

# linguistics + english language

postgraduate conference

*Book of Abstracts*

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Dear delegates,

Welcome to the 2015 Linguistics and English Language Postgraduate Conference at the University of Edinburgh, a conference which has been running for over 20 years. We received a lot of great submissions this year on a wide number of topics and over the next three days you will have the opportunity to attend talks which reflect the diversity of linguistic research throughout the postgraduate community.

We hope you find both the conference and Edinburgh enjoyable and inspirational. Committee members will be present throughout the conference to keep everyone informed—please don't hesitate to ask us if there is something you are not sure about.

A warm welcome to those from Edinburgh and beyond!

Best wishes,  
the conference committee

Elizabeth Adeolu	Gabrielle Blackburn
Zac Boyd	Jon Carr
Stephanie DeMarco	Juliet Dunstone
Zuzana Elliot	Weibing Liang
Yasamin Motamedi	Katerina Pantoula
James Reid	Udita Sawhney
George Starling	

## **Contents**

Programme.....	2
Abstracts for student talks.....	5
Useful information.....	48

**LEL Postgraduate Conference programme**  
**3rd-5th June 2015, the University of Edinburgh**

**Day 1: Wednesday 3rd June**

WORKSHOPS	9.30-10.15	Panel session: the dissertation experience	
	10.15-11.00	Running experiments	Mark Atkinson
	11.00-11.45	Data processing	Dr Josef Fruehwald
PLENARY	12.00-13.00	Plenary 1: Apparent failures of statistical learning as a window into human cognition	Dr Jennifer Culbertson
	13.00-14.00	LUNCH	
SESSION 1	14.00-14.25	The Spanish middle passive analysed from a Cognitive Grammar viewpoint	Javier Olloqui Redondo
	14.25-14.50	Remodelling the semantic network of <i>up</i> . The approach from the Theory of Lexical Concepts and Cognitive Models	Yukiyo Takimoto
	14.50-15.15	Absence, inference and ideation: soldiers' description of violent actions in personal narratives of the First World War	Matt Voice
	15.15-15.45	BREAK	
SESSION 2a	15.45-16.10	The tone system in Dogri, an Indo-Aryan language	Udita Sawhney
	16.10-16.35	Phonological models of Bulgarian vowel reduction	Mitko Sabev
	16.35-17.00	To /i:/ or not to /i:/: an articulatory, acoustic and sociophonetic study of Swedish Viby-i	Fabienne Westerberg
	17.00-17.25	Acoustic correlates of vowel quality in English infant-directed speech	George Starling
SESSION 2b	15.45-16.10	Modelling and the Dynamic Turn	Ryan Nefdt
	16.10-16.35	Sub-sentential coherence: English free adjuncts and absolutes	James Reid
	16.35-17.00	On modal strength in Croatian	Ana Werkmann Horvat
	17.00-17.25	Revisiting and defining synonymy: collocational and colligational behaviour of potential synonyms	Juan Shao
	18.30	Conference Dinner	

## Day 2: Thursday 4th June

SESSION 3	9.55-10.20	Investigating learner autonomy in a distance learning English classroom	Anzhela Oganesyanyan
	10.20-10.45	Does productive vocabulary knowledge predict L2 oral ability?	Takumi Uchihara
	10.45-11.15	BREAK	
SESSION 4	11.15-11.40	The end of the curve: verb movement and its loss in Shetland dialect	Elyse Jamieson
	11.40-12.05	The interaction between verb tense and illocutionary verbs: the case of 'to recommend'	Stephanie Doyle-Lerat
	12.05-12.30	Towards a unified structure of pu-clauses in Modern Greek: evidence from factive islands	Catherine Gkritziou
	12.30-12.55	Transparent adjuncts in an autonomous syntax	J.M.M. Brown
	12.55-14.00	LUNCH	
SESSION 5	14.00-14.25	Investigating English Language identity of Polish migrants in Scotland: the case for ELF-oriented pedagogy	Jarek Kruikow
	14.25-14.50	Content, practice, direction: identifying differentiated word use within a standardized curriculum using corpus linguistic analysis	Stephanie DeMarco
	14.50-15.15	The role of SCOLAR in the promotion of Putonghua in Hong Kong	Adam Scott Clark
	15.15-15.45	BREAK	
SESSION 6a	15.45-16.10	Verbal subject agreement in Ambel: accounting for apparent irregularities	Laura Arnold
	16.10-16.35	Word-order in Kelabit: typology and information structure	Charlotte Hemmings
	16.35-17.00	Aquiring different types of morphology: the role of grammatical type of the mother tongue in Second Language Acquisition	Svenja Wagner
	17.00-17.25	On <i>Barbary horses</i> and <i>apple-squires</i> : investigating linguistic metaphor in noun+noun compounds from an Early Model English literary corpus	Julia Hubner
SESSION 6b	15.45-16.10	Modelling the role of Theory of Mind in Language Evolution	Marieke S. Woensdregt
	16.10-16.35	Access to contextual information and the emergence of structure in asymmetric communication games	James Winters
	16.35-17.00	Iterated Learning in an open-ended meaning space	Jon W. Carr
	17.00-17.25	The emergence of systematic structure in artificial gestural communication systems	Yasamin Motamedi

## DAY 3: Friday 5th June

SESSION 7	9.30-9.55	Unifying the <i>that</i> -trace and anti- <i>that</i> -trace effects	Jamie Douglas
	9.55-10.20	The correlative as an overtly pronounced index of the demonstrative	Anne Beshears
	10.20-10.45	On the necessity of recognizing specificationally-categorizing copular clauses	Wout Van Praet and Kristin Davidse
	10.45-11.10	On event structure in Chinese syntax: <i>le</i> is a telicity marker	Chen Wang
	11.10-11.40	BREAK	
SESSION 8	11.40-12.05	Adult language learning and sociocultural determination of linguistic complexity	Mark Atkinson
	12.05-12.30	The effect of the perception of distance on complement order preference in two types of double complement constructions: evidence from a picture-sentence matching task	Sam D'Elia
	12.30-12.55	The role of executive functions in syntactic priming	Michela Bonfieni
	12.55-13.20	Parsing <i>wh</i> -questions: evidence from L1-Greek adults	Katerina Pantoula
	13.20-14.15	LUNCH	
	14.15-15.00	Feedback session	
PLENARY	15.00-16.00	Plenary 2: Being a Linguist	Professor Geoffrey Pullum
	16.00-18.00	wine reception	

## Verbal subject agreement in Ambel: Accounting for apparent irregularities

Laura Arnold  
The University of Edinburgh

Ambel is an Austronesian language, of the South Halmahera-West New Guinea branch. It is spoken by around 1000 people on the island of Waigeo in West Papua province, Indonesia (see figure 1). In this presentation I will introduce unpublished primary data collected from speakers of Ambel during in 2014. I will use these data to argue that, for certain verbal roots, verbal subject agreement paradigms include infixation.

In Ambel, all verbs are obligatorily inflected to agree with the syntactic subject of a clause. As with possessive morphology (see Arnold 2014), subject agreement in Ambel is particularly rich. In addition to making an inclusive/exclusive distinction in the first person, and an animate/inanimate distinction in the third person singular and plural, four number distinctions are made (singular, dual, paucal, and plural). In this presentation, I will focus on verbal inflection agreeing with singular animate subjects.

Verbal subject agreement is mainly prefixing in Ambel. For the majority of verbal roots, the form of the prefix is predictable from the phonological shape of the root: if the root is C-initial, the forms of the prefixes agreeing with a singular, animate subject are *ya-* 1SG, *nya-* 2SG, and *na-* 3SG.AN; if the root is V-initial, the forms are *y-* 1SG, *ny-* 2SG, and *n-* 3SG.AN. As well as being the most common means of marking subject agreement, these prefixes are used with loan verbs; this is taken as evidence that these prefixes are productive and regular in Ambel.

There are some C-initial verbal roots, however, that do not follow this pattern of prefixation. At first glance, when these verbs agree with a 1SG or 2SG subject, they appear to undergo a process of irregular stem alternation. Examples of some of these verbs are given in (1) and (2):

(1) /-tu/ ‘wash’:

- |                             |                             |
|-----------------------------|-----------------------------|
| a) ine tʃu sansun           | *ine <b>ya-tu</b> sansun    |
| 1SG <b>wash.1SG</b> clothes | 1SG <b>1SG-wash</b> clothes |
| ‘I wash clothes.’           |                             |
| b) awa ntʃu sansun          | *awa <b>nya-tu</b> sansun   |
| 2SG <b>wash.2SG</b> clothes | 2SG <b>2SG-wash</b> clothes |
| ‘You wash clothes.’         |                             |

(2) /-bun/ ‘hit’:

- |                               |                               |
|-------------------------------|-------------------------------|
| 1. ine <b>dʒun</b> i          | *ine <b>ya-bun</b> i          |
| 1SG <b>hit.1SG</b> 3SG.AN.OBJ | 1SG <b>1SG-hit</b> 3SG.AN.OBJ |
| ‘I hit him.’                  |                               |
| 2. Awa ndʒun i                | *awa <b>nya-bun</b> i         |
| 2SG <b>hit.2SG</b> 3SG.AN.OBJ | 2SG <b>2SG-hit</b> 3SG.AN.OBJ |
| ‘You hit him.’                |                               |

In this presentation, I will argue that these apparently irregular surface forms are in fact regularly derived. I will show that, by positing <y>-infixation in the 1SG and 2SG, and by making reference to a small number of other regular phonotactic restrictions and phonological processes found elsewhere in Ambel, the surface forms of these apparently irregular verbs are entirely predicatable from the phonological shape of the root.

In addition, I will show that the verbs which are candidates for infixation are not predictable from the phonology of the root. This motivates an analysis of Ambel in which lexically-specified verb classes are distinguished. I will show that, by this

analysis, all apparently irregular verbs in Ambel can be subsumed by a single verbal class.

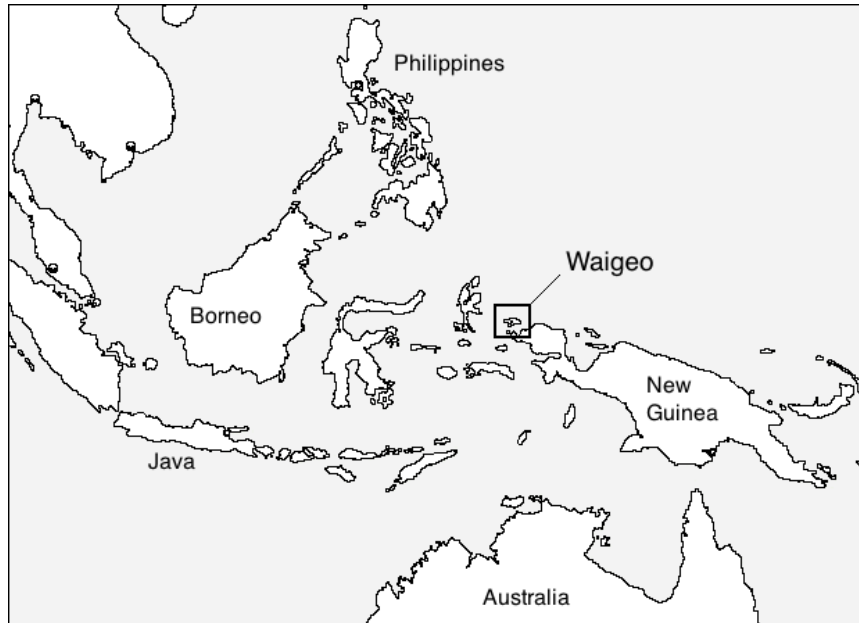


Figure 1: The location of Waigeo, where Ambel is spoken

## **Adult language learning and sociocultural determination of linguistic complexity**

Mark Atkinson

Language Evolution and Computation Research Unit, University of Edinburgh

Languages spoken by larger groups have less complex morphology than those of smaller communities, although it is not immediately clear why this would be the case. One explanation considers the effect of adult second-language learning. As adults find complex morphology challenging to learn, and larger groups have greater proportions of adult learners, languages spoken in these groups may be under a greater pressure to simplify as they are learned and transmitted from generation to generation.

I'll describe some recent work which aims to assess these proposed effects of group size and non-native speakers on the transmission of morphological complexity. In a first experiment, we consider the claim that adult learners simplify morphology. Participants were required to learn an artificial, morphologically-complex miniature language over 8 rounds of training and testing. In the earlier rounds, they were found to produce simplified morphological systems as proposed, before they acquired the target language, or a very similar and equally complex variant of it, by the final round.

A second experiment then considered language learning in different types of social groups, to determine the impact of non-native morphological simplification as a language is transmitted. The early round productions from Experiment 1 were used to construct a set of data from "non-native" speakers of a language, while their later productions made up a set of "native" speaker data. This was used to create input for 4 different social conditions for a second set of participants: a large group of native speakers, a small group of native speakers, a large mixed group of native and non-native speakers, and a small mixed group of native and non-native speakers.

Despite large differences in the input data received by the learners in the different conditions, we ultimately found no differences in the complexity of the languages they acquired. I'll discuss the reasons for this (arguably surprising) result, what this means for the hypothesis that adult language learning causes group-level morphological simplification, and directions for future research.



## The correlative as an overtly pronounced index of the demonstrative

Anne Beshears

Queen Mary University of London

The correlative construction is characterized by a relativizing clause (the correlative, CorrelP in (2)) which is linked with the main clause through a correlate (DemP in (2)) (Bhatt 2003; de Vries 2005; Liptak 2009), which may be either a demonstrative phrase or a pronominal (de Vries 2001).

While correlatives are often analyzed as being base-generated at the left periphery (Srivastav 1991; Dayal 1996), Bhatt (2003) proposes that the correlative clause has the following structure (1) in which the correlative and the correlate/demonstrative are part of the same constituent (2). The correlative may then be fronted.

1. [[CorrelCP][DemP DemNP]]

### 2. Hindi

ram	[	[CorrelP	jo	CD	sel	pər	hɛ	]		[DemP	us		CD	ko]]
<i>Raam</i>		<i>which</i>	<i>CD</i>	<i>sale</i>	<i>on</i>	<i>be.pres.3s</i>				<i>that.OBL</i>			<i>CD</i>	<i>ACC</i>
k <sup>h</sup> aridega														
<i>buy.fut.3ms</i>														

‘Raam will buy [ which CD is on sale, that CD ].’

Bhatt’s analysis leaves the question of why the correlative only enters the syntax where there is a corresponding demonstrative or pronominal, and semantically, how the correlative CP and the demonstrative compose to give the proper interpretation.

Using technology from Elbourne (2008)’s treatment of demonstratives, I propose that the demonstrative takes the correlative as an overtly pronounced argument.

3. [DemP [[this *i*]R]NP]

4. This CD [GESTURING AT A ‘DARK SIDE OF THE MOON’ POSTER] is one of my favorites.

5. [this CD] = The unique x such that x is a CD and x is represented by POSTER, and POSTER is singular, proximal.

The demonstrative has an underlying structure like that in (3) (Elbourne 2008, following Nunberg 1993). The index, a lexical item *i*, picks out an object (poster), and R is a contextually salient relationship (in this case, ‘is represented by’). The morpheme *this* contributes the information that poster is singular, proximal, and definite.

Given example (4), the index *i* picks out the object poster, where the morpheme *this* contributes the proximal, singular, and definiteness features. Thus, this CD has a semantic value as in (5).

I propose that the Hindi correlative (2) is an overt pronunciation of the index of the demonstrative, with the structure in (6). The demonstrative takes the correlative *jo CD sel pər hɛ* ‘which CD is on sale’ as the index *i*. In this context, R is simply an identity relation (ie. ‘=’), and the NP is *CD*. Using English to represent the Hindi and reflecting the Hindi word order, this has a semantic value of (7).

6. [[[[*whichCD*isonsale ]that]R]CD]

7. [whichCDisonsale, thatCD]= the unique x such that x is a CD and x = the CD which is on sale.

The correlative (CP) and the demonstrative remain within the same constituent, but it is clear under this account why the demonstrative licenses the correlative construction and the semantic composition of the correlative-correlate constituent follows easily from the semantics of the demonstrative phrase.

This analysis also accounts for the distinctive features of the correlative construction noted by Dayal such as the internal NP head and independent case marking.

## **The Role of Executive Functions in Syntactic Priming**

Michela Bonfieni

AthEME Project, University of Edinburgh

Syntactic priming has been described as the persistence of syntactic representations. Various linguistic, contextual and individual factors play a role in it, and the two theoretical accounts that have been put forth so far – Pickering and Branigan (1998) residual activation model and Bock and Griffin (2000) implicit learning approach – rely, in different ways, on memory processes. As a linguistic strategy used to align to the linguistic context, syntactic priming appears to be an adaptive strategy. Memory and adaptation are central to the study of executive functions, and are crucial to models of language control, in particular in research on bilingualism (Green and Abutalebi, 2013). While priming effects have also been studied in bilingual populations, the specific contribution of different factors is not fully understood, and the degree of automaticity of priming and its relation to other cognitive processes remain controversial.

This experiment aims at addressing the relation between measures of executive functions and syntactic priming, by comparing the priming effect of Double Object constructions and small clause complement constructions on the production of sentences with an alternating Double Object-Prepositional Object verb. Participants are English native speakers with a varying level of experience in one or more other languages. A correlational analysis of priming effects is carried out including measures of the participants' linguistic experience, assessed through a language history questionnaire, as well as the participants' scores on the AX-Continuous Performance Test as a measure of proactive and reactive control components (Morales, Gómez-Ariza, Bajo, 2013).

In line with a vast research on bilingualism, we predict to find a correlation between the degree of bilingualism and executive functions measures. We also expect the magnitude of the priming effect to negatively correlate with the performance on the AX-CPT, indicating that executive functions modulate the automaticity of priming. As we hypothesise that attentional processes play a role in the selection of the appropriate linguistic representations, we further predict an interaction between executive functions measures and priming effects as a function of the degree of syntactic similarity.

## Transparent Adjuncts in an Autonomous Syntax

J. M. M. Brown

DTAL, University of Cambridge

Central to the Y-model of grammar is the strict separation of syntax and semantics (*autonomy of syntax*). Consequently, the semantics cannot license movement. In (1a-c) however, the semantic representation appears to license movement paths in the syntax, as subextraction is possible just in case a single event interpretation holds between matrix and adjunct predicate (cf. Schmerling, 1975; Truswell, 2007, 2011; Sheehan, 2013). Contrast the transparent participial (1a), pseudocoordinate (1b) and canonical prepositional (1c) adjuncts with the opaque tensed adjunct in (2).

(1) Single event:

- a. What did Monica arrive whistling ~~what~~?  
(Borgonovo and Neeleman (2000, (3a,b), 200), also Truswell (2007, 2011))
- b. Which car did I go and buy ~~which car~~?  
(cf. Ross, 1967, (4.108a,b,c), 170)
- c. What temperature should I wash my jeans at ~~what temperature~~?  
(cf. Sheehan, 2013, (16a))

(2) Non-single event:

- \*Which celebrity did Mary eat an ice-cream before she greeted?  
(cf. also Huang, 1982, (503))

**Previous analyses** are either empirically inadequate (e.g. Borgonovo and Neeleman (2000); shown in Truswell (2011, fn.11, 30)) or introduce redundant semantic units into the syntax, e.g. in the lexicon (De Vos, 2005), in Narrow Syntax (Wiklund, 2007; Sheehan, 2013), or at LF (Truswell, 2011).

**Proposal** I use **adverb scope tests** to show that the single event constructions in (1), not previously discussed all together, pattern unlike (2) with respect to their position of base-generation. Whilst VP-adjuncts like *loudly* can modify the transparent matrix predicate-adjunct complex as a whole in (3), suggesting merger to VP, *loudly* cannot scope over the opaque adjunct in (4), suggesting merger to a position higher than VP, e.g. vP.

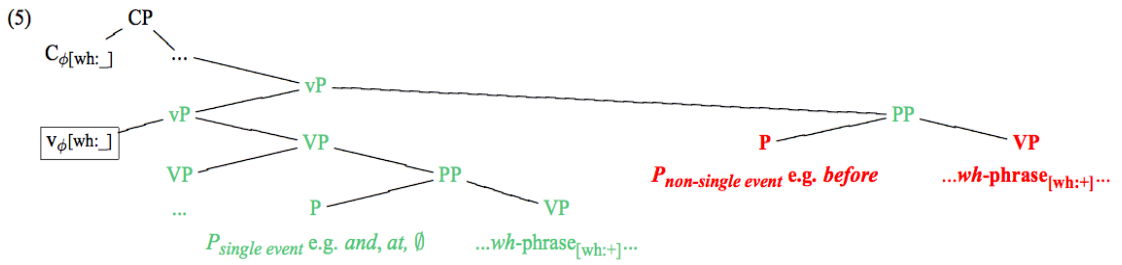
(3) a. Monica loudly [arrived whistling the national anthem].

b. I loudly [went and bought the car].

c. I loudly [washed my jeans at 40 degrees].

(4) #Mary loudly [ate an ice-cream before she greeted the celebrity].

In (5) the green nodes can be targeted for *wh*-movement whereas the red nodes cannot be targeted. Syntactically the crucial question is why subextraction from adjuncts should depend on the phasehood of the head in whose projection the adjunct stands. **Phase theory** (cf. Chomsky, 2000, 2001) derives (5) if *phase edge* of a phase head  $\phi$  is defined as nodes within the projection of  $\phi$  that c-command  $\phi$ . Checking of uninterpretable features requires c-command of  $\phi$  also. Therefore [*wh*: ] on  $v_\phi$  cannot be checked in subextraction from vP-adjuncts as (i) red nodes do not c-command  $v_\phi$  from their in-situ position; and (ii)  $v_\phi$  cannot trigger movement to an alternative Spec,vP that does c-command  $v_\phi$ , as red nodes are not c-commanded by  $v_\phi$ , unlike green nodes internal to VP-adjuncts. Subextraction from vP-adjuncts therefore violates the Principle of Full Interpretation and results in illformedness.



In conclusion, I have (i) shown that three transparent constructions involve the same syntactic process of adjunction to a non-phase head; and (ii) used phase theory to provide a unified analysis: some nodes remain inaccessible to the phase heads in whose projections they stand. Significantly, the analysis reconciles three potential counterexamples to the autonomy of syntax with standard syntactic assumptions.

## Iterated learning in an open-ended meaning space

Jon W. Carr

Language Evolution and Computation Research Unit, University of Edinburgh

Iterated learning experiments (e.g. Kirby et al., 2008) typically use small, discrete meaning spaces. This is unlike natural language which is capable of discretizing a continuous and unbounded set of possible meanings into categories. Additionally, one criticism of the iterated learning paradigm is that the experimenter supplies participants with pre-digested meanings, rather than allowing them to emerge in the cultural evolutionary process. Some recent experiments have explored using continuous spaces (e.g. Perfors and Navarro, 2014; Silvey et al., 2013), but these do not fully address the open-ended nature of meaning, since they rely on a small, fixed set of stimuli.

We have created a meaning space based on randomly generated triangles that is continuous, high-dimensional, and open-ended. The dimensions of the space were not determined by the experimenter *a-priori* – instead it is the task of the participants to decide what the salient dimensions are. The triangle stimuli were generated by randomly selecting three coordinates in a 480×480-pixel space, which allows for  $6 \times 10^{15}$  possible stimuli. The set of stimuli that participants are tested on changes at each generation, such that no two participants are ever exposed to the same stimulus during their test or communication phase. This experimental paradigm models discrete infinity (see e.g. Studdert-Kennedy, 2005), since a finite set of symbols is used to describe an (essentially) infinite and ever-changing set of meanings.

Participants in our experiments first learned an artificial language describing a set of triangles. The first participant in a transmission chain was taught words that were generated from a finite set of syllables. Subsequent participants were trained on the output of the previous participant in the chain.

In our first experiment, the number of words used to describe the stimuli collapsed dramatically after only a few generations. Within a few more generations, systems emerged that arbitrarily divided the space into a small number of categories. Although our technique for uncovering the structure in the languages was able to consider multiple geometrical properties, the systems that emerged pertained primarily to the size and shape of the stimuli, ignoring features such as rotation and location.

Our second experiment added dyadic communication to the paradigm which greatly increased the expressivity of the languages. These more expressive languages appear to make more nuanced distinctions by making use of compositional linguistic structure. This suggests that communicative pressures are required for compositionality to arise in more complex, higher-dimensional meaning spaces.

## **The Role of SCOLAR in the Promotion of Putonghua in Hong Kong**

Adam Scott Clark

LEL, The University of Edinburgh

Hong Kong's language policy has come under close scrutiny since the inception of the region as a colony of Great Britain in 1843. Throughout Hong Kong's time as a colony of Great Britain, and post-1997 as a Special Administrative Region (SAR) of the People's Republic of China, language use and the policy that aims to dictate this use has told us a great deal about Hong Kong's hierarchy of socioeconomic power and the languages used by those in high and low positions on the hierarchy.

The Standing Committee on Language Education and Research (SCOLAR) was established in 1996 in anticipation of the return of Hong Kong to the People's Republic of China to advise the Hong Kong government on language-in-education issues and on the use of the Language Fund - a source of funding available to public bodies for different language initiatives and projects.

Recent studies on Hong Kong's language policy ordinarily make reference to SCOLAR. However, a dedicated study on the role of SCOLAR in the promotion of Putonghua, the official language of the People's Republic of China and a language not native to Hong Kong, is something that is currently missing from the academic discourse.

This paper aims to redress this gap through critical discourse analysis of documents pertinent to SCOLAR's promotion and dissemination of Putonghua in Hong Kong and assesses SCOLAR's rationale for this promotion and furthermore the effect that this has had on Hong Kong's two other languages - Cantonese and English. This study is of fundamental importance in developing a greater understanding of Hong Kong's contemporary language policy and the increasing role of importance that Putonghua has come to play in the region.

## **The Effect of the Perception of Distance on Complement Order Preference in Two Types of Double Complement Constructions: Evidence from a Picture-Sentence Matching Task.**

Sam D'Elia

University of Kent

I present the results from a picture-sentence matching task which examines the effect of the egocentric perception of distance on preferences for one of the constructions in the dative alternation (1) and one of the constructions from the spray/load alternation (2).

- (1) a. Sarah gave the letter to John    b. Sarah gave John the letter  
(2) a. Sarah loaded hay onto wagons    b. Sarah loaded wagons with the hay

I show that the perceived relative distance of objects from a speaker has an effect on the alternations in (1) and (2).

### **Background**

Studies have shown that the focus of visual attention has word order effects (e.g. Myachykov, Garrod, and Scheepers, 2012). Mazzo, Turatto, and Umiltà (2005) showed that an object that is nearer to the perceiver is more likely to be the focus of attention compared to one that is relatively further away. Vogels, Krahmer, and Maes (2013) build on these findings to show that perception of distance can affect the production of active or passive constructions when describing a visual scene. They found that participants produced more sentences where the sentential subject corresponded with a person that was perceived to be closest to them, irrespective of whether that person was the agent of the action described by the verb. The present experiment tests the effect of this property of visual scenes on the alternations in (1) and (2), and demonstrates that perception of distance affects participants' preference for one of the two constructions.

### **Experiment**

The experiment presented participants with images of two objects at different depth planes. In this, I follow Mazzo, Turatto & Umiltà (2005), who make a distinction between objects located on different depth planes rather than a foregrounded object against a homogenous backdrop, as this introduces competition for attention between the available objects. The images were accompanied by two sentences: either a dative construction (1a) and a double object construction (1b), or a locative construction (2a) and a with-variant construction (2b). I controlled for a number of features that are known to affect attention allocation and word order preferences (phonological weight, number, definiteness, animacy, and colour). The items whose distances were manipulated corresponded to the grammatical objects in the sentences.

A pilot study established a baseline preference for the dative over the double object construction and the locative over the with-variant construction in the absence of context. The main experiment showed that when the item that corresponded to the indirect object was in the foreground and the item that corresponded to the direct object was in the background, participants' preferences were significantly shifted to the double object construction and the with-variant construction.

Based on these results, I argue against the approach to the dative and spray/load alternations that views each construction as having a distinct meaning (e.g. Oehrle 1976; Goldberg, 1995; Beavers, 2005). A difference in semantic interpretation cannot account for the experimental data showing that visual information can influence the choice of the alternations in (1) and (2) when describing a scene.



## **Content, Practice, Direction – Identifying differentiated word use within a standardized curriculum using corpus linguistic analysis**

Stephanie DeMarco  
LEL, University of Edinburgh

This paper outlines preliminary findings of a corpus-based study on the power of individual words and their context (Bartlett, 2014) in teacher talk. The analysis coincides with qualitative findings on the same observations, before they are tagged for the corpus. The previous findings outline a distinction of three lesson types that draw a clear line socioeconomically between the schools. Corpus data here, is used to reinforce this qualitative analysis.

The corpora are made up of about one hundred and fifty hours of lesson observations from ten classrooms in five Massachusetts high schools. The observations all record lessons within the Massachusetts Framework, the mandated curriculum for all public high schools in Massachusetts.

The data here hopes to demonstrate an account of word differentiation among smaller stratifications of social classes. The word categories are developed by looking at the corpora and recognizing the distinct differences in frequency of words, then using knowledge of educational language and the similarities and differences of the observed classrooms. Additionally, the sub-corpora have been analyzed in terms of exclusivity, a marker of high intellect, and educational level in previous research, which resulted in a finding that the teachers are teaching at similar levels (Sampson and McCarthy, 2005).

In a preliminary corpus analysis of the classroom observations each class (14 hours±) was turned into a separate corpus then, subsequently divided into three sub-corpora, grouped together by socioeconomic distinctions: Upper Middle Class, Middle Middle Class and Lower Middle Class. For the initial analysis, the corpora was uploaded to AntConc and frequency word lists and 'keyword' searches were run in order to create a list of 98 (1% of the corpus) individual word findings that lead to associate certain words with different schools.

### Preliminary Findings:

- . *Academic action verbs* such as understand, make an argument, explain are more frequent in the Middle Middle Class lessons.
- . *Academic direction/practice nouns*: progress, problem(s), paragraph(s), sentence(s) etc. are far more frequent in the Middle Middle Class lessons than in the Upper Middle Class'.
- . Verbs such as review and discuss with you (3<sup>rd</sup> person plural) as the pronoun referent are more frequent in the Upper Middle Class. These verbs could be categorized with *academic action verbs* such as analyze or understand but could also be seen as more autonomy directed words.
- . Words *describing assignments*, such as homework, project, and unit were far more frequent in the Upper Middle Class, though essay was similar in all categories. While these findings are still very much a work in progress, the results are promising, and show a distinct differential in word use for specific purposes among social classes. These quantitative findings allow a broader view of the qualitative analysis and allow readers a chance to inspect the data from a different angle.

## Unifying the *that*-trace and anti-*that*-trace effects

Jamie Douglas

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The anti-that-trace effect (ATTE) of subject relatives and the that-trace effect (TTE) have resisted a unified analysis. The TTE (Perlmutter, 1971) involves the complementiser *that* being obligatorily absent in cases of subject extraction, whilst the ATTE involves *that* being obligatorily present in short subject relatives.

- (1) Who did you say (\**that*) *t* saw Mary? (TTE)
- (2) The man \*(*that*) *t* saw Mary is called Bill. (ATTE)

Given the TTE, the ATTE is doubly problematic: the TTE does not hold and its reverse holds. The TTE has received far more attention in the literature, with the ATTE often being ignored, set aside, or dealt with as an exception (Chomsky & Lasnik, 1977; Pesetsky & Torrego, 2001; Rizzi & Shlonsky, 2007; Rizzi, 1982; a.o.). I aim to address this imbalance and give a unified analysis.

I assume CP is always split into Force and Fin (cf. Rizzi, 1997), with Force=*that* and Fin= $\emptyset$  (the null complementiser). Furthermore, whilst *that*-clauses and *that*-relatives are ForcePs,  $\emptyset$ -clauses and  $\emptyset$ -relatives are FinPs only (Bošković, 1994, 1997; Doherty, 1993, 2000; a.o.).

I hypothesise that the ATTE results from the general ban in (3).

- (3) Movement from SpecTP to SpecFinP is prohibited.

The [ForceP  $man_i$  Force=*that* [FinP Fin= $\emptyset$  [TP  $t_i$  T saw Mary]]]

\*The [FinP  $man_i$  Fin= $\emptyset$  [TP  $t_i$  T saw Mary]]

As (3a,b) show, the basic ATTE is directly derived on these assumptions. This analysis leads to several further consequences:

- (1) Movement across FinP is permitted.

Who<sub>*i*</sub> did you [<sub>VP</sub>  $t_i$  say [FinP Fin= $\emptyset$  [TP  $t_i$  T saw Mary]]]?

- (6) Movement across ForceP and FinP is prohibited.

\*Who<sub>*i*</sub> did you [<sub>VP</sub>  $t_i$  say [ForceP Force=*that* [FinP Fin= $\emptyset$  [TP  $t_i$  T saw Mary]]]]?

- (7) SpecForceP cannot be an intermediate landing site.

\*Who<sub>*i*</sub> did you [<sub>VP</sub>  $t_i$  say [ForceP  $t_i$  Force=*that* [FinP Fin= $\emptyset$  [TP  $t_i$  T saw Mary]]]]?

- (8) The presence of ForceP forces movement through SpecFinP.

\*Who<sub>*i*</sub> did you [<sub>VP</sub>  $t_i$  say [ForceP Force=*that* [FinP  $t_i$  Fin= $\emptyset$  [TP  $t_i$  T saw Mary]]]]?

Who<sub>*i*</sub> did you [<sub>VP</sub>  $t_i$  say [ForceP Force=*that* [FinP  $t_i$  Fin= $\emptyset$  [TP Bill T saw  $t_i$ ]]]]?

In (4), who moves directly from SpecTP to matrix SpecvP. I argue this allowed because Fin is not a phase head. Force, however, is a phase head, therefore such direct movement is barred in (5) by the Phase Impenetrability Condition (Chomsky, 2000 et seq.). Consequently, if Force is present, wh-phrases are forced to transit through the C-domain, as in (6) and (7). The TTE shows that SpecForceP cannot be an intermediate landing site, as in (6), which means the escape hatch must be SpecFinP. Given (3), non-subjects can move to SpecFinP, as in (7b), but subjects cannot, as in (7a). (4) and (6) have been proposed independently by van Urk & Richards (2015) for successive cyclic A'-movement in Dinka. I propose that SpecFinP only acts as an escape hatch if it inherits

this property from Force, the phase head, as in (7) (cf. Chomsky, 2013). Possible motivations for (3) will also be discussed.

## **The interaction between verb tense and illocutionary verbs: the case of ‘to recommend’**

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Illocutionary verbs have the unique characteristic that when used by a speaker in the first-person present tense, they are interpreted as performatives (Austin, 1962/1975), that is to say, as means to perform the speech act they denote. Thus, by uttering “I recommend you try the carrot cake”, a speaker effectively performs the speech act RECOMMEND. Despite the existence of several verb tenses in English which can be used to refer to present time, only the *simple present* activates this performative interpretation. The *present progressive* (“I am recommending you try the carrot cake”) and the *present perfect* (“I have recommended you try the carrot cake”) seemingly convey different values: a meta-illocutionary value and an assertive value respectively. As a result, these tenses participate differently in the construction of meaning and ultimately leading to different interpretations.

Building upon this observation, and adopting the perspective of interpretation, this presentation explores the following questions: 1) What are the semantic and discursive functions of the *simple present*, the *present progressive* and the *present perfect* when combined with the illocutionary verb *to recommend*? 2) How can the interpretive mechanisms involved be accounted for?

As a starting point, the semantic representation of RECOMMEND will be considered. Within the adopted theoretical framework, Galatanu’s *Semantics of Argumentative Possibilities* (Galatanu, 1999; 2012), linguistic meaning is understood as being argumentative. As such, in any situation, a certain interpretation of a given verb tense is far more likely than others. In order to identify these interpretations, the results of a study carried out on a corpus comprising of  $\approx 157$  examples taken from English-language Internet discussion forums are examined. Taking in to consideration the semantics of English verb tenses (Huddleston & Pullum, 2002; Lapaire & Rotgé, 2002; Quirk *et al.*, 1972), the proposed analysis of the corpus accounts for the distinctive functions of the three different tenses resulting from the interaction with *to recommend* by determining which circumstances trigger which interpretations. The described interpretative mechanisms shed light on the complex interaction between illocutionary verbs and tense as well as contribute to a deeper understanding of these three English verb tenses.

## Towards a unified structure of pu-clauses in Modern Greek: Evidence from factive islands

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**Overview & Goals:** This study investigates the internal structure of Modern Greek (MG) Relative Clauses (RCs) and Factive Complement Clauses (FCCs) introduced by the indicative factive complementizer *pu*, ‘that’. Taking as a starting point the assumption that *pu* is the same lexical item in both embedded constructions, I propose a uniform analysis for *pu*-clauses. In particular, RCs introduced by *pu* are analyzed on a par with Kayne’s (1994, 2008) raising analysis while FCCs introduced by *pu* require an extra layer in the structure; a null FACT DP adjoins to TP in order to create CP-internal factivity and give rise to a factive interpretation. The resulting structure in FCCs aims to account for the islandhood effects (weak and strong) that *pu*-clauses essentially give rise to. Uniformity of structure in both clauses is maintained under the assumption that these clauses are always dominated by a DP node and are headed by a null D which is specified as [Def: ]. The null D head obligatorily selects *pu* in both clauses given the requirement to value its uninterpretable [def] feature via Agree: in *pu*-RCs, the null D gets valued by the [Def:+] feature on the head noun of the RC whereas in *pu*-FCCs, it gets valued by the [Def:+] on the null FACT DP.

**Evidence:** I present data from Determiner-Headed Clauses (DHCs) - a special construction in MG - which are only compatible with the other MG indicative (non-factive) complementizer *oti*, ‘that’. This discussion has a dual purpose: a) to serve as the basis for the distinction between the two complementizers *oti* and *pu* (they are always in complementary distribution) by looking into their interpretational properties b) the analysis of DHCs in the literature (Roussou 1991) illustrating a DP representation for these clauses, serves as the basic motivation to opt for a DP representation for *pu*-clauses in my system. The second point is supported by the fact that neither *pu* can surface in subject position nor subjects can surface as bare indefinites. Therefore, the requirement to have a null D above the CP in these clauses remains constant.

**Further issues and analysis:** Having argued that a null D head selects *pu* obligatorily in both RCs and FCCs in MG, I turn to the syntactic properties of *oti* and *pu*-clauses in order to examine the island effects they give rise to. I treat *pu*-clauses selected by an emotive predicate (i.e. *regret*) as weak islands (contra Roussou 1994 and Varlokosta 1994), *pu*-clauses selected by a semi-factive predicate (i.e. *remember*) as strong islands, *oti*-clauses selected by a semi-factive predicate as weak islands and *oti*-clauses selected by an epistemic predicate (i.e. *think*) as generally unproblematic for *wh*-extraction. Finally, I apply the (extraction pattern) findings to the system I propose for FCCs.

**Theoretical Implications and further questions:** The distinction between *oti* and *pu* does not rely solely on the semantic notion of factivity nor on the semantics of the two complementizers involved but on the [Def:+] feature on the null FACT DP. The system aims to provide a novel way of capturing and accounting for the complex extraction patterns observed in MG *pu*-FCCs through the following proposed solution: the null D that selects *pu* gets its [Def: ] feature valued by the [Def:+] on the (phonologically) null FACT DP via Agree (satisfying locality conditions) and its Spec filled by the null FACT DP via movement. The latter operation is required in order to account for the factive interpretation that semi-factive predicates selecting *pu* give rise to as well as their strong island effects. The only question that still remains open is: Why is it that only factive

verbs require the Spec of their DP to be filled? The proposed solution provided by the system is the idea that the null D needs its Spec filled to get valued but factive predicates can value null D regardless, therefore, movement is not necessary in these cases.

### Examples

[non-factive predicate]

- (1) Nomizo **oti**/\*pu i Maria malose ton Jani.  
think.1SG that the.NOM Mary.NOM scolded the.ACC John  
'I think that Mary scolded John.'

[factive predicate]

- (2) Lipame **pu**/\*oti i Maria malose ton Jani.  
regret.1SG that the.NOM Mary.NOM scolded the.ACC John  
'I regret that Mary scolded John.'

[semi-factive predicate]

- (3) a. Thimame **oti** i Maria malose ton Jani.  
remember.1SG that the.NOM Mary.NOM scolded the.ACC John  
'I remember that Mary scolded John.'
- b. Thimame **pu** i Maria malose ton. Jani.  
remember.1SG that the.NOM Mary.NOM scolded the.ACC John  
'I remember that Mary scolded John.'

[Relative Clause]

- (4) I kopela pu voithise o Janis.  
the.NOM lady that helped.3SG the.NOM John  
'The lady that John helped.'

[Factive Complement Clause]

- (5) O Janis lipate pu i Maria ipe psemata.  
the.NOM John regrets that the.ACC Mary said.3SG lies.  
'John regrets that Mary told lies.'

## Word-order in Kelabit: Typology and Information-Structure

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Word-order has long been a subject of great interest among typologists (Greenberg 1966; Dryer 1997; Siewierska 1998). Recently, studies have considered the role of information structure in word-order flexibility (c.f. Otsuka 2002). This paper extends such an approach to the study of word order in Kelabit, a Western Austronesian language spoken in Northern Sarawak, Malaysia. It addresses the possible word-orders in Kelabit and how these compare to better studied Western Austronesian languages of the two major typological classes: ‘Philippine-type’ and ‘Indonesian-type’ (Himmelman 2005). Philippine-type languages are overwhelmingly verb-initial whilst Indonesian-type languages, historically the more innovative, are typically SVO (Donohue 2007):

(1) a. **Tagalog (Philippines)**

*l<um>a-lakad ang bata*  
REDUP<AV>-walk NOM child  
V S  
‘The child is walking’

b. **Indonesian (Western Indonesia)**

*anak itu ber-jalan kaki*  
child DEM MIDDLE-walk leg  
S V  
‘The child is walking’

However, in addition to these basic orders, other possible orders occur in different pragmatic contexts (Gregor 2013; Dery 2007).

Kelabit and the languages of Northern Borneo have been argued to be transitional between Philippine and Indonesian-type in their voice systems (Clayre 2005). This paper explores whether word-order reflects these typological differences by analysing elicited possible orders; their relative corpus frequencies and their acceptability in different information structure contexts using the QUIS manual (2006). The main finding is that both the basic-order and possible-orders in Kelabit clauses differ depending on voice:

Voice	Subject	Basic Order	Other Orders
Actor Voice (AV)	Agent-like argument	SVO	VOS, VSO
Undergoer Voice (UV)	Patient-like argument	VOS	SVO (rare), *VSO

Table 1. Word Order According to Voice in Kelabit

(2) a. **Actor Voice**

*nih uih kuman buaq kaber*

PRT 1SG AV.eat fruit pineapple  
 S V O  
 ‘I’m eating pineapple’

b. **Undergoer Voice**

*kinan uih buaq kaber dih*  
 UV.eat 1SG fruit pineapple DEM  
 V O S  
 ‘I ate the pineapple’

Secondly, the acceptability of different word-orders depends on information structure as new information tends to precede old. This is illustrated in the oddness of (3b):

(3) Q. *Iih suk riruh?*

Who REL laugh  
 ‘Who is the one laughing?’

a. *Neh men dedtur sidih riruh-riruh keneh*  
 prt prt woman dem laugh-redup prt  
 S V

‘The woman is laughing’

b. *#Riruh teh dedtur sidih*  
 Laugh PRT woman DEM  
 V S

‘The woman is laughing’

Thus word-order in Kelabit does seem to be different from many Philippine-type languages, in that SVO is favoured in Actor Voice, but also differs from Indonesian-type in preserving verb-initiality in Undergoer Voice. Moreover, word-order in Kelabit can be said to reflect not only grammatical functions but also information structure.

Hence the study of word-order provides additional support for the idea that Kelabit is neither Philippine-type nor Indonesian-type and prompts further research into potential information structure differences between its major voice constructions given the different levels of word-order flexibility.



## On Modal Strength in Croatian

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The aim of this paper is to provide an analysis based on the notion of judge parameter (Stephenson, 2007) that will account for different levels of strength in Croatian modal system. It is widely claimed (von Stechow & Iatridou, 2008; Rubinstein, 2012) that *ought* and *should* (weak necessity) are weaker than *have to* and *must* (strong necessity). In Croatian, a strength difference exists among necessity modals *morati* (transl. *must*) and *trebati* (transl. *ought to/should*), and among possibility modals *smjeti* (transl. *may/be allowed to*) and *moći* (transl. *may/can*). The usual tests based on domain restriction that are employed to identify modal strength and modal scalarity relations reveal unexpected results for Croatian. Examples (1) and (2) show a strength relationship between Croatian necessity modals that seems to be similar to English *must* and *ought*.

- (2) Trebaš učiti, ustvari, moraš.  
ought.PRES.2SGstudy.INFinfact must.PRES.2SG  
*You ought to study, in fact, you have to.*
- (3) \*Moraš učiti, ustvari, trebaš.  
must.PRES.2SGstudy.INFinfact ought.PRES.2SG  
*You have to study, in fact, you ought to.*
- (4) ?Možeš učiti, ustvari, smiješ.  
may.PRES.2SGstudy.INFinfact may.PRES.2SG  
*You may study, in fact, you are allowed to.*
- (5) ?Smiješ učiti, ustvari, možeš.  
may.PRES.2SGstudy.INFinfact may.PRES.2SG  
*You are allowed to study, in fact, you may.*

However, (3) and (4) show that the same relationship is not present for possibility modals, though native speakers consistently report for *smjeti* to be the stronger one. While the entailment works in the predicted direction for necessity modals, it does not hold for possibility modals. Therefore an account based on domain restriction does not predict correct results for (3) and (4) since it assumes a clearer modal scale and fails to capture the intuitive strength differences.

My proposal follows Stephenson's assumption (2007) that epistemic modals, apart from quantificational force and the nature of the modal base, also rely on the person with relevant knowledge. To account for the knowers' dependency of epistemic modals, a judge parameter, which I aim to extend to deontic modals, is introduced. My analysis is largely based on Kratzer's approach (1981; 1991; 2012) but with a non-domain-restricting twist. The crucial part of the new analysis is the judge parameter, which is introduced into the semantics of stronger modals *morati* and *smjeti*. It influences the ordering source and determines the final ordering of the possible worlds. This means that, for example, *morati* and *trebati* do not differ in quantification, but only in the presence of the judge parameter that orders the possible worlds in a different way. Therefore, a weaker modal is not more restricted since the domain restriction in both modals stays the same, but the ordering of the worlds is different. This is crucial for the possibility modals that lack clear modal scalarity. Also, this analysis, in a way, formally captures the fact that native speakers' intuitions about differences between modals consistently include the notion of authority as the key difference between *morati* and *trebati*, and *smjeti* and *moći*.

## **On Barbary horses and apple-squires –Investigating linguistic metaphor in noun + noun compounds from an Early Modern English literary corpus**

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Linguistic research on the language of William Shakespeare is abounding as are complimentary appreciations of the richness and pre-eminence of his vocabulary. The Bard's contemporary Early Modern English playwrights, however, receive considerably less attention from linguistic scholars. Starting from this imbalance, my dissertation sets out to contribute to the largely neglected fields of linguistic research on the language of Christopher Marlowe and Ben Jonson, as well as on Early Modern English compounds in general. By conducting a systematic analysis of compounds in nine plays by William Shakespeare, Christopher Marlowe and Ben Jonson, the playwrights' respective stylistic habits, preferences and creativity are being assessed and compared.

The presentation's main focus will lie on instantiations of metaphor in the compounds under study and methodological deliberations will be discussed. It will be argued that the systematic identification and analysis of linguistic metaphor in compounds from a literary corpus demands a two-fold perspective on the issue: The morphological shape of compounds, provisionally defined as lexemes containing "at least two roots" (Bauer 1983:28), allows for four different anchor points and manifestations of metaphor in a compound's morphological set-up. The embeddedness of the items in the context of a literary corpus, however, makes for a second dimension in the analysis that has to account for metaphoricity initiated by the context-specific reference of the compound now conceptualized as a naming-unit. Depending on the directness of the metaphorical reference as expressed on the linguistic level, two relevant categories of contextual metaphoricity can be distinguished following the methodology proposed by Steen (2010). The resulting taxonomy of compounds involving metaphor, which will be proposed, hence surpasses the traditional boundaries between endo- and exocentricity and enables a comprehensive and systematic account of figurativeness in compounds from a literary corpus, that is sensitive of the multifacetedness of compounds in use.

The application of this framework, which takes up and combines insights and approaches from earlier studies on metaphor and compounding (e.g., Benczes 2006, Steen 2010) to the noun + noun compounds from the corpus, will be demonstrated to provide insights into both the productivity of metaphor in compounds from Early Modern English literary texts and the respective stylistic preferences of the individual writers. In order to substantiate particularized statements about stylistic expertise, however, innovativeness must be factored in the analysis and, thus, a principled distinction between 'use of metaphor' and 'creation of metaphor' will be suggested to allow for differentiated results.

First findings of the study, which will also be presented, indicate that the three playwrights follow different patterns and exhibit idiosyncratic preferences in their use and creation of metaphor in compounds, which can possibly be linked to genre conventions and rhetoric mastery of individual characters. Further, the detailed investigation of particular items from the corpus, such as Barbary horse (Oth 1.1.114), depicts the linguistic realizations of metaphor in compounds as being highly complex and subject to a variety of influences, manifest, among others, on the levels of phonological resemblances and semantic connotations.

## The end of the curve: verb movement and its loss in Shetland dialect

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In order to better account for the relationship between the universal and the specific in syntax, it is essential that we recognise the nuances of microparametric variation. While work has been done to establish this variation across different languages and dialects, examining variation at an intra-speaker level can be equally valuable for our understanding. This has, for the most part, been considered from a diachronic perspective (e.g. Kroch 1989), but the stability or lack thereof of synchronic syntactic variation is extremely important, particularly for the field of dialect syntax. Recent studies have made attempts to use this dimension of variation to develop a fuller understanding of syntax more generally, often taking examples from Scots dialects (e.g. Adger and Smith 2010). This paper will join this work on syntactic variation in Scots, examining aspects of verb movement in Shetland dialect in order to address the issue of what happens at the end of a syntactic change.

In Standard English, main verb movement to the left periphery is not permitted. However, Shetland dialect speakers are reported to allow the main verb to raise from the VP to somewhere in the left periphery, giving a verb-subject word order in a number of constructions (Jonas 2002), including overt-subject imperatives and interrogatives. Examples of this can be found in dialect literature:

1. **Shoo you** dem on an lat me win ta da Skjibbie Gio Disco. (Peterson 1993)  
*Sew you them on and let me get to the Skjibbie Gio Disco.*
2. So **whit tinks du,** sweet Mairi? (Tulloch 1993)  
*So what think you, sweet Mairi?*
3. **Kens du** wha his fok is? (Johnson 1994)  
*Know you who his parents are?*

In this paper I will present the results of a survey of acceptability judgments given by Shetland dialect speakers which show that, presently, there is no significant difference in how speakers over 30 treat both the traditional verb-subject order, and the standard English subject-verb order in imperative constructions with second person pronominal subjects. However, it appears that speakers aged 18-30 only permit this word order variation to the same extent if the verb is intransitive. This appears to show the capacity for variation on the way to change in imperative constructions. With interrogatives in all age groups, speakers rated the subject-verb order significantly higher than the verb-subject order – although they did not go as far as to rate the verb-subject examples as ‘unacceptable’.

I will thus posit that while imperatives are showing some signs of loss, interrogatives are at the very end of the change from verb-subject to subject-verb word order. I will consider this in line with Ingason’s “death rattle” hypothesis (2010), which draws on the weight and fitness aspects of Yang’s variational model of language change (2000) but suggests that when a *context* is lost for a particular rule, speakers may over-generalise and “sporadically” produce the variant which is being lost at the same rate, regardless of context. I will suggest that the “death rattle” of a variant may have its own context.

## **Investigating English language identity of Polish migrants in Scotland: the case for ELF-oriented pedagogy**

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A growing body of research on English as a lingua franca (ELF) argues for a need to introduce courses which raise students' awareness of the global spread of English and its consequences (cf. Dewey, 2012; Galloway, 2013; Jenkins, 2006, 2012; Matsumoto, 2011; Sifakis, 2007). However, although the goal of such "ELF-oriented pedagogy" (Dewey, 2012: 165) is essentially to influence non-native English speakers' (NNES) identity, it is safe to say that understanding of NNESs' identities in relationship with the English language is still limited.

The presentation reports on the initial stage of a study of Polish migrants in Scotland, where they constitute the largest group of migrants. The study investigates Polish migrants' English Language Identities (ELI), the term based on Block's (2007) definition of Second Language Identity and referring to "the assumed or attributed relationship between one's sense of self and the English language". It is believed that in their migrant experience in which they have been rapidly immersed in a new linguistic environment the way Polish migrants perceive themselves as users of English vis-à-vis native English speakers (NESs) is likely to affect their sense of self.

It is important to investigate this group's ELI as considering a relatively high level of Polish migrants' education (Blanchflower and Lawton, 2008) and therefore their potential contribution to the Scottish economy it is necessary to foster their "sense of belonging in the majority culture" (Moskal, 2014: 279). Additionally, such knowledge may lead to a better understanding of factors influencing the construction of both "positive" and "negative" ELI and contribute to ELT classrooms which could prepare learners for future integration into English-speaking societies and ensure their well-being by fostering the development of positive ELI.

## **The emergence of systematic structure in artificial gestural communication systems**

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Languages exhibit systematