmer 2011:496, Fagan 1986:84, Ross 1988:228). All orders of DPs referring to A and O are possible. However, AOV (2a) and AVO (2b), occurring with similar frequency, account for most transitive clauses with two overt DPs, while with intransitives, SV (1a) and VS (1b) also occur with similar frequency (Fagan 1986:84). All other orders are possible but rare.

When postverbal, a DP referring to S or O is usually marked with ga (1b),(2b), while the A cannot be (3), leading Fagan (1986:94) to conclude ga is an absolutive case preposition. However, ga is confined to S and O when <u>post</u>verbal: it cannot precede <u>pre</u>verbal DPs referring to S (1a) or O (2a) (or A (2b)), a fact Fagan's analysis does not account for. A further issue justifying closer examination of ga as projecting absolutive case lies in its typologically unusual overt marking of absolutive with an unmarked ergative, the opposite of the claimed universal making absolutive the unmarked case (e.g. Tsunoda 1981).

The syntactic position of ga-marked DPs is also in question. MA objects are obligatorily indexed by postverbal bound forms (2a-b),(3), leading Fagan to conclude that MA displays both ergative and accusative case marking (1986:80,108). However, there is evidence that the bound forms are not agreement but object pronouns in internal argument position, with coreferential ga-marked DPs as adjuncts, a hypothesis resembling that proposed for object DPs elsewhere in Oceanic from nearby Hoava (Palmer 2011) to Fijian (Aranovich n.d.). Evidence for this in MA includes the obligatory nature and fixed position of the bound forms versus the optionality and freedom of location of object-referring DPs elsewhere in the clause, including the possible separation of a ga-marked DP from the verb by an oblique (4).

Fagan notes in passing another construction, in which S precedes the verb with ga located between S and V (5). For Fagan, ga is still associated with the S, but notes it cannot be a preposition here as it follows the NP with which it is associated (1986:95), acknowledging his theory is unable to account for this construction. In fact, the construction also occurs when the phrase preceding ga refers to the O (6), A (7), or even an adjunct (8).

This paper proposes a unified account in which ga does not mark absolutive case, but topic. A post-predicate position is occupied by a Topic Phrase with ga 'TOP' as head. As in other NWS languages (e.g. Palmer 2009), unmarked topics are prodropped, while marked (e.g. contrastive) topics are overtly expressed in TOPP. In MA verbal constructions (1)-(4), DPs referring to S or O may occur in TOPP, but DPs referring to A are prohibited for information structure reasons. Postverbal A (3) is not in the same syntactic position as ga-marked S. Clause order of DPs is relatively free, and DPs may occur postverbally without occurring in TOPP, as shown by postverbal non-topic A co-occurring with a ga-marked O (9a), corresponding to postverbal non-topic S (9b) or O (7) not marked with ga.

In this analysis, the construction in (5)-(8) does not involve *ga* postposed to a preverbal NP as Fagan assumes. Instead, *ga* remains a preposition, with the VP as its complement forming TOPP in a cleft construction. The clause-initial phrase is in focus, with the *ga*-marked VP topic expressing the situation or event within which context the focal information holds.

(1) a. E'a Sakusaku i-lefe. b. Ithis S. 3SG.SBJ.REAL-leave 3 'Sakusaku went away.'

b. *I-lefe* ga Sakusaku. 3SG.SBJ.REAL-leave ga S. 'Sakusaku went away.'

- (2) a. *Maito kai-gu oi-golu=Ø*.
 2SG same.sex.sib-1SG.PSSR 2SG.SBJ.REAL-swallow=3SG.OBJ
 'You swallowed my brother.'
 - b. *E'a magota bau ena-lapu=ri* **ga** sa-gu talaiva. this old.woman NEG 3SG.SBJ.IRR-kill=3PL.OBJ ga POSS-1SG.PSSR women 'The old woman shall not kill my wives.'
- (3) Mafa kai-gu $i-lapu=\emptyset$ sa-ma tolo'o. 1SG same.sex.sib-1SG.PSSR 3SG.SBJ.REAL-kill=3SG.OBJ POSS-1EXCL.PL.PSSR eel 'Our eel has slain my brother.'
- (4) $E'a \ batafa \ sale-na \ i-fuane=\emptyset \ kokobui=a \ ga \ iana.$ this woman be.alive-NMLZ 3SG.SBJ.REAL-put.inside=3SG.OBJ basket=LOC ga fish 'The living woman put the fish in her basket.'
- (5) *Pirite* ga *i-gagana*.
 k.o.bird ga 3SG.SBJ.REAL-go
 'The pirite bird went off.' ['It was the pirite bird that went off.']
- (6) *Au sa-ria, batafa i-polee. I-polee.* exist IPFV-3PL.SBJ woman 3SG.SBJ.REAL-be.pregnant 3SG.SBJ.REAL-be.pregnant 'Once upon a time, a woman became pregnant. She became pregnant.

Manualai **ga** *i-fa-por-i*= \emptyset . fish.hawk *ga* 3SG.SBJ.REAL-CAUS-be.born-TR=3SG.OBJ She gave birth to a fish hawk.' ['It was a fish hawk that she gave birth to.']

- (7) Ale ga i-fa-mako darami?
 who? ga 3SG.SBJ.REAL-CAUS-be.cooked food
 'Who has cooked our food?' ['Who is it that has cooked [our] food?']
- (8) *O'a=ua* **ga** *i-aofo* ga *ifa-na*. that=COMIT ga 3SG.SBJ.REAL-be.sick ga same.sex.sib.in.law-3SG.PSSR 'That's why her sister-in-law fell ill.' ['It was with that her sister-in-law fell ill.']
- (9) a. I-nkot-i= \emptyset Matairua ga tauii. 3SG.SBJ.REAL-hold-TR=3SG.OBJ M. ga child 'Matairua took hold of the child.'
 - b. *Iri-soku* fanua famata=ang. 3PL.SBJ.REAL-arrive people village=LOC 'The men arrived at the village.'

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Towards a typology of linguistic expressions of spatial Frame of Reference

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The literature on spatial language and cognition contains extensive discussion of spatial Frames of Reference (FoR) (Pederson et al. 1998; Levinson 2003; Danziger 2010; Palmer 2014 etc), strategies for representing the location, orientation or path of one object with respect to another. Three FoRs occur: <u>intrinsic</u> (with an asymmetry in the ground object); <u>relative</u>, (employing a viewpoint); and <u>absolute</u> (anchored outside the array). However, while previous typologies classify languages by preferred FoR (e.g. Majid et al. 2004), a cross-linguistic comparison of grammatical constructions expressing FoR has been neglected. Further, a clear distinction between conceptual representations of space and linguistic expressions invoking them is lacking. As a result, conceptual categories have been defined on the basis of grammatical construction and vice versa, and languages are often described in ways that do not distinguish between conceptual and linguistic levels.

We propose an explicit typology of linguistic expressions of FoR that has the potential to extend to linguistic expression of other domains (e.g. possession). We explicitly distinguish between FoR as a conceptual notion and linguistic expressions of FoR, then typologize linguistic FoR expressions on two dimensions: whether or not they employ a specialized construction, and whether or not they employ specialized terms. 'Specialized' for a construction means it is restricted in function, and its behaviour in the wider grammar and/or participating terms. For terms, 'specialized' means a term has restricted syntax (constructions open to it) and/or morphology. The car is on the north side of the tree is not specialized as it is a standard English PP and north may be substituted by other nouns (the car is on the *left/beach/house side of the tree* etc). The noun *north* is also not specialized as it occurs freely in other constructions and lacks restricted morphology. In contrast, the car is to the north of the tree is specialized, in that a restricted set of nouns may occur (the car is to the left/*beach/*house of the tree). Likewise, the car is north of the tree is specialized as it lacks a preposition and is open to a restricted set of nouns (the car is left/*beach/*house of the tree). The construction on the X side of is not specialized, while to the X of and X of are, but terms in all three are not specialized as they occur in other constructions and lack restricted morphology. See (1).

We then exemplify the typology. Marshallese (Oceanic) employs all three FoRs in three directional or locative constructions. One non-specialized construction involves a standard PP with any noun or local noun (2). This contrasts with a specialized local construction (3) (Ross 2004), where a locative oblique lacks a preposition and is restricted to local nouns. However, local nouns themselves are not specialized as they freely participate in other constructions. A further specialized directional construction (4) places the local noun before an obligatory deictic. This construction employs local nouns in most categories, but expresses cardinals with dedicated enclitics which, confined to this construction, are specialized (=to (4) vs local noun *rilik* (2)-(3)). This situation is represented in (5).

The reverse applies to directional adverbs in Kuuk Thaayorre (Australian). These freely occur in any clause-level position (7), so occur in non-specialized constructions. However, the terms themselves are specialized as they employ highly restricted morphology (6) confined to spatial roots invoking absolute or intrinsic FoR (relative FoR is not expressed). This is represented in (8).

Dhivehi (Indo-Aryan) employs all three FoRs, exclusively expressed using non-specialized nouns that attract standard case marking and participate in a wide range of constructions. Direction is expressed by a non-specialized dative construction with any noun (9). A specialized locative dative construction exists (10), restricted to nouns denoting cardinals or certain body parts or landmarks. However, this is rarely used, speakers preferring a non-specialized locative construction, with nouns such as *farātu* 'side' or *koļu* 'end' modified by any bare noun or relative clause (11). See (12).

We argue that our typology is a significant advance in three ways: it allows the explicit definition of categories of linguistic expression; of linguistic expressions in individual languages, and of expressions of individual concepts in individual languages (e.g. FoRs in Kuuk Thaayorre in (13)).

(1) English locative obliques	terminology specialized	terminology non-specialized
construction specialized		X of; to the X of
construction non-specialized		on the X side of

- (2) a. *E-j pād [ilo rilik / lik / wōjke e]*.
 3SG-TAM be.located at west / oceanside / tree DEM
 'He is at [the] west/ocean side/this tree.'
 - b. E-j $k\bar{a} = lok$ [$\bar{n}an$ **rilik** / **lik** / **wojkee**]. 3SG-TAM jump =thither to ocean.side / oceanside / tree DEM 'He jumps thither to [the] west/ocean side/this tree.'
- (3) E-j pād [rilik / lik / *wōjkee].
 3SG-TAM be.located west / oceanside / tree DEM 'He is at [the] west/ocean side/*this tree.'
- (4) $E j \quad k\bar{a} \quad [=to / lik / *w\bar{o}jke \ e] = \underline{lok}.$ 3SG-TAM jump =west / oceanside / tree DEM =thither 'He jumps westward/oceanward/*this tree thither.'

(5) Marshallese	terminology specialized	terminology non-specialized
construction specialized	directional construction	local construction;
	(cardinals)	directional construction
		(non-cardinals)
construction non-specialized		general oblique construction

(6)	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5
	distance/motion	(orientation)	directional root	(secondary direction)	(river)

(7) Ngay (*ii-rr-kuw*) Darwin-ak yat=ay 1970 (*ii-rr-kuw*).
 I there-towards-west Darwin-DAT GO:P.PFV=I 1970 there-towards-west 'I went westwards to Darwin in 1970.'

(8) Kuuk Thaayorre	terminology specialized	terminology non-specialized
construction specialized		
construction non-specialized	directional adverbs	locative NP

- (9) *Mīhā utur-aš / atiri-aš / gē-aš da-nī.* person **north-DAT / beach-DAT /house-DAT** go-PRS.PROG 'The person is going to the north/beach/house.'
- (10) *Mīhā inū gahu utur-aš / atiri-aš / *gē-aš.* person sit.PST.FOC tree.GEN **north-DAT / beach-DAT /*house-DAT** 'The person is at the north/beach/*house of the tree.'
- (11) $M\bar{i}h\bar{a}$ in \bar{u} gahu uturu / atiri / $g\bar{e}$ far $\bar{a}t$ -u. person sit.PST.FOC tree.GEN **north** / **beach** / **house** side-LOC 'The person is at the north/beach/house side of the tree.'

(12) Dhivehi	terminology specialized	terminology non-specialized
construction specialized		locative dative construction
construction non-specialized		general dative construction; locative construction

(13) FoR in Kuuk Thaayorre	terminology specialized	terminology non-specialized
construction specialized		
construction non-specialized	<u>absolute</u> , some <u>intrinsic</u>	intrinsic

Cans from Cairns: Australia's latest phonological development

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Changes in phonological features of the English language have generated an increased amount of attention in recent years (Billington, 2011). Many of these changes concern a phonetic shift in the perception and production of vowel sounds, which play a pivotal role in distinguishing Australian English from other world varieties (Cox, 2012). Current literature indicates a vague understanding of the phonological changes to these systems, identifying the need for further research into the changing structure of Australian English vowels. One such change for which there is only some evidence available (compared to, for example, the /el/-/æl/ merger in Victoria by Loakes et al, 2010) concerns the structure of the pre-nasal TRAP vowel.

Cox and Palethorpe (2008) described a phonetic change in the TRAP vowel in Australian English, where it is raised before the nasal phonemes /m/ and /n/ in a syllable coda (for example hand, lamb and fan, but not cannon and salmon). Although North American English has a similar phenomenon (for example, Dinkin, 2011), the Australian TRAP raising has a different environment. This study examines literate adults' categorical perception of this vowel in that context, where innovative listeners may categorise it as a SQUARE vowel (rather than a TRAP, or DRESS vowel).

Speakers of Australian English in North Queensland completed a series of word matching tasks. They identified words with the same vowel sound out of a given list of five options, including unambiguous TRAP and SQUARE vowels (Wells, 1982), as well as a pre-nasal "TRAP" vowel and two control vowel sounds. The results indicate that there may be a significant number of people for whom prenasal TRAP vowels have changed category.

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Gender bender: Disagreement in Jingulu noun class marking

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Languages undergoing accelerated change as the result of language obsolescence are often characterised as displaying high levels of variation and optionality in comparison with conservative varieties of the language. These characteristics are assumed to be a symptom of a lack of systematicity and are often not explored further. For example, Schmidt (1985a) observes that the ergative marker only applies variably in Young People's Dyirbal but does not examine whether the optionality is principled in anyway. In this paper we argue that, while variation and optionality in grammatical systems is one effect of language obsolescence, these changes are nonetheless highly rule governed. Furthermore they often represent an increase in linguistic complexity rather than reduction or simplification which is often described for situations of language obsolescence (Campbell & Muntzell, 1989; Dorian, 1981, 1989). We use a case study of the changes in the noun class system of Jingulu to argue for a more nuanced approach to language obsolescence.

Jingulu (non-Pama-Nyungan) is a traditional language of the Jingili people who live in northern Australia. It is a highly endangered language now only spoken by a few elderly people and is no longer learnt by children. Jingulu was first documented by Chadwick in the 1970s and later by Pensalfini in the 1990s. During this time, Jingulu had undergone a number of changes, some attributable to language contact with Mudburra and Kriol (Pensalfini, 1999b), other changes attributable to processes observed in situations of language obsolescence. One change occurred in the noun class system. Jingulu distinguishes four genders: masculine (I), feminine (II), vegetable (III) and neuter (IV). Categorisation of nominals is typical of Australian languages, largely based on natural semantic categories and cultural organisation (Harvey & Reid, 1997). NP modifiers such as adjectives and demonstratives generally show agreement in gender with the head noun, however Pensalfini (1999a) also observed that modifiers can optionally 'disagree' with their head. Disagreement is principled and hierarchical with masculine-marked modifiers optionally found with heads of all four genders and neuter-marked modifiers optionally found with heads of the vegetable gender. This system was not in place when Chadwick first documented the language 20 years prior, suggesting the phenomenon described is the result of language change.

Similar changes have occurred in Dyirbal (Schmidt, 1985b) and Nungali (related to Jingulu) (Schultze-Berndt per. comm.). Similar patterns have also been observed in Wambaya, but are not attributed to language contact (Nordlinger, 1998).

Two generalisations can be made about disagreement patterns in these languages: where 'disagreement' occurs, masculine gender is the default for animates and neuter gender is the default for inanimates. Changes have also occurred in Tiwi where the masculine/feminine system now only applies to humans and all other nouns are randomly distributed between the two classes (Lee, 1987). Changes in these languages may represent a shift to noun class systems which only distinguish natural semantic categories and not esoteric cultural categories, and may be the result of a loss of cultural knowledge which has occurred in tandem with linguistic loss. Changes in contextual inflection such as case and agreement are common in language shift situations (Gardani, 2008).

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Dispreferred responses when texting: Delaying that 'no' response

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Socially, people find it difficult to say 'no' to requests or invitations. In spoken interaction (face-to-face), we orient to this difficulty through the design of our responses (Schegloff, 2007). A 'yes' response (preferred) is characteristically said straight away with minimal gap between request and response. A 'no' response (dispreferred) is characteristically delayed through silence and by prefacing the actual 'no' turn with tokens such as, 'well', 'uhm', 'uh' or with accounts as to why the recipient can't accept the request or invitation (Pomerantz, 1984). The question is what happens with requests made via texting. Are dispreferred responses also delayed more than preferred responses and is the actual 'no' delayed far into the body of the turn? Results from 329 texting interactions showed that if responses to a request or invitation were delayed by more than 5 minutes, it was much more likely be a 'no' rather than a 'yes' response (p < 0.0001). In other words, preferred responses were sent quickly (median delay for preferred responses was just under 5 mins); dispreferred responses were delayed (median delay for dispreferred responses was 35 mins). Data were collected by Language and Society students, with each student texting 10 requests or invitations to friends and family. Once responses were received, students noted the time delay between the request and response. Students took a screen shot of the texting interaction to ensure accuracy of the data. Data were analysed qualitatively, using a conversation analytic framework, as well as quantitatively. Understanding texting as social interaction is becoming increasingly important as the range of communicative options continues to widen (e.g. Facebook, SMS, MMS, IM, email), yet minimal interactional research has focused on patterns of interaction across different media (see, however, Anderson et al (2010); Baron, 2010; Herring 2010; Hutchby & Barnett, 2005; Hutchby & Tanner, 2008). This study shows preference organisation similarities between spoken interaction and texting with texters orienting to social norms concerning delayed responses. Further research is needed to understand how or when people choose one communicative medium over another.

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"And the next minute we've turned around and there's five nuns that've jumped the queue in front of us": Some sociolinguistic insights into the narrative uses of the Australian English Present Perfect

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Innovative uses of the Present Perfect (henceforth PP) have been documented in Australian English (AusE) radio chat-show programs, police and news media reports (Engel & Ritz 2000; Ritz 2007; Ritz & Engel 2008; Ritz 2010). They have notably been reported in *performed* narratives, as defined by Wolfson (1978: 216) (see example (1)).

(1) and he's just looked at me and gone <SOUND EFFECT INDICATING SPEED> he's just ran off and I've just gone 'What's with that?!' (CC2014MMC46)

The English has not been described as undergoing anterior-to-perfective grammaticalization (Bybee, Perkins & Pagliuca 1994). It is analysed as a perfect form which establishes a link between a past situation and a current state of affairs (Bybee et al. 1994: 54), not as a perfective. The occurrence of the is therefore unexpected in the complicating action section of narratives where a series of discrete events advances the storyline (Labov & Waletzky 1967: 29).

Several questions arise:

- How common is the occurrence of the AusE in the complicating action portion of performed narratives?
- Who are the users of this innovative AusE PP?
- Is there evidence that the phenomenon reflects a change in progress (Ritz 2010; 2012)?

This paper reports on research currently in progress. The data stem from a corpus of performed narratives of personal experience built specifically for the purposes of this study. Throughout 2014, speakers born and raised in Perth, aged 13 years old and above, and from different socio-economic backgrounds, have been recorded in a one-on-one session with the researcher. Performed narratives are extracted from the corpus and all narrative clauses are coded. Statistical analyses are run to account for the internal and external factors that constrain the choice of the variable (the PP).

Results will inform us about the frequency of the phenomenon. AusE is considered a more friendly variety (Elsness 2009: 112). Yet Rodríguez Louro and Ritz (2014) find that the represents only 1% [9/678] of the inflected tense forms in the narrative clauses of their conversational corpus. Results will also show whether the use of the innovative AusE aligns with any identifiable social characteristics – i.e. whether there is any correlation with the age, sex, and/or socio-economic background of speakers. The synchronic variation observed is likely to be the symptom of a change in progress if the frequency of use and constraints on the variable differs across age cohorts. The presence of the adolescent peak, "a general requirement of change in progress" according to Labov (2001: 455), would also support this interpretation.

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Perception of intervocalic consonants in first language by speakers of an Australian Aboriginal language and speakers of Standard Australian English

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Introduction: Little research has been done on the perception of speech sounds in native speakers of Australian languages and none that makes a direct comparison with the perception of similar contrasts in non-Australian languages. Australian phonologies are different from most other languages of the world in that there are significantly more places of articulation and, in most cases, a single series of obstruents. Anderson (2000) showed that native speakers of Arrente were able to identify place of articulation (POA) equally well in nasals, laterals and oral stops. Bundgaard-Nielsen et al. (2012) showed that native speakers of Wubuy were able to distinguish between pairs of coronal stops with a degree of accuracy beyond that of chance in both VCV and CV contexts. Stoakes, Butcher, Fletcher & Tabain (2012) showed that Yolngu Matha speakers make fewer errors and have faster reaction times in distinguishing POA categories than when distinguishing manner of articulation (MOA) categories. This contrasts with the findings of other researchers, such as Miller and Nicely (1955), Wang & Bilger (1973) and Benkí (2003), who analysed the recognition of English consonants by monolingual American English speakers and showed that perception of POA distinctions was less accurate than perception of MOA distinctions. However, these studies all used somewhat different elicitation paradigms from Stoakes et al (2012), and with no corresponding data for speakers of Standard Australian English it is impossible to determine the true nature of differences in consonant perception between these languages.

Method: Using exactly the same methodology and equipment as in the Stoakes et al (2012) study, 30 monolingual speakers of Standard Australian English (SAE) (5 male, 25 female; age range 19-59 years) completed two four-alternative closed-set forced-choice listening tasks (eight blocks of 32 trials) in a quiet, but not fully sound-proofed environment. The audio stimuli were based on of 8 /pCp/ nonsense words formed by omitting the onset consonants of 8 real English words. For example, the target word *trucker* becomes /pkp/, *butter* becomes /ptp/, etc, Participants responded by selecting an image from a set of 4 pictures which best matched the sound they heard (picture of a trucker, picture of some butter, etc). Each set of four blocks was delivered with an increasing level of background noise (speech-spectrum gaussian white noise). In an attempt to approximate the field conditions of Stoakes et al's (2012) study, each of the four noise conditions was increased by 5 dB above those used by the latter.

Results: As expected, exact replication of the Stoakes et al (2012) study meant that a similar learning effect was experienced over the four noise conditions, with the result that only the first (lowest) noise condition produced appreciable error rates. Error rates were much lower and reaction times much faster than in the earlier study. Also the /ete/ stimulus used in the POA task was recorded at a later session than the others and proved to be more easily distinguishable. As a result, error rates were not significantly different between POA and MOA. Reaction times were somewhat longer for POA than for MOA (see Figure 1), but only significantly so, if results for /ete/ are excluded.

Conclusion: Whereas speakers of Yolngu Matha perceive POA distinctions more accurately and more rapidly than MOA distinctions, speakers of SAE appear to show no significant differences in either measure, using the same elicitation paradigm. However, when the results arising from an imperfect stimulus are removed, SAE listeners have slower

reaction times for POA distinctions than for MOA distinctions, in accord with the results of previous studies with American English- speaking participants. It may be hypothesized that these differences are mainly due to the greater number of POA distinctions in Yolngu Matha (4 coronal categories) and the smaller number of manner distinctions (no fricatives). Clearly the increased noise levels were not sufficient to reproduce the error rates obtained in the original study and the inclusion of the non- contemporaneous stimulus was unfortunate. Nevertheless, taken together, the results of the present and previous study suggest that speech perception in English requires a somewhat different set of learned processing skills than those required for a typical Australian Aboriginal language. Thus it may be the case that the local Aboriginal language is, on purely acoustic grounds, a more appropriate medium of classroom instruction and assessment than Standard Australian English.



Figure 1: Reaction times for Yolngu Matha (top) and Standard Australian English (bottom) speakers for place of articulation and manner of articulation tasks.

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Threshold concepts in linguistics: A case study

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Threshold concepts are a critical framework for engaging in a student-centred approach to curriculum design. This framework proposes that within most disciplines, there are concepts that are both transformative to the student and essential for progression, yet often prove troublesome (Meyer & Land 2003; Meyer & Land 2006). This approach has found traction with curriculum developers from a wide range of disciplines as a way to focus an otherwise overcrowded curriculum and improve the learning experience for students (Cousin 2006).

Though threshold concept research has been conducted across a great range of disciplines, linguistics remains relatively under-represented, with only one extensive study, conducted by Orsini-Jones (2008), and a handful of studies in related fields (Orsini-Jones 2013; Orsini-Jones, Cribb & Jones 2010; Day 2007). Furthermore, these few studies have all been conducted in the United Kingdom and have often looked at subjects not in the context of a discreet linguistics major, but a single unit of study within a separate, though related field such as English Studies or foreign languages. No studies have yet been conducted in Australia, which is significant because many researchers see threshold concepts as context-dependent, with factors such as educational background and the reigning discipline paradigm potentially affecting what thresholds are identified for any given group of students (Meyer & Land 2003; Quinlan et al. 2013; Orsini-Jones 2008).

This underrepresentation of linguistics is perhaps unsurprising as it has been noted that 'while many have written about the various methodologies they use in linguistics research, linguists have often failed to explore pedagogical innovations considered by their colleagues in the humanities and the social sciences' (Battenburg & Lant 2003: 4). There is, however, growing interest in the linguistics academic community to investigate and reflect on how students are taught. This is evident in recent publications, such as Kuiper's *Teaching Linguistics: Reflections on Practice* (Kuiper 2011) and a new section in *Language*, the journal of the Linguistics Society of America, entitled *Teaching Linguistics* (2013). The aim of this project is to unite two emerging areas: threshold concept theory and pedagogy of linguistics to investigate the threshold concepts experienced by Australian undergraduate linguistics students.

A case study is currently being conducted at an Australian university where potential thresholds are being identified using surveys and focus groups with academics and students. Identified thresholds will then be compared with unit materials (outcome statements, descriptions) to see if and how these transformative yet troublesome ideas are currently dealt with by the course. This paper will report on thresholds identified in this study, examine how they relate to the outcomes of the major at the university and discuss pedagogical implications. The results of this case study are intended to add to the emerging dialogue around pedagogical practice and to uncover the 'jewels of the curriculum' (Cousin 2006), threshold concepts, that may in future studies be applied to curriculum development.

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Next-generation typological variables: from theory to practice, and back again

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Modern, large-scale typology, with its enormous datasets and batteries of algorithms rather than humans doing the comparisons, is more sensitive than ever to choices in how to code up language data. Thus we see increasing theoretical emphasis on the need for variables which robustly compare like with like (Haspelmath 2010, *et seq.*); which typologize language facts, not quirks of descriptive traditions (Hyman 2014); which decompose traditional variables into their finer-grained constituent notions (Bickel 2010, Corbett 2005, *et seq.*); and which attend closely to the logical relationships between those constituents (Round 2013). But how does this theory translate into the nitty-gritty work of actually building such variables? We offer a view from the coalface, as a complement to these more theoretical lines of thought, as we attempt to modernize, decompose and scrutinize one traditional typological variable: the presence or absence in a language of phonemic pre-nasalised stops. Our findings help to assess the practicality of some recent, theoreticallymotivated proposals, and to nuance the theory itself.

The presence or absence of pre-nasalised stops, as a typological variable, has figured in several recent, large-scale typological studies (Dunn *et al.* 2005, Reesink *et al.* 2009, Donohue *et al.* 2013), however preliminary investigation (Round 2013) suggested that the variable performed poorly at comparing like languages with like. In response, we set about to develop a finer-grained set of MICRO-VARIABLES, which should encode richer information and perform better at comparing like with like. We coded them for 280 Australian and Papua New Guinean doculects (i.e., descriptions of language varieties; Cysouw & Good 2013), and along the way paid particular attention to the challenges we encountered.

A first finding is that, as a PROCESS which researchers undertake, the decomposition of typo- logical variables is iterative. The aim of decomposing a MACRO-VARIABLE is to tease apart some of the linguistic properties which it conflates, and which would lead to false comparisons of unlike with unlike. Our experience shows that in reality, it is likely that after a given round of decomposition, there will be further conflations that emerge and require addressing. To take an example, after we had created separate micro-variables which interrogate the structure of consonant clusters in word initial/medial/final position, we noted that these still conflate languages in which certain clusters are rare and those in which they are common. Accordingly, it would be wrong to view the building of micro-variables as a 'fell-swoop' process, or one which replaces 'imperfect variables' with 'perfect variables'. Rather, it is a process for improving dataset design in an iterative fashion.

A second finding is that the logical dependencies between variables, including those which can be problematic for the 'big data' statistics coming into currency, may also be iterative, or tree-like in nature. For example, we find that micro-variables focusing on consonant clusters in certain positions funnel logically into a disjunctive 'meso-variable' focused on clusters in general, which then feeds along with other micro-variables into the macro-variable 'are there prenasalised stops'. This has certain ramifications for how one might best approach the discovery of such dependencies, and to this end we demonstrate the use of CONDITIONAL RANDOM FORESTS (Strobl *et al.* 2009) as an appropriate analytical tool.

Finally, we find strong evidence that preliminary suspicions about our pre-nasalised stop macro- variable were well founded. The macro-variable 'are there prenasalised stops' is primarily, and covertly, a variable about the size of consonant clusters, but one which (i) does poorly at grouping like languages with like, and (ii) is modulated by a second micro-variable which appears to us to act as a proxy for different schools of linguistic analysis, and not linguistic facts. Therefore, we strongly endorse a rapid shift towards MICRO-variate typology (Bickel 2010; Round 2013) if our aim is to reach better, clearer and deeper generalizations about human languages and human Language, from sound empirical data.

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Yidiny final deletion is not conditioned by morpheme boundaries

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Since it was first described in extensive detail by R.M.W.Dixon (1977a,b), the phonology of Yidiny (Paman, Queensland Australia) has featured prominently in key debates within theoretical phonology. The linguistic system of Yidiny has much to keep phonologists busy, with complex interactions between stress, vowel length, morphotactics and word-final deletion, some of which are also subject to idiosyncratic morphological exceptions. The phenomena of stress and vowel length have received particularly intense attention within the development of modern theories of meter and prosody (Hayes 1982, 1985; Kager 1993; Crowhurst & Hewitt 1995; Hall 2001; Pruitt 2011; Kaviloda & Lunden 2014, *inter alia*). By contrast, the process of word final deletion has received relatively less attention, particularly in relation to its claimed conditioning by morpheme boundaries (Dixon 1977a:58). Given that our understanding of all three processes in Yidiny is interdependent, there may be benefits at a general level, to gaining increased clarity with respect to final deletion. With this in mind, we demonstrate that word final deletion in Yidiny is a simpler process than previously described.

A close examination of the complete morphological inventory of Yidiny shows that in Dixon's (1977a,b) analysis, sensitivity to morpheme boundaries arises as a complex consequence of a single analytic decision as to which, out of two sets of just three suffixes, is regarded as exceptional. Reversing Dixon's choice, from set #1 to set #2, permits us to recast the rule so that constraints on word-final phonotactics subsume the role Dixon had assigned to morpheme boundaries. Given that Dixon's original rule also necessitated reference to constraints on word-final phonotactics, this means that our revision of the analysis represents a significant simplification, effectively folding two distinct conditioning factors into one. As confirmation that our reanalysis is on the right track, our revised account of word-final deletion also explains certain gaps in the Yidiny lexicon, which are accidental and indeed highly unexpected under Dixon's analysis, but which are principled under ours. We implement our analysis in a constraint based grammar and show that it is simple, being expressible in terms of a small set of constraints pertaining to foot structure, word final phonotactics, and lexical exceptions.

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Acoustic correlates of stress in Kaytetye words

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In Kaytetye ['ker^Jdɪtʃ], the first syllable with an onset carries the main stress, like most Indigenous Australian languages (Tabain, Fletcher & Butcher, 2014; Goedemans, 2010). Unlike most Australian languages, however, the vast majority of Kaytetye words begin with an unstressed vowel. They also end with a non-contrastive vowel. Both word-initial and word-final vowels can be reduced, or even omitted entirely in some contexts (see Example 1). A class of disyllabic short words, for which there are 70 content words, exhibits a non-optional vowel on the left edge (i.e. it is never reduced or deleted in casual speech) and the stressed (and final, non- contrastive) vowel is never reduced (see Example 2). Additionally, short and long words form a natural class through exponents of the locative, instrumental and ergative case (*-le* on long words, *-nge* on short words). In this paper, we examine the acoustic features of stressed and unstressed vowels in short (V'CV) and long (V'CVCV) word types to ascertain whether they exhibit acoustic differences.

The recordings used for the acoustic analyses were originally created for the purpose of implementing a multimedia Kaytetye-to-English dictionary. A single speaker AR – a 41-year old speaker of Kaytetye, literate in both English and Kaytetye – read out the headwords in a sound attenuated recording studio. Each word was repeated twice, generating two tokens per word. Analyses were conducted on 45 tokens of short words and 38 tokens of long words – a dataset of 166 stressed and unstressed vowels. Note that analyses of Kaytetye propose only two phonemic vowels (Koch, 1980; Breen, 2001) and all the vowels in the analysed words were broadly [v]. For the purpose of conciseness in the discussion, we propose a notation of the four vowel contexts ($\underline{V}'C\underline{V}$ and $\underline{V}'CVC\underline{V}$) as outlined in the word examples below.

Results indicate that the stressed vowels are produced with a significantly higher pitch (F0) and intensity (see Figure 3). Interestingly, the magnitude of these differences between stressed and unstressed vowels are more pronounced in long words than in short words. Significant differences were found for F1 and duration between stress conditions only in long words. There were no significant effects of stress on F2 and F3 for both word types.

With the exception of short words, these results are similar to what Tabain et al. (2014) find for lexical stress in Pitjantjatjara, also spoken in central Australia. For the present study, it is difficult to ascertain whether these findings are a result of lexical or phrasal stress, as the words were produced in isolation for the dictionary, Nonetheless, whether lexical or phrasal, short words still exhibited a considerably different stress realisation from that of long words in respect to F1 and intensity for both stressed and unstressed vowels.

While classes of words may exhibit a different stress pattern from the general pattern of the language (e.g. Polish see Dogil et al., 1999), an alternative interpretation is that Kaytetye has binary trochaic feet and the initial vowel is extrametrical, e.g. <a>.('ka.rre) (Goedemans, 1998; Turpin et al., 2014). The minimal word is thus disyllabic but less than a foot, e.g. <a>.'ka; and can be considered what Kipasky (2013) calls a sesquisyllable. This supports Garrett's (1999) finding of a connection between word minimality and stress patterns, though not necessarily foot structure.

Word examples

Unstressed vowels from long and short words are denoted $/a_L/and /a_s/$ respectively. Stressed vowels are denoted /a/and /e/



(3) Spectrogram of (a) a long word (V) CVCV; and (b) of a short word (V'CV)

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Directionality in British Sign Language is not obligatory: The importance of corpus data when considering "agreement"

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Directional verbs like ASK or GIVE in British Sign Language move in the signing space between locations associated with their arguments. These verbs have been identified in most if not all sign languages studied to date and have been the source of great theoretical interest and debate. Some (e.g., Lillo-Martin & Meier, 2011; Rathmann & Mathur, 2002) have argued that directionality is fundamentally the same as grammatical agreement found in spoken languages. One of the arguments for this for American Sign Language has been that modification (at least for the object argument) is obligatory (Meier, 1982). Others (e.g., Corbett, 2006; de Beuzeville et al., 2009) argue that directionality is fundamentally different from agreement due to the pointing behaviour incorporated into these verbs. To move this debate forward, more data are needed about the use of directional verbs in a range of sign languages (Lillo-Martin & Meier, 2011).

The current study considers various linguistic and social factors involved in the use of directional verbs in the BSL Corpus, a large dataset of 249 deaf signers from 8 regions across the UK. Using ELAN, 1680 tokens of directional verbs from the BSL Corpus conversational collection (from 100 participants across 4 UK cities) are annotated for the current study. Directional verbs (including verbs that could potentially be directional) are annotated for linguistic factors including person, number, animacy, co-reference, and lexical frequency and social factors such as signer's gender, age, region, language background and ethnicity.

Results reveal that modification of directional verbs is not obligatory for either subject (66%) or object (64%) arguments. For object arguments, the following factors were found to be significant, (1) co-reference, with co-reference with the object argument in the preceding clause favouring modification, (2) person, with second and first person favouring modification over third person, (3) animacy, with animate objects favouring modification. Frequency and social factors were not significant.

At a minimum, these findings highlight the importance of using corpus data for (sign) linguistic research, to verify or counter claims in the literature based on little data. The low rate of modification of directional verbs suggests that directionality in BSL is not obligatory, consistent with de Beuzeville et al.'s (2009) findings for Auslan. Moreover, the lack of age variation suggests a stable linguistic system which, unlike what has been documented for younger sign languages (Senghas & Coppola, 2001), does not provide evidence of grammaticalisation in progress. We argue that the data from this study seem to support the idea of directionality as a pointing-based reference tracking system, and does not seem to support the agreement analysis of these verbs.
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Contact-induced change in an Oceanic language: the Tok Pisin-Paluai case

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In many language communities within Papua New Guinea (PNG), the English lexifier creole Tok Pisin (TP) is presently in use in a situation that can roughly be characterised as diglossic. TP has been steadily on the rise and is now one of the official languages of PNG. It is extensively used in most parts of PNG as a lingua franca in intergroup contacts. In some communities, the pressure of TP is such that the younger generations do not acquire the local vernacular as L1 anymore, if at all, but grow up as monolingual TP speakers. Even when this is not the case, and children do still acquire the vernacular as L1, the presence of TP for a prolonged amount of time is likely to lead, or has already led, to profound contact-induced change in the local vernaculars.

A case in point is the linguistic situation on Baluan Island, in the Manus Province of PNG. On the island, the vernacular spoken by the majority of inhabitants is Paluai, with the exception of one village where Titan is spoken. All adults on Baluan are fully fluent in both the local vernacular and TP, and the unmarked code of communication is codeswitching between Paluai and TP. Even when people are talking amongst themselves and no outsiders are present, TP is normally in use alongside the vernacular. Children presently still acquire Paluai as their L1. However, they start to acquire TP from such an early age that their acquisition process could in fact more adequately be characterized as bilingual acquisition, despite the pride that Baluan people take in claiming that their children still acquire the vernacular as L1, in contrast to some other language communities on Manus.

Substrate influence from Oceanic languages on TP and the closely related Solomons Pijin and Bislama has been fairly well documented; see amongst others Keesing (1988, 1991), Romaine (1995, 1992), Smith (2002), and Siegel (1998). However, not much seems to have been written about influence from TP on the local vernaculars (but see Jenkins (2005)). Since TP has been around in most of the Manus language communities for at least a century or so, we can assume that the more-or-less stable diglossic situation already has led to contact-induced language change in the vernaculars. Data from recent fieldwork strongly suggest that this is indeed the case. In addition to extensive borrowing of lexical items, a number of grammatical elements have been adopted into Paluai, most notably the verb *gat* 'have' to express predicative possession, and *i gat* 'there is' to express existential relations.

This paper will give examples of borrowing of grammatical structures such as *i gat*, and calquing. It appears that there may be a principled reason for the rise of *i gat* constructions in Paluai, which has to do with information structure. The issue of convergence will also be touched upon: what are the future implications for local vernaculars? Could it be the case that closely related languages (e.g. the languages of the Manus Province, belonging to the Admiralties subgroup) are converging because of structural borrowing from their shared lingua franca, rather than because of shared genetic origins (Sapir's 'parallelism in drift' or 'parallel developments')?

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When good linguistics goes bad: Radical descriptivism on the internet.

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Most linguists maintain that their field is descriptive and not prescriptive. Indeed, no firstyear course would be complete without offering students this proclamation. We assert that descriptivists seek to observe languages as they truly are, while prescriptivists falsely impose rules onto language. The former is scientific, the latter the product of ignorance and bigotry. In short, they exist in a dichotomy where descriptivism is a good thing and prescriptivism is bad. Yet Cameron (2012:5) argues that this position is "an ideologically non-neutral one" and that it signals a failure on the part of linguists "to live up to their own prescriptive ideals" (2012:xxiii).

The prescriptive/descriptive dichotomy is meant to refer to grammatical rulemaking; yet we often associate beliefs on either side of this binary with certain behaviours and attitudes. Prescriptive behaviour is associated with nastiness, rudeness, aggression, judgement, ignorance, the dismissal of reason, misguided calls to authority (i.e. to dictionaries as bastions of correctness), and a lack of willingness to listen to the opinions of others. Meanwhile, descriptivism is related to knowledge and education regarding language change and variation, acceptance, politeness, and lower levels of social discrimination. In effect, prescriptivism and descriptivism are not simply evaluated as positive and negative; they are assessed in combination with strong social qualities.

Yet, this oversimplifies a complex set of human behaviours. Not all prescriptivists are nasty uncaring bigots and, by contrast, not all descriptivists are courteous and progressive. By glorifying descriptivism, we dismiss even the possibility of the existence of antisocial behaviour with descriptive motivations. While reverence for descriptivism is the dominant perspective in academic rhetoric, it is also prevalent in popular linguistic discussion online. Radical and aggressive descriptive stances found on the internet suggest that their aggression has underlying motivations other than metalinguistic attitudes.

Through the study of one online community, I argue that such behaviour does indeed exist and that it can in fact be used to create social meaning. Unlike in face-to-face interaction, anonymous users cannot rely on traditional power structures such as race or gender to assert their authority; instead, they are dependent on the content of their argument. In the group that I analyse, users establish authority through their language attitudes and a corresponding battle of intellectual one-upmanship. Most importantly of note, the ways in which their linguistic meddling manifests itself can be placed along a sort of 'social acceptability' spectrum which does not correlate with the prescriptive/descriptive dichotomy.

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The social distribution of potential suffix allomorphs in Japanese verbs

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In Japanese verbs with vowel-final roots, the standard potential mood suffix -rare is sometimes realised in a reduced form -re by deleting the syllable -ra. Previous studies have examined this phenomenon from both linguistic and social perspectives using large scale corpora data (Matsuda 1993, Ito & Mester, 2004, Sano 2009 & 2011). While the role of linguistic factors conditioning the variation has been demonstrated, the social factors remain unclear from the results. Effects of gender and age have been explained, however the data does not account for the interlocutor or the life stage of the speaker. Using data collected from 40 native speakers in Fukuoka, Japan, this study focuses on probing the interaction of specific social factors which influence the phenomenon of *ranuki* 'ra-dropping' in the potential form of some Japanese verbs. To identify socially-relevant variation, data was elicited from four groups, Female students, Male students, Female workers and Male workers, using a questionnaire in an interview format. Participants were asked how they would say a given sentence to a friend or to a teacher/superior. This was done to compare usage patterns according to formality to determine if the short form of the suffix -re is a social choice based on style (Holmes, 2008). The frequency of ranuki varied substantially across groups and interacted with interlocutor. When addressing teachers, Male students were more likely to use the short form (62%) than Female students (32%). For workers the effect of gender was reversed. Male workers used the short form when speaking to superiors (34%) less often than female workers (64%). When speaking with friends, however, both Male (64%) and Female (64%) workers had a tendency to use the short form. The results suggest that *ranuki* is heavily influenced by social context, identified in the different patterns of usage when speaking to superiors than when speaking to friends. Moreover, usage patterns interact with gender. This tendency reflects the complex nature of gender and workplace stereotypes in Japan, where creating the ideal worker image is seen as critical for career advancement (Nemoto, 2013). In line with recent work on the corporate gender divide in Japan, the interaction between gender and interlocutor in ranuki frequency suggests that males feel (and respond to) social pressure in the workplace to greater degree than females.

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Phonological awareness for linguistics teaching

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Scholes (1993) showed literate adults' difficulty in counting phonemes in simple words. Other research (for example, Lehtonen and Treiman 2007; Connelly 2002; Scarborough, et al. 1998) has shown similar results for other phonological awareness and manipulation tasks, implying that phonemic consciousness dissipates after primary education. For many adults this likely poses no daily difficulty, but for students commencing a speech pathology degree, it may be more problematic, because these skills will be used frequently.

Commencing students (N=34) were tested on syllable and phoneme segmentation, phoneme manipulation, vowel matching and stress identification at the beginning and end of a linguistics subject. Participants had the most difficulty with vowel matching, phoneme segmentation and stress identification. After instruction, all measures except stress identification, which was not specifically taught, had improved.

Vowel phoneme matching, which is not usually included in phonological awareness testing, was tested by asking students to match vowels from a list of vowel keywords, in one task and recognising the odd one out of a trio, in another. In both tasks, students in the pretest had difficulty separating orthographically matching vowels from phonologically matching vowels. In the post test, almost all students made no errors or only one error.

The results confirm the need for the availability of phonological awareness tasks for students in introductory linguistics classrooms, and show the potential for tasks matching vowel phonemes as a measure of phonological awareness. Developing these skills is likely to improve success in linguistics subjects and through it other educational outcomes such as retention at subject, major and degree level.

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The preposition *at* from a spatial language, cognition, and information systems perspective

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Accurate and useful definition of the meanings of natural language prepositions has been a long-standing concern of both Linguistic Semantics and Geographic Information Science (GIScience). However, there has been less dialogue between these disciplines than one might expect.

The English preposition *at* has been considered to pose particular challenges for semantic description. Highly underspecified, it can correspond to multiple, more precisely describable types of spatial situations. A proposal such as (1) may imply a meeting point inside the park, along its boundaries or even outside the park, but close to it. This underspecification is of particular concern to GIScience, as *at* is both very frequently occurring and may appear in contexts such as queries to search engines (e.g. (2)), where a useful response would require a ranking of individual cafes that considers those in the grounds of the University, or on its boundaries, or maybe even cafes within a reasonable distance from the University.

Most previous work on the semantics of *at* has attempted to capture these intuitions within a Cognitive Semantics framework, which assumes that in their core meaning prepositions code spatial relationships between two entities, described as a 'trajector' or 'locatum' and a 'landmark' providing a reference location. It is acknowledged in this literature that *at* is "one of the most polysemous of all English prepositions" and "affords the most general expression of localisation in space in English", potentially encoding all the more precise spatial relations expressed by other prepositions such as *by, on, in, over,* or *under.* The key insight within Cognitive Semantics accounts has been that *at* expresses a topological relation of co-location—adjacency or coincidence— between the two entities, with the landmark conceptualised as a point and without any specification of a direction of orientation of the locatum (Tyler & Evans 2003: 178; Evans 2010; Herskovits 1985).

In this paper we attempt to further illuminate the meaning of English at using wellestablished formal models of qualitative spatial relations within GIScience, and we relate this description to the previous definitions of *at* from within Linguistic Semantics. Based on a corpus of 204 Prepositional Phrases containing at from 2221 geocoded place descriptions collected in a relatively naturalistic context, we consider the discriminatory power of *at* in comparison to the known qualitative spatial relationships or operators used in GI Systems. This analysis shows that at in fact has no topological discriminatory power and no directional discriminatory power, but can be described as specifying a ternary comparative distance relationship (X is nearer to A than to B, C...). We show that the meaning of at can be modelled within the theory of anchoring (Galton & Hood 2005), designed to capture vague and uncertain locations in a precise information space. Thus at can be modelled as identifying a location anchored with respect to the centre of one cell within a contrast set provided by context. For example in (3), the relevant contrast set for line 1 is modelled in the Voronoi diagram in Figure 1, and we take the use of *at* to mean the locatum is nearer to the centre for Melbourne Central than to the other centres; the relevant contrast sets for lines 2-4 will be different, as the granularity level of the landmarks changes (i.e., street exits vs. buildings).

The model proposed in this paper contributes to a better understanding of the meaning of *at*, and will enable improved automatic interpretations of this preposition. The paper also demonstrates potential areas of fruitful cross-fertilisation between Geographic Information Science and Linguistic Semantics.

- (1) Let's meet at the park.
- (2) cafe at the University of X(3)
- (3) 1. A. I am now at Melbourne Central.
 - 2. B. At the Elizabeth St exit?
 - 3. A. No, at the Swanston St exit.
 - 4. B. Ah, I see. You are at the State Library.



Figure 1: The Voronoi Diagram of the set of Melbourne's inner city train stations Southern Cross, Flagstaff, Melbourne Central, Parliament, and Flinders Street.

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Subject expression in spoken English: Testing hypothesized genre differences

Catherine Travis (ANU) & Amy Lindstrom (New Mexico)

It has been proposed that unexpressed subjects in English are "restricted to certain types of discourse" (Roberts and Holmberg 2010:5), and that distinct constraints on subject expression are operative across genres (e.g., Haegeman 2013; Weir 2012). As yet, however, there has been no quantitative evidence adduced in support of such a distinction. Here we examine this proposal, through a comparison of the factors conditioning the variation in pronominal and unexpressed 3sg human specific subjects in two spoken genres of English: conversation (eg. 1) (drawn from the Santa Barbara Corpus of Spoken American English, Du Bois et al. 2000-2005) and narrative (eg. 2) (drawn from Pear Story narratives, Chafe 1980).

Overall, the two genres present vastly different rates of expression: approximately 3% (153/4,563) of the 3sg human specific subjects are unexpressed in the conversational data, compared with 22% (165/748) in the narrative data. We test whether this difference in rates corresponds to differences in grammar through comparisons of the linguistic constraints conditioning this variation in each of the two genres, using the Variationist Comparative method (Poplack and Tagliamonte 2001).

Analyses were conducted on all tokens of unexpressed 3sg human specific subjects (N=153 in SBCSAE, 165 in Pear), and a corresponding sample of 300 pronominal subjects from each dataset. Results indicate that the patterning is virtually identical in the narrative and the conversational data. Unexpressed subjects are favored when the previous subject was also unexpressed (which we interpret as a priming effect), and when the target clause shares the same tense as the preceding (which is associated with temporally sequential events). An apparent difference between the two genres is that, in the conversational data, coordinated contexts (illustrated in 1.4) significantly favor unexpressed subjects over non-coordinated contexts (1.2 and 1.3), yet in the narrative data, there is no difference in rate of expression between these two environments (seen in 2.2 and 2.3). We demonstrate that this is because the narrative data present proportionally more productive instances of coordinated clauses (as in 2.2) while the conversational data present proportionally more fixed coordinated constructions (such as [go and $+ \emptyset$ VERB], e.g. She goes and \emptyset dumps it in there. (SBCSAE 49:391)), which most favor unexpressed subjects (cf. Torres Cacoullos and Travis 2014:31). Furthermore, the narrative data present more tokens occurring in temporally sequential clauses in both coordinated and non-coordinated contexts, which results in similar rates in these contexts, and a higher rate of non-expression overall.

In this empirical test, we do not find support for hypothesized genre differences in constraints on subject expression. Instead, we find that, despite marked divergence in rates of expression in the conversation and narrative data, the variable grammar, as seen in the linguistic conditioning, remains constant across the two.

- (1) 1. Alice: ... And yesterday was the first day she used it.
 - 2. (H) Ø Put a bunch of stuff in it to read,
 - 3. (H) Ø went home last night,
 - 4. and Ø couldn't get it open. (SBCSAE 43: 34-37)
- (2) 1. and you see he notices that the bushel's missing,
 - 2. and Ø counts them,
 - 3. Ø can't figure out what's happening, (Pear 08: 6.9-6.11)

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Codes and classrooms: The interaction of home and school language(s) in four Aboriginal communities

Jill Vaughan & Gillian Wigglesworth (Melbourne)

Language socialisation plays a fundamental role in children's cognitive, social and cultural development. Learning language, and being able to use it to manage the world, is critical to the healthy cognitive and linguistic development of all children. Two of the most important sites of language socialisation are the home and the school classroom. In Aboriginal Australia, children typically enter school with a wide range of linguistic codes and, for the most part, are expected to adjust to the Standard Australian English (SAE)–dominant environment of the classroom (Lowell & Devlin 1998, Rhydwen 1992). A small body of research has addressed the kinds of issues Aboriginal children subsequently face in classroom participation, in part resulting from this transition, such as the discussion around whether children are equipped to deal with the nature of questions typical of school interactions (see, e.g., Christie 1985, Malcolm 1982, Moses & Yallop 2008).

This paper presents insights from research in four Aboriginal communities: Murray Downs and Ltyentye Apurte in Central Australia, Wurrumiyanga on the Tiwi Islands, and Yirrkala in north-east Arnhem Land. These communities represent diverse language ecologies, and together exemplify the sociolinguistic variation that typifies Aboriginal Australia. We first consider the linguistic codes that children in each of these communities use at home, and how these pattern onto expected code-use in the classroom. These repertoires vary significantly across the sites due to: (i) the different traditional language spoken in each (Alyawarr, Arrente, Modern Tiwi and Yolngu Matha respectively); (ii) the differing role and nature of Kriol in each (i.e. whether it is used at all, whether varieties are acrolectal/basilectal); and (iii) the linguistic environment of the school (the differing role of SAE, e.g. Yirrkala School has a bilingual program).

We further discuss the effect of children's linguistic repertoires on their ability to participate effectively in the classroom, and the key issues faced by children in each community during and beyond this transition. In the early years of schooling, children worldwide acquire more developed linguistic skills (such as advanced use of pronouns, determiners and demonstratives and more complex syntactic structures) as well as increased pragmatic and metalinguistic competence. This process is complicated when there is the additional challenge of acquiring a new code. The linguistic situation faced by children in much of Aboriginal Australia is distinct, however, from what has typically been considered in the literature on early education and L2 acquisition (e.g. the experiences of immigrant children speak at home have some features in common with SAE, and children usually have prior exposure to the standard code (Heath 1983, Siegel 1992). As such, the experiences of Aboriginal children in this regard constitute an under- researched area that this study will contribute to illuminating.

This work builds on findings from the first phase of the *Aboriginal Child Language Acquisition* project (ACLA1, see Simpson & Wigglesworth 2008), which detailed the complex linguistic environment children are raised in by investigating children's language input in three Aboriginal communities (Yakanarra in the Kimberley, Dagaragu in the Victoria River District, and Tennant Creek). In combination, these two groups of studies provide a much clearer picture of how children are exposed to and learn to manage their linguistic repertoires across a variety of contexts in Aboriginal Australia, and the ways in

which the first language (acrolectal vs. basilectal creoles, mixed languages, traditional languages) impacts language behaviour and integration in the school environment.

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An NSM approach to *quan* $h\hat{e}$ ('relationships') and *thúr bậc* ('footings') as cultural schemata in Vietnamese interactions

Lien-Huong Vo (Griffith)

Verbal interactions are greatly influenced by the conceptual and perceptual systems of information – the cultural schemata – that allow people to think about and understand reality (Sharifian, 2007). This paper reports on two cultural schemata in Vietnamese, which have been identified in an in- progress study of Vietnamese cultural logic of interactions, viz. *quan h* $\hat{\rho}$ ('relationship') and *th* \hat{r} $\hat{h}\hat{\rho}c$ ('footings'). The cultural meanings of these two concepts have been approached by means of the NSM semantic primes and molecules (Goddard & Wierzbicka, 2014) to tap into their multi-layer meanings.

In Vietnamese interactions, the concept of *quan* $h\hat{e}$ – a state of being in an interpersonal network – embodies people's thoughts and feelings towards each other, and become the most concerned concept in the Vietnamese mindsets. Metapragmatic empirical survey showed that 85% of the participants think about *quan* $h\hat{e}$ first when they engage in an interaction (see Table 1). *Quan* $h\hat{e}$ determines the types of interactions (family talks vs. social interactions):

when I am with another person, if this person is not part of the same family [m] as me, I can't not think about the other person like this: "Do I know this person?"

In interactions with non-family people, it is based on people's "knowledge" about and the attitudes towards each other:

- If I don't know this person, it is good if I don't say anything to this person; it is good if I don't do anything with this person.
- If I know this person, it is good if I think about these things: how long I know this person; how much I know about this person; how I feel towards this person;

at the same time, I want to know how this person feels at this time

Accordingly, people have an appropriate selection of linguistic formulae, particularly terms of address, relevant to the situation.

Another concern adjacent to quan $h\hat{e}$ in Vietnamese interactions is thứ bậc ('footings'). Except for the additional meaning of social status or ranking in certain social domains such as in workplaces, thứ bậc culturally connotes the meaning of generation footing, based on the age difference between interlocutors (Tran, 1996). Therefore, it is natural that people want to know the age of the other people in a conversation:

when I am with another person if this person is not part of the same family [m] as me, I can't not think about the other person like this:

"I want to know when this person was born [m]"

In an ordinary interaction, a Vietnamese interactant is engaged in one of the three footings in relation to the other: the older, the younger and the peer. In each footing, people are expected to be normatively appropriate in their attitudes and behaviour:

- if I know this person was born [m] before me, I can't not think about this person like this: this person is someone above me, ...
- if I know this person was born [m] after me, I can think like this: this person is someone below me, ...

if I know this person was born [m] in the same year [m] as me, I can think about this person like this: this person is someone like me, ...

The NSM approach to the cultural meanings is intrumental to the access to the indigenous frames of mind in speech practices (Wierzbicka, 1997). The explications of *quan h* $\hat{\rho}$ and *th* \hat{r} *b* $\hat{q}c$ in Vietnamese have contributed to the understanding of Vietnamese cultural conceptualization of approapriate behaviour in interactions.

	Times of	Percentage	
	occurrence		
Relationships (Quan hệ)	68	85	
Footings (Thứ bậc)	65	81.3	
Gender	46	57.5	
Ethnic and religion backgrounds	24	30	
Occupations	39	48.75	
Others:			
Appearance	13	16.25	
Dressing style	11	13.75	
Conversationtopic	7	8.75	

Table 1: Cultural concerns in Vietnamese interactions

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Intergenerational vowel change in several Russian-English speakers

Ben Volchok (Melbourne)

There has been little phonetic research undertaken on the various migrant varieties of Australian English, and only slightly more on second-generation speech. This apparent time study hopes to address this paucity of research of such a diverse sample space. Acoustic phonetic techniques were employed in an attempt to characterise the accents of Russian-speaking migrants and their children. Using static spectral and durational information, as well as dynamic measures, it has quantified the basic acoustic properties of the speech of these two generations of this underresearched subset of Australian English speakers.

Sixteen participants were selected from two generations of speakers. The speakers of the older generation were all born in and grew up in Kharkov, Ukraine, with Russian as a first language. They arrived in Australia aged 15;8-34;5 (µ=25;1); at the time of recording, their ages ranged from 41;1- 59;3 (μ =51;1). The speakers of the younger generation were all born in Melbourne, Australia (with the exception of one, who arrived here aged 1;9), and at the time of recording were aged 18:0-26:6 (μ =23:1). This generation's L1 is English, but all also grew up in a Russophone household and are themselves heritage Russian speakers (indeed, many were the children of some of the older generation speakers in this study). The sixteen participants were recorded producing a total of 1,121 tokens of monophthongs of Australian English [1] in a /hVd/ context. These vowels were then analysed according to standard and established acoustic phonetic procedures [e.g. 2]. Recordings were segmented phonemically and annotated in Praat, after which vowel targets were identified and labelled manually. Information from the first two formants was subsequently extracted in Emu. Formant and durational data were handled using the R software to create plots of vowel spaces (e.g. Figures 1-4), as well as graphs of Euclidean distances and of durational comparisons.

Results show that the older generation of speakers clearly exhibit features of Russian phonology [3] in their speech (e.g. difficulty with length or tense/lax contrasts, difficulty with the /a/ vowel, lack of centralization of the /u/ vowel, effects of palatalisation, among others; see Figures 1 and 2), indicating the presence of language transfer. Additionally, results demonstrate that the younger generation's speech is almost indistinguishable from Standard Australian English. At the same time, however, there are characteristics of the older generation's vowels that suggest an adaptation of their speech patterns towards Australian English (e.g. some instances of length constrast), and that their accents are not a simple consequence of transfer. There are also several instances of minor deviation from Standard Australian English in the speech of the younger generation, hinting at either interference from Russian or parental phonetic influence (e.g. relative backing of the /u/ vowel). Several notable idiosyncrasies were also observed in individual speakers. Moreover, in both generations, there was a trend for the vowels of female participants to be closer to the vowels of Standard Australian English than those of males, though other covariables were also investigated.

The small differences observed between the younger generation's vowels and established descriptions of Standard Australian English vowels support previous findings in plurilingual and heritage language speakers with relation to standard norms (e.g. [4] or [5], both running contrary to the claims regarding second-generation speakers made in [6]). The results of the study suggest that second-generation speakers will carry elements of their

parents' language and speech, highlighting the importance in documenting variability in speakers of a language as supposedly homogeneous as Australian English. Conversely, the otherwise overwhelming resemblance of the younger generation's speech to Australian English accentuates key processes in linguistic change between generations of speakers. It also indicates that research should take place into phonetic features other than the areas focussed on in this study (e.g. connected speech processes, prosody) in order to determine more precisely what it is that contributes to the speech patterns of this younger generation.

1 (Hz)



Figure 1. F1 vs. F2 vowel space of older generation females (4 speakers) for /hVd/ words.



Figure 3. F1 vs. F2 vowel space of younger generation females (4 speakers) for /hVd/ words.



Figure 2. F1 vs. F2 vowel space of older generation males (4 speakers) for /hVd/ words.



Figure 4. F1 vs. F2 vowel space of younger generation males (4 speakers) for /hVd/ words.

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F1 (Hz)

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Verbal "arts of memory" in south-eastern Australia: Retracing the poetics of song in the Hunter River-Lake Macquarie language

James Wafer (Newcastle)

Song is a powerful tool for the revitalisation of any language, perhaps especially so in the case of the languages of Australia. The centrality of Song in Aboriginal cultures has often been noted. But if we are to go beyond songs of the "head, shoulders, knees and toes" type and consider revitalisation of ancestral songs, we see that they now exist in a completely new context, where their intimate connection to cosmology, social relationships and arts of memory (Severi 2012) cannot be taken as a given, and they are liable to be put to unforeseen new purposes (Turpin 2011) – such as publication.

In the case of many of the languages of the coastal south-east, the performance of the song repertoire ceased before the advent of recording devices, and the only records we have are written ones, usually consisting of a song text, sometimes with one or more of the following: a translation; a score; an exegesis; a performance context. From these precious fragments it is often possible to do a degree of restoration – in some cases, even enough to throw some light on a song's broader implications (for cosmology and so on).

The case is demonstrated through a reconstruction of two secular song texts in the Hunter River-Lake Macquarie language that were recorded in writing in the early 19th century (one anonymously, the other by E. H. Dunlop). Their metrical and textual structure is compared with that of a song in the Sydney language from the late 18th century (for which we have both a text and a score), and also (briefly) with other early song material from the south-east (Saintílan 1993, McDonald 2001), as well as with contemporary ancestral song material from elsewhere in Australia (such as Turpin 2007).

From this research (undertaken in an ongoing collaboration with the Wonnarua Nation) we get some idea of how the two songs would have sounded, even though the melody is probably impossible to reconstruct in any definitive way. We also gain an insight into a number of the stylistic conventions in play (textual and rhythmic divisions, repetitions, sequencing, constituency matching between text and melody, rhyme, alliteration and so on). Further, the imagery of the songs hints at a set of distinctions (furred versus scaled, for example) that were plausibly relevant to the classification system that underpinned this language's acoustic mnemotechnics – and arts of memory more broadly.

Thus, even a small corpus can tell us enough about the song conventions to enable the formulation of a few technical guidelines for the composition of new songs. But we are still a long way from being able to recognise, in the isolated fragments that have come down to us, the "aural 'identification markings'" (Payne 1978: 9) that link a song to particular "nodes" in the classification system (a "node" being the representation of a place and the mythical being associated with that place).

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Switch-reference and impersonals in Yagaria

Glenn Windschuttel (Newcastle)

Switch-reference and impersonals are two prominent features of the Papuan languages (Foley 1982). It has long been recognised that the subject (as determined, for example, by verb agreement) is not always followed by switch-reference (Longacre 1972). Indeed, switch-reference has been claimed in general to follow topics or some pragmatically prominent position rather than a syntactic position such as subject (Donohue 2005; Roberts 1997). Nevertheless, this 'misreference' has only one particular form sometimes called 'clause skipping' (Roberts 1987:299). Examples in the texts in the Hua Grammar (Haiman 1980) show this exists in Yagaria, a Trans-New-Guinea language spoken in the Highlands of PNG (of which Hua is a dialect).

In the impersonals of Yagaria (sometimes called object experiencer constructions, Evans 2004) the 'subject' according to verb agreement is also ignored in clause-chains. In many Papuan languages this might fit into the above pattern (as has been explicitly claimed for Lani, Donohue 2005); however, in Yagaria this is not the case. While switch-reference does give more significance to the experiencer it does so in a way that is clearly distinct from the clause skipping pattern. This indicates that there is some difference in the grammar of the impersonal construction in particular rather than the switch reference system in general. This may be explained if the experiencer has become the subject.

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Perception of Cantonese tones by native Mandarin speakers: the influences of native properties

Mengyue Wu (Melbourne)

This study examined how Mandarin speakers categorised Cantonese tones to their native tone system and how well they discriminated Cantonese tones. 20 native Mandarin speakers, who had no former experience with Cantonese, categorised all three level Cantonese tones [Chao number 55, 33, 22] into the only level tone in Mandarin [55]. However, these listeners gave different goodness ratings for the three level tones, showing that even they paid more attention to tone contours, they were still able to differentiate pitch heights. The two rising tones in Cantonese [25, 23] had dual categorisation patterns - the rising tone [35] and the falling rising tone [214] in Mandarin. It is possibly because Mandarin speakers paid more attention to the latter part of Tone 3[214], which is a rising tone. The low falling Cantonese tone [21] were 68% categorised into the high falling tone [51] and 30% into the falling rising tone [214], even it shared more F0 similarity with Tone 3[214], showing that contour is still the priority cue for Mandarin speakers. But as pointed out by Guion & Pederson (2007) and Wu, Munro & Wang (2014), listeners made their choices on partial similarities. Besides, current results could be explained that listeners focused on different L1 tone features when listening to different L2 tones.

Based on the methodology from So & Best (2014) and the Perceptual Assimilation Model for Suprasegmentals (PAM-S) (So, 2010, 2012; So & Best, 2008, 2010a, 2010b, 2011, 2013, 2014), all Cantonese tones are categorised except for Tone 5 [23]. The fifteen tone pairs were further grouped into Two Category, Category Goodness (the t-tests for goodness ratings are significant), and Uncategorised-Categorised. In general, Mandarin speakers performed 74.8% overall, while Cantonese speakers had an overall of 92.9%. Both groups had most problems with T2 [25] -T5 [23] pair where Mandarin speakers just made it over chance level (51%). This confirmed former results (Qin & Mok, 2014) that even native Cantonese speakers confused T2 with T5 as they shared similar F0 onset and contours. The error patterns are in line with predictions from PAM-S, which helped provide some empirical evidence to extend perceptual models to suprasegmental tier.



Figure 1: The Mandarin listeners' tonal categorisation percentage for each Cantonese tone and its goodness rating in brackets. The total number of responses for each tone category was 380 (19 participants \times 20 repetitions). The symbols * (p <.001) show that the mean is significantly above the chance level (20%). CT stands for Cantonese tones, MT stands for Mandarin tones.



Figure 2: The mean correct discrimination (in percentage) for each Cantonese tone pair by Mandarin listeners

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Binding in L2 English infinitives revisited

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Previous second language acquisition studies on anaphoric and pronominal binding revealed a tensed and non-tensed asymmetry (Finer & Broselow, 1986; Hirakawa, 1990; [author], to appear; [author], 2014). The correct interpretations were more difficult for L2 English learners to obtain in the infinitives than in the tensed structure. [Author] claim that Japanese speaking learners of English (JSEs) need time to acquire the syntactic knowledge that PRO is obligatorily controlled by either a matrix subject or a matrix object in English. However, since their study did not look at a subject- object asymmetry in the Control sentences, the present study investigated if there would indeed be a subject-object asymmetry. This paper reports JSEs' binding interpretations in tensed, Subject-Control, Object-Control, and *want* constructions and confirms JSEs' misanalysis of different Control constructions.

Ninety JSEs and 28 native speakers of English participated in the study. The JSEs were divided into three subgroups (n=30 each): High school students (HS), and two college student groups that were divided based on their TOEIC scores (Low, TOEIC Ave. 384; High, TOEIC Ave. 687). A context- based multiple choice questionnaire was employed, where all participants read a short narrative written in Japanese and chose the most appropriate answer from among the four choices to complete the corresponding English sentence. There were 24 test sentence-narrative pairs, 12 each for pronouns and reflexives (3 for each sentence type), as in (1)-(4), with 6 fillers.

A summary of results is presented in Table 1. Overall correct response rates by the three learner groups differed significantly (F(2, 87)=44.221, p<.0000), and by four sentence types (F(3, 261)=44.225, p<.0000). However, there were no significant differences between pronouns and reflexives. Significant interactions were observed in groups and sentence types (F(6, 261)=4.483, p<.0002) and in sentence types and anaphoric types (F(3, 261)=22.936, p<.0000). A post-hoc (Ryan's method) analysis shows that each group was significantly different from one another at the .05 level (HS < COL < COH), indicating their developmental improvement in binding. The College High group's performance was similar to that of the Control group in both pronominal and reflexive binding, regardless of the clause type. In addition, all sentence types except the Object Control and want constructions were significantly different from each other (Subject Control < Object Control, Want < Tensed) confirming the claim that binding in the infinitives is more difficult for JSEs to acquire than in the tensed clause. The Subject Control sentences were the most difficult for JSEs, similar to the finding in L1 acquisition (C. Chomsky, 1969; Thornton & Wexler, 1999). We interpret these results as showing that JSEs do not have a firm knowledge of PRO in the infinitive subject position, assigning the want like structure (5c) to both the Subject Control (5a) and the Object Control (5b). Thus, the three learner groups scored more poorly on reflexives than on pronouns in the Subject Control construction. On the other hand, the three learner groups showed poorer performance on pronouns than on reflexives in the Object Control construction, contrary to our prediction. We suspect that this asymmetry may emerge as an intervention effect (6) (Belletti & Rizzi, 2013) because the matrix object DP blocks the embedded object pronoun from taking the matrix subject antecedent.

Test sentence examples

(1) **Tensed** (Pronominal example)

Miki: Mom, I scored 100 points in the recent trial examination. Isn't it great?
Mom: Congratulations! You did it. Keep up the good job, will you?
Miki: The homeroom teacher praised my hard work.
Miki told her mother that the homeroom teacher praised (1. she 2. her 3. herself 4. Ø) for her test score. (her)

(2) **Subject Control** (Reflexive example)

Father: Be very cautious when you drive at night.
Jim: O.K.
Father: Particularly, you'd better watch out for drunk drivers.
Jim promised his father to protect (1. he 2. him §. himself 4. Ø) from drunk drivers.
(himself)

(3) **Object Control** (Reflexive example)

Susan: When you have a problem, it may be necessary to analyze yourself. Yuko: I agree. I am going to do so. Susan told Yuko to analyze (1. she 2. her 3. herself 4. \emptyset) when she had a problem. (herself)

(4) **Want** (Pronoun example)

Jim: Dad, I have a request.
Dad: What do you want?
Jim: I'd like you to buy me an iPad Mini for my birthday, please.
Dad: You'll have one if you promise you'll study harder.
Jim wanted his father to buy an iPad Mini for (1. he 2. him 3. himself 4. Ø). (him)

Schematic structures

- (5) a. X_i promised Y_j [CP PRO_i to V reflexive_i/pronoun_j]
 (Jim_i promised his father_j to protect ^{OK}himself_i/*him_i from drunk drivers.) (2)
 (Kirki promised Joe_j to return the money to *himself_j/^{OK}him_j.)
 - b. X_i told Y_j [CP PRO_j to V reflexive_j/pronoun_i] (Susan_i told Yuko_j to analyze ^{OK}herself_j/*her_j]) (3) (Shinji_i told his father_j to support *himself_i/ ^{OK}him_i during his study abroad.)
 - c. X_i wanted [CP Y_j to V reflexive_i/pronoun_j] (Taro_i wanted Ichiro_j to ask ^{OK}himself_j/*him_j what to study in college.) (Jim_i wanted his father_i to buy an iPad Mini for *himself_i/^{OK}him_i.) (4)
 - Intervention X Y Z $(X \neq Z \text{ if } Y \text{ c-commands } Z)$

a. [Subject Control]

(6)

 X_i promised Y_j [CPPROi to V $*p_i / {}^{o\kappa}p_j$] $\rightarrow X_i$ promised [CP Y_j to V $*p_i / {}^{o\kappa}p_j$] (L2) (no PRO)

<intervention> coreferential relation between X_i and pronoun_i is blocked by Y;

This Y intervention leads to a correct response in the case of $pronoun_i$. In the case of $pronoun_i$, the intervention effect also leads to a correct result.

b. [Object Control]

 $X_i \text{ told } Y_j \text{ [CP PRO}_j \text{ to } V \overset{\circ \kappa}{p_i} / *p_j \text{]} \rightarrow X_i \text{ told } \text{[CP } Y_j \text{ to } V \overset{\circ \kappa}{p_i} / *p_j \text{]} (L2) \text{ (no PRO)}$ <intervention> coreferential relation between X_i and the pronoun_i is blocked by Y; This Y intervention leads to an incorrect response in the case of pronoun_i. In the case of pronoun_i, the intervention also yields an incorrect result also.

ale caracteria	Tensed		Subject Control		Object Control		Want	
Group	Pronoun	Reflexive	Pronoun	Reflexive	Pronoun	Reflexive	Pronoun	Reflexive
	5	S	5	5	S	S	S	S
HS	86.7	75.7	46.7	29	57.7	72.3	71	89
CoLo	85.7	82.3	73.4	41	66.7	80	77.7	64.4
CoHig h	95.7	95.7	86.7	71	83.3	97.7	83.4	96.4
Contro 1	98.7	89.3	90.3	95.3	96.3	98.7	91.7	95.3

Table 1 Percentages of correct responses by group, sentence type, and anaphoric type

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Romance workshop

The derivation of Spanish preposition-complementizer 'conglomerates'

Manuel Cantero (ANU)

Spanish (and other Romance and Germanic languages) allows a preposition to combine with the complementizer *que*. Spanish finite clauses may optionally be introduced by the article *el* ('the') in certain semantically constrained contexts (Serrano 2014). However, the article is excluded if the clause is introduced by a preposition (1) (Cantero 2013a, 2013b; Serrano 2014):

Cantero (2013b) argues that this ungrammaticality results from strict adjacency between the preposition and the complementizer, which blocks all interpolation (2). Interpolation is nevertheless grammatical with other categories (3).

This inseparability could be claimed as a case of univerbation. Indeed, traditionally, linguists have categorized such combinations as units (Herman 1963). More recently, Bosque (1998) argues that certain frequent combinations such as *porque* ('because') or *para que* ('so that') show double categorization, both as complex complementizers/units and as separate preposition-complementizer combinations, depending on the syntactic context. However, the traditional analysis fails to account for some evidence put forward in favor of maintaining the separation between a prepositional projection and a complementizer projection (Pavón 2003, Cantero 2013a, among many others). The double categorization analysis is insufficient, as strict adjacency still applies beyond those frequent cases. Additionally, a univerbation account leaves selectional properties unexplained, as the preposition may be required by the selecting category (verb, noun, etc.).

The syntactic behavior of these preposition-complementizer combinations is similar to other Spanish contractions such as *del* ('of-the') and *al* ('to-the'). Similar cases in French (e.g., *au* 'to-the') and German (e.g., *ins* 'in-the') have been examined as instances of lexical sharing (Wescoat 2007; Cabredo Hofherr 2012). Drawing on these parallelisms, I present a syntactic analysis of these preposition-complementizer 'conglomerates' which accounts for the aforementioned strict adjacency effect (van Riemsdijk 1998) and lexical sharing in the course of the syntactic derivation, while essentially maintaining the categorial integrity of prepositions and complementizers as separate elements.

The data present in this paper contribute to our understanding of the syntax of Spanish, with implications to other Romance languages, by focusing on the interrelation between morphology and syntax and categorization, topics which figure prominently in current general syntax discussions.

- (1) a. *Me alegro de(*l) que vengas* me get-happy.1SG of-the that come.2SG.SUBJ 'I am happy that you are coming'.
 - b. *Leí* hasta (*el) que salió el sol read.1SG.PAST until the that appeared the sun 'I read until the sun came out'.
- a. *Me (2)acuerdo de. claro. que fuimos la playa а remember.1SG of-course went.2PL to the beach me of that
 - b. **No quiero ir por, claro, que hace frío* not want.1SG go.INF for of-course that makes cold
- (3) *Hablamos de, claro está, la mejor oferta del mercado.* speak.1PL of of-course the best offer of-the market 'We are of course speaking of the best offer in the market'.

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Second Language Acquisition of the French clitic system

André Diez de Aux (Toronto/ANU)

Clitic pronouns (referred to hereafter simply as clitics) are amongst the most studied aspects of Romance languages. How they are realised is linked simultaneously to questions of pragmatics, semantics, syntax, morphology, phonology and phonetics. Their form and the rules governing them are also subject to considerable variation across languages. French poses particular problems for learners because, unlike other Romance languages, it has nominative clitics, and clitic parsing and production is dependent upon the phonological constraints of rhythm groups.

Previous studies in second language acquisition (Alba de la Fuente 2012, Duffield et al. 2002, Herschensohn 2004, Mercier 2013, among numerous others) have examined certain discrete aspects of clitics in the interlanguage (IL), but few have sought to study the acquisition of the system as a whole. This paper is part of a larger project comparing the acquisition of the French clitic system by speakers of English on one hand, and by speakers of Spanish on the other, with the goals of:

- 1. Determining whether the properties of the different L1s affect the rate and order at which the French clitics are acquired.
- 2. Determining whether proficiency with French stress patterns and prosodic structure can either predict or affect the rate at which the French clitic system is acquired.
- 3. Using findings to inform teaching practices and curriculum development targeting speakers of the different L1s.

The proposed paper will present preliminary findings from English-speaking learners of French collected from corpora of French learners, namely the French Learner Language Oral Corpora, publiclyavailableat<u>http://www.flloc.soton.ac.uk</u>,andwill examine the following questions:

- a. the extent in learners' interlanguages to which clitics are realized with phonological stress;
- b. whether there is a correlative, or ideally, a causative, relationship between learners' stress patterns and prosodic structures and their acquisition of target-like clitic constructions, and whether the Prosodic Transfer Hypothesis (Goad, White and Steele 2003) can be corroborated in the context of this study;
- c. the extent to which syntax, morphology and phonology play different roles in the realization of clitic constructions (c.f. Mercier, 2013); and
- d. the stage(s) at which different clitics and clitic paradigms are realized accurately.

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To ISC or not to ISC – that is the question. On allomorphy in so-called –IRE verbs in Italian

John Hajek (Melbourne)

Italian is unusual amongst standardised Romance languages in Europe in exhibiting a high degree of verbal allomorphy (De Mauro 2007), examples of which can be found across the verb system, e.g. devo/debbo 'I must' and 'apparse/apparve/appari 'it appeared', 'perso/perduto' 'lost (past participle)'.

In this paper we examine the presence of the originally inchoative infix ISC from Latin in part of the Italian verb system. The infix is today found only in the present tense of the indicative and subjunctive moods of 3rd conjugation verbs in –IRE. Such verbs fall into one of at least three groups:

- (1) no infix ever, e.g. dormire 'to sleep' > dormo 'I sleep'
- (2) infix always, e.g. finire 'to finish' > finisco 'I finish'
- (3) optional/variable presence, e.g. mentire 'to lie' > mento/mentisco 'I lie'

It is often assumed that the ISC forms in (2) are the norm and that (1) and, in particular, (3) are more exceptional. However, our research shows that normative and descriptive sources on Italian disagree which and how many verbs fall in to (3) in particular, and, therefore, also as a result, in (1) and (2).

Our research also shows that ISC-related variability is much greater than previously noted, but the reasons for such variability remain unclear.

We consider issues possible causes and correlates of such variability, including speaker attitudes and register, in relation to ISC to show that Italian remains a language whose verbal system is still very much in motion.

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Does /e/ split into four vowel phonemes in Western Almeria? Effects of /s/, /r/, and θ / deletion in this variety of Eastern Andalusian Spanish.

Alfredo Herrero de Haro (Wollongong)

As documented by several scholars, such as Wulff (1889) and Navarro Tomás (1938), Eastern Andalusian Spanish (henceforth *EAS*), neutralises most consonants in coda position. However, there is no consensus on the effects that consonant deletion has on surrounding vowels. Researchers of EAS, such as Mondéjar Cumpián (1979), have distinguished between two types of vowels in this variety of Spanish: vowels in coda position and vowels followed by a deleted consonant. However despite the neutralisation of most consonants in coda position in EAS, phonemic value has only been given to vowels preceding deleted /s/, as in Salvador Caja (1950) and Carlson (2012).

This paper expands on the traditional view on vowel doubling in EAS and shows evidence of a more complex phenomenon previously undescribed: the division of /e/ into different phonemes as a result of different consonant deletion. This paper will analyse the differences between word-final /e/ and /e/ preceding deleted word-final /s/, /r/, and / θ / (/e^s/, /e^r/, and /e^{θ}/, respectively) in order to determine if the deletion of these consonants causes consistent changes of quality to /e/, thus creating a new system of mid front vowels.

Once it has been established whether the deletion of /s/, /r/, and θ / creates a new set of vowels, a perception analysis will be carried out to determine if native speakers of EAS from

Western Almeria can distinguish between /e/, $/e^{s}/$, $/e^{r}/$, and $/e^{\theta}/$, which will confirm whether those new vowels have allophonic or phonemic value.

An analysis of the F1 and F2 of /e/, /e^S/, /e^r/, and /e^{θ}/ pronounced by native speakers of Western Almeria reading a text and during free speech shows that /e/ presents some consistent F1 and F2 values depending on whether it is in coda or whether it precedes /s/, /r/, or / θ / deletion. Furthermore, the perception tests completed by native speakers of the area show some ability to distinguish between some of those vowels, although some contrasts are more clearly distinguished than others.

These findings show that, as Alarcos Llorach (1950: 122) explained, the evolution of a system means that some distinctions are lost, but the system develops other ways of solving ambiguity. In this case, EAS, or at least in Western Almeria, vowel quality is used to mark whether /s/, /r/, or / θ / has been deleted after /e/, thus creating a new set of mid front vowels in this variety of Spanish. The results of the perception test show that speakers of this variety of Spanish have developed a complex mid front vowel phonemic system, as they show an ability to distinguish between various realisations of /e/ which had been previously described as allophones. A preliminary analysis of additional data suggests a similar situation for at least /o/ and /a/, which would increase dramatically the 8-10 vowel phoneme system traditionally attributed to Eastern Andalusian Spanish.

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From lo to le: Spanish clitic systems on the move

Elisabeth Mayer (ANU)

Spanish clitics are special clitics (Zwicky 1977), they have been analysed as agreement markers (Jaeggli 1982, Suñer 1988), stem-level inflectional affixes morphologically attached to the verb (Andrews 1990), and independent syntactic elements adjoined to functional heads (Kayne 1990; Uriagereka 1995). There is general consensus on clitics being an interface phenomenon.

This paper focuses on the morphology-syntax-information structure interfaces in clitic doubling with the accusative *lo* in complementary distribution with the dative *le* as shown in (1) and co-occurring with a co-indexed lexical noun phrase in (2). Accusative clitic doubling in standard varieties requires differential case-marking (DOM) and is subject to different and varying semantic (animacy and definiteness) and pragmatic (topicality) constraints.

- (1) Loi /lei vimos (a éli) ACC.3MSG / DAT.3SG saw.1PL DOM PRO.3MSG 'We saw him'
- (2) Loi /laj vimos (a Juani /a Claraj) ACC.3MSG /ACC.3FSG saw.1PL DOM Juan / DOMClara 'We saw him, Juan. We saw her, Clara'

In language contact situations divergence at the interfaces may result in hybrid/split or new clitic systems marked by a transition from co-reference to object marking. Loss of semantic, pragmatic and grammatical constraints on doubling such as the emergence of accusative *lo* as an invariant form in (3), dative *le* accusative doubling in (4), and case erosion in both examples, are indicative of several ongoing grammaticalization processes affecting the entire objet marking system.

- (3) Lo vimos (a) las chicas ACC.3MSG saw.1PL DOM DET.FPL girls 'We saw the girls'
- (4) Le vimos al /el carro DAT.3SG saw.1PL DOM.DET.3SG / DET.3SG car 'We saw the car'

In this paper I link the grammaticalized forms in (3) and (4) to a difference in projectivity and distribution of dative and accusative clitics based on a revised projection/dependence matrix (Toivonen 2001; Mayer 2010). Whereas Spanish 'true' clitics, dative and accusative agreement markers, are phonologically dependent and non-projecting, the default accusative clitic *lo* is still phonologically dependent, but shows some projecting determiner use such as default direct object pronoun, S-Pronominalization (Perlmutter 1971:30) and determiner cliticization (Ormázabal & Romero 2007:341). These grammaticalized forms turned topicality and transitivity markers can further be linked to primary object and secondary topic marking (Dalrymple & Nikolaeva 2011, Mayer 2008, 2010).
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'Come dine with me': How do Jamaican learners of French express verb of movement constructions?

Hugues Peters (UNSW)

Set within the framework of generative approaches to Second Language Acquisition (SLA), this presentation studies the acquisition of French verbs of movement in conjunction with spatial prepositions (Giaccobe, 1992; Stringer, 2007, 2008, 2010) by Jamaican learners of French.

Adopting a reformulation of the 'Full Transfer Full Access' hypothesis (Schwartz and Sprouse, 1996) at the level of lexical properties (Lardière, 2000), this research assumes a transfer of these properties via a process of 'Relexification' (Sprouse, 2006; Stringer, 2007) or 'Conservation' (Van de Craats, 2003) from the L1 to the L2, and assesses how the learners' use of verbs of movement and spatial prepositions is influenced by native and target languages and/or by developmental constraints.

This research adopts the methodology of corpus linguistics to describe and analyse learner data on the use of verbs of movement elicited mainly via a Comic strip story retelling activity transcribed and encoded in a computerized learner corpus of spoken French.

The learners under investigation are all characterized by early-childhood bilingualism in Jamaican Creole and Jamaican English within a diglossic background. As these learners are native speakers of a language that possesses serial verb construction (Alleyne, 1996), of particular interest, therefore, will be an investigation of the modes of realization adopted by these learners of the French pseudo-serial verb construction: "verb of movement + nonfinite verb".

Careful comparison between the native languages: Jamaican English and Jamaican Creole, and the target language: Standard French, is therefore required as the structure under consideration manifests subtle differences between English (Nicolle, 2009; Wulff, 2006), Jamaican (Bailey, 1966, Aleyne, 1996) and French (Bouchard, 1991; Lamiroy, 1987, Larreya, 2005).

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The phonological weight of Spanish syllables

Carlos-Eduardo Piñeros (Auckland)

Five decades after Foley (1965) proposed the first generative analysis of Spanish stress, there is still no clear understanding on how this language determines which syllable of the word is to be stressed. Fundamental issues such as whether the system distinguishes between light and heavy syllables and whether it constructs trochaic or iambic feet are still vigorously debated. Within the last decade, for instance, Shelton (2007) endorses both light and heavy syllables, while Ohannesian (2004) accepts only light ones. By the same token, Gibson (2011) employs trochees to prosodify words, while Roca (2006) draws on iambs. The disagreement extends even to the domain, which although traditionally assumed to be the word (Harris 1969, 1975, 1983, 1992, 1995), has also been claimed to be only a fraction of it: the stem (Hooper and Terrell 1976, Otero 1986, Roca 1988, 1990, 2006, Hualde 2012). While focusing on syllable weight, this study also sheds new light on the type of foot and the extent of the domain. It demonstrates that Spanish is quantity insensitive, constructs a single trochee, and places it flush with the end of the prosodic word.

The lack of symmetry among the attested patterns serves as the point of departure. Frequency counts have confirmed the long-held speculation that most Spanish prosodic words are paroxytone. Data presented in Núñez-Cedeño and Morales-Front (1998: 211) show, for instance, that nearly two thirds of a corpus of 91,000 words belong to this subset (see 1). Since the second most common pattern —oxytone— does not reach even half that rate, it is safe to assume that the system favours the penult. Such propensity follows naturally from the universal principles in (2), which, when dominant, ensure that words are prosodified by projecting a final trochee: [... σ (σ σ)].

It is in the treatment of oxytones that syllable weight takes centre stage. On the assumption that complex rhymes support bimoraic syllables (e.g. $[\nabla^{\mu}\nabla^{\mu}]$, $[\nabla^{\mu}\nabla^{\mu}]$, $[\nabla^{\mu}C^{\mu}]$), a straightforward explanation for final stress becomes available because the vast majority of oxytones happen to end in a consonant (e.g. *mar* 'sea', *e.dad* 'goodness', *ve.ge.tal* 'vegetable'). Such an analysis, which can be labelled quantity sensitive (QS), is compatible with the principles in (2) for they yield a final trochee in this context too, the difference being that stress ends up on the ultima because, by virtue of containing two moras, that syllable can support a binary foot by itself (e.g. $[ve^{\mu}.ge^{\mu}.(ta^{\mu}l^{\mu})]$). In addition to deriving this pattern at no additional cost, the QS analysis claims to have the merit of making the distribution of stress tighter. It is said, for instance, that words with a branching rhyme in the penult cannot be proparoxytone because the ultima and the penult suffice to form a wallformed foot without having to draw on the aptenenult (a g [ach (bell mildel)]).

form a wellformed foot without having to draw on the antepenult (e.g. $[co^{\mu}.(ba^{\mu}r^{\mu}.de^{\mu})]$ 'coward').

These merits are spurious, however, because they are arrived at via circular reasoning. It turns out that the number of ultimas that are analysed as heavy by virtue of having a coda consonant is equal to the number of ultimas that need to be reanalysed as light despite possessing a coda consonant too. This effectively means that codas are equally likely to make syllables heavy or light. The circularity becomes apparent when the full set of inflectional forms of any given word is examined. For instance, while final stress on the singular form of *e.dad* is expected, penultimate stress in the corresponding plural form (i.e. *e.da.des*) comes as a surprise and cannot be derived without the stipulation that the word-final consonant is extrametrical. Attempts to rescue this approach are disappointing

because they involve the introduction of an exorbitant number of extrametricality marks whose only purpose is to conveniently adjust the weight of heavy syllables. The failure extends to the tighter stress distribution that heavy syllables allegedly induce. There is ample evidence from both patrimonial and borrowed words that it is perfectly possible for a syllable with a simple rhyme to capture stress despite the availability of more complex syllables (e.g. *por.tá.til* 'portable', *Mar.tí.nez* 'last name', *yó.key* 'jockey', *vó.lei.bol* 'volleyball') and results from experiments with nonce words confirm that speakers accept forms in which stress bypasses one or more heavy syllables (Kárkányi 2002a, b, Alvord 2003, among others). It follows from the above that the QS analysis is both theoretically and empirically unsalvageable.

	Total:	91,000	100.00%
	c. Proparoxytones:	7,362	8.09%
	b. Oxytones:	25,642	27.71%
(1)	a. Paroxytones:	58,423	64.20%

- (2) a. MAIN-RIGHT: MAIN FOOT RIGHT Align the main foot with the word, right edge.
 - b. FOOTBIN: FOOTBINARITY Feet are binary at the mora or syllable level.
 - c. TROCH: TROCHAIC RHYTHMIC TYPE The head of the foot precedes the tail.

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What do post-verbal subject pronouns do in discourse?

Catherine Travis (ANU)

It is widely assumed that, in languages with variable subject-verb word order, this variability is "pragmatically controlled", as Givón (1983:19) claims for Spanish in his seminal volume on topic continuity. Some of the pragmatic accounts that have been put forward include an association between post-verbal subjects and new information (Givón 1983:19; Rivas 2008:906); post-verbal subjects and peripheral, or backgrounded, information (Naro and Votre 1999); and post-verbal subjects and unaccusative verbs (e.g. López Meirama 2006; Montrul 2004:128). While such pragmatic factors may apply to third person (lexical and pronominal) subjects, positioning for first-person subjects (1sg), as discourse participants, may differ.

Here, we operationalize and test these hypotheses for approximately 1,100 1sg pronominal subjects in Spanish, based on data from the New Mexico Spanish-English Bilingual corpus (Torres Cacoullos and Travis In preparation), in which the average rate of post-verbal (vs. pre-verbal) *yo* is 17%.

An operationalization of the discourse role of presenting new information in terms of subject continuity, predicting that greater distance from previous mention should favour post-verbal *yo*, yields unclear results. There is also little evidence for a backgrounding role of post-posed subject pronouns, based on findings for tense and clause type. And the number of tokens of unaccusative verbs is simply too low for this factor to be able to account for 1sg post-verbal subjects.

However, two clear trends emerge that suggest that variable subject-verb word order for 1sg is "controlled" by lexically particular constructions. 1sg cognition verbs (mainly (yo) creo 'I think' and (yo) (no) sé 'I (don't) know') resoundly disfavour post-verbal yo (at 3%, a rate six times below the average), while 1sg decir 'say', illustrated in (1), strongly favours (at 56%, a rate three times above the average), especially when it is a quotative marking direct speech. In addition, we find a strong negative polarity constraint, according to which post-verbal subjects are disfavoured under negation (at 3%); independent evidence for a schematic [yo no VERB] construction comes from the frequency of this sequence.

A second set of factors shaping the variation may be characterized as structural, both syntactic and prosodic. In multivariate analysis, post-verbal *yo* is strongly favoured by a preverbal adverbial in the clause, as in (2), and is disfavoured with a post-verbal object, predicate nominal or complement clause (cf. Silva-Corvalán 1982:113). It is also strongly favoured in prosodic medial position, when the verb is preceded in the Intonation Unit by material other than *no* and/or object clitics, as in (3), an effect which is independent of the presence of preverbal adverbials and direct objects.

In sum, rather than pragmatic constraints, accountable quantitative analysis reveals that for 1sg at least, paramount in variable subject-verb word order are the effects of lexically particular constructions together with structural—syntactic and prosodic—constraints.

(1) Fabiola:

es lo que <u>le dije **yo**=</u>. 'That's what I-POST <u>said to him</u>. ...no tengas mucho apuro <u>le dije **yo**</u>. ...don't be in such a hurry I-POST <u>said to him</u>.' [09 La Salvia 0:48:30---0:48:33]

(2) Francisco ... (TSK) <u>aquí</u> vivo **yo=**.

'<u>here</u>I-POST live.'

[18 Las Minas 1:12:38---1:12:39]

Monica <u>por eso</u> tengo telefón **yo**, para estarlo llamando.

'<u>that' s why</u> I-POST have a telephone, to call you.' [11 El Trabajo 0:18:40---0:18:41]

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Poster session

Are trans women from Venus, Mars...or Earth? A linguistic analysis of trans women's language

Erica Dodd (Monash)

The belief that men and women speak differently is prevalent in wider public discourse. It is not uncommon to hear claims that women speak more than men, that men are more confrontational in interactions, or that women possess larger vocabularies. Indeed John Gray (1993) in his publication *Men are from Mars, Women are from Venus* would have us believe that men and women are so profoundly different in their language use they originate from two different planets. Whilst some linguists argue that women may use hedges, tag questions, and politeness strategies more than men (see Lakoff 1975; Tannen 1990), others contend that men and women do not vary considerably in language use (see Cameron 2007). Moreover, in the instances where language differences are believe to exist, linguists tend to explore why these differences occur instead of questioning whether they are based on popular imaginations.

However, the idea that men and women speak differently is underpinned by the belief that 'men' and 'women' form distinct groups. Numerous individuals have established identities which are situated outside the gender binary of male and female (see Stryker 2008; Kulick 1999; Feinberg 2006). Transgender individuals for instance cross the divide between the sexes. These individuals may utilise linguistic patterns and behaviours that cannot be classified as purely feminine or masculine. The language of trans women is therefore of interest as it provides a test bed for studying the effects that sex has on an individual's language.

Through the analysis of a group of 5 trans women - via a recorded group discussion, a one on one interview, and a questionnaire - I explore the ways in which trans women construct gender identity through language. I contend that trans women utilise styles typical of both male and female language in order to project a desired identity. Consequently, it is possible for a speaker's linguistic behaviour to encapsulate both stereotypical masculine and feminine linguistic features.

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Evaluating the undefinable: What happens when grammar isn't grammar?

Julia Doyle (Charles Darwin)

Despite the diversity in dictionary definitions and innumerable common uses of the word 'grammar', universities seem able to systematically assess it, allocating both a category and marks to its use. The impact of laying discussions of the definition of grammar to rest is huge, for its meaning has always been far from settled. The collection of jokes on the webpage '*Grammar Jokes*' provide great insight into today's common use of the word, encompassing plays on spelling (orthography), word stress (prosody), word meaning (semantics), the sounds of letters (phonology), and even prescriptivism ; suggesting that a dialect becomes a language "when its speakers get an army". Dictionary definitions do little to clear matters up with grammar being defined as narrowly as; "a book that explains the rules of the language" (Merriam Webster, 2014), or as broadly as; "features of a language (sounds, words, formation and arrangements of words etc.) considered systematically as a whole..." (Macquarie, 2014). Butterfield (2008) manages to sidestep the argument of definition entirely, yet sum it up perfectly in suggesting that grammar serves as; "a generic way of referring to any aspect [of English] that people object to" (p. 142).

While this paper has benefitted from investigating the variety and discord in current definition, its focus is far more pragmatic. This paper reports on a small study which collated and analysed open access assessment criteria documents from universities around Australia. It looked at the context in which grammar was mentioned, the words used to evaluate its use, and whether its role in assessment criteria was consistent across universities. Finally, the ramification of any inconsistency was considered. If the meaning of grammar is as overgeneralised as some dictionary definitions would suggest, and its common use so varied, then what are the implications for assessing students' writing, and what exactly is being marked if not grammar?

Sample sentences

Pelosi (1973) suggested that the ever narrowing and widening definition of grammar could be traced back to the word's Greek origins. The Greek used their word to mean 'the art of writing'; however even then its use was extended to cover the study of language as a whole.

It seems that the disparity between what a journal article looks like and what a student's writing looks like is equated with a problem in grammar.

Fang and Wang's suggestion (2011) is that teachers might be better equipped to teach writing if grammar was understood more as a tool for making meaning rather than as a set of rules to be memorised and applied.

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Identifying typological features likely to show synchronic variation

T. Mark Ellison (ANU)

Language typology maps out the variation space filled by the languages of the world (Haspelmath 2001). For example, the WALS database (Dryer et al. 2011) identifies 192 features of variation, and provides a sparsely-filled matrix of values for these features for 2679 languages. While the variation recorded in WALS is between-language, it can also be used to infer features likely to show synchronic variation.

If two related languages hold different values for a typological feature F, then there must have been, at one time or another, synchronic variation in that feature. Languages are related if and only if they descend from a common ancestor via histories of normal transmission. If that ancestor allowed both values for the feature, QED. If not, the value for the feature must have changed in the development of one of the descendents. Since under normal transmission change is not sudden, but progresses through an intermediary period of variation, there must have been a time during which more than one value for the feature was possible within the language. Thus typological variation within a feature implies synchronic variation in that feature at some time during the history of that family.

On the basis of the above argument, we can assume that the more a feature varies within small phylogenetic units, the more synchronic within-language variation we can expect it to have. For phylogenetic affiliation we use the genus feature assigned within the WALS database. Information theory (see for example Cover & Thomas 2012) offers a principled measure of variation in one feature conditioned by another. The relative conditional information for a feature F based on phylogenetic classification G can be defined as in equation (1), where I(F), I(G) are the information in feature F and genus G, and I(F, G) is the information in both together.

The relative conditional information for the features showing the most variation within genera is shown in table 1. Notice that the number N of languages for which the feature is defined varies considerably in WALS. The significance of a feature with a great deal of non-phylogenetic variation is tempered when that feature is only defined for a few languages, such as feature 90F which is defined for only 10 languages. Of the features defined for a sizeable number of languages, the most non-familial variation is found in the placement of the negative marker, the use of articles definite and indefinite, and boundaries between finger, hand and arm. These features are thus the most likely to show synchronic variation.

 $\operatorname{RI}(F/G) \triangleq \underline{I(F,G) - I(G)}$ I(F)

	Feature <i>F</i>	RI(F/G)	N
15A	Weight-Sensitive Stress	0.37189	500
14A	Fixed Stress Locations	0.37929	502
143G	Minor morphological means of signaling	0.38370	1324
	negation		
143A	Order of Negative Morpheme and Verb	0.38463	1324
129A	Hand and Arm	0.38985	617
143F	Postverbal Negative Morphemes	0.39075	1324
143E	Preverbal Negative Morphemes	0.39148	1324
144A	Position of Negative Word With Respect	0.39387	1189
	to Subject		
38A	Indefinite Articles	0.39918	534
116A	Polar Questions	0.40210	955
16A	Weight Factors in Weight-Sensitive Stress	0.40439	500
	Systems		
112A	Negative Morphemes	0.40684	1157
130A	Finger and Hand	0.41114	593
92A	Position of Polar Question Particles	0.41474	884
37A	Definite Articles	0.41506	620
144D	The Position of Negative Morphemes in	0.44487	463
	SVO Languages		
144I	SNegVO Order	0.48172	421
144J	SVNegO Order	0.49487	446
144K	SVONeg Order	0.50425	446
90F	Adjoined relative clauses	0.54024	10

Table 1: The 20 features with greatest scaled conditional information. The final column gives the number of values for which the feature is defined. Features defined rarely show only weak evidence for non-phylogenetic information, compared to those defined widely.

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The burns: Mock impoliteness in competitive esports

Stacey Sherwood (UWS)

Social interaction allows speakers to use a variety of linguistic strategies which can promote, maintain or attack a recipient's face. Among these strategies, previous studies have shown that acts of impoliteness are far less common than those of politeness; however, they can be heard frequently in the online broadcasts of competitive electronic sports (esports) (Culpeper 2010). It is unusual though that frequent *intentionally* aggravating face-threatening-acts between players and casters (commentators), who regularly interact with one another, would occur. Therefore the possibility that these seemingly impolite utterances are indeed acts of mock-impoliteness, strategies used as a form of under-politeness to convey politeness, needs to be explored (Haugh & Bousfield, 2012). This study examines the impolite exchanges between players and casters of the most played video game in the world, League of Legends, to determine if these impolite exchanges can be considered mock impoliteness. The data for this study consists of twenty-six YouTube videos of League of Legends broadcasts from 2013 to 2014. Seemingly impolite speech exchanges between players and casters were analysed using Bousfield's model of examining the triggering, progression and resolution of the speech exchanges (2006). In addition, Culpeper's conventionalised impoliteness formulae were used as a framework for identifying the nature and intent of the exchange (2010). The results of this study found that while the linguistic strategies used by players and casters shared certain formulae and practices with impoliteness, the triggering, progression and resolution of the exchanges can be more correctly identified as mock impoliteness (Culpeper 2010, Haugh & Bousfield, 2012). In many exchanges, the intention of the speaker who triggers the exchange is not to intentionally damage the face of the recipient, but to increase solidarity with the interlocutor. This paper therefore contributes to a better understanding of linguistic strategies used in the domain of online communication.

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Changing pattern of language use of Minangkabau language

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The Minangkabau society faces a diglossic situation, where they use Minangkabau language for daily conversation, while Indonesian is used as an official language. One of the most important discussions about the use of Minangkabau language is in Anwar (1985). Anwar described the issue of language use Indonesian versus regional language. One of his examples was the use of Indonesian by Minangkabau people in West Sumatra. In his old data, he said "The Minangkabau do not normally use Indonesian in the home no matter what the topic of the conversation is, but speak in Minangkabau throughout because that is the proper language to be used at home" (1985: 155). Furthermore, he said "A Minangkabau who tries to use Indonesian all the time when speaking to other Minangkabau is normally regarded as a crank or even crazy" (1985: 156). The picture of the language situation at that time indicated that people preferred to use Minangkabau language in the home domain.

This situation contrasts with the situation at present. Parents mostly use Indonesian as the first language to their children. Indonesian is becoming the home language, especially in urban areas. Minangkabau language is constantly affected by Indonesian in every domain of language use. Although it is a good sign for the spread of Indonesian as the national language, the trend to use Indonesian language is also a threat for the maintenance of local languages. By describing and investigating the domains of language use and their attitudes, this study will give the picture of Minangkabau attitudes and domains of language use. The picture of Minangkabau society's perception toward their language will reflect their identity as well.

The degree of language contact is the main basis for choosing the research locations, high and low language contact. I chose three cities as the high language contact areas and three regencies as the low language contact areas. The data were collected in the form of questionnaires, in-depth interviews and participant observation with the sample of 400 respondents. They were divided into two groups: adults (200) and youth (200) age 11 to 18 years. The purpose of having these two groups is to study if there is any difference in the Sociolinguistic choices on the language use and attitudes between these two groups. The results reveal that there is a shift of language use in family, friendship, and market domains in some research areas. Different interesting patterns are also found for the use of Minangkabau and Indonesian. Addressee, social relationship, setting, and topics are the dominant social factors, which influence the language choice in this community.

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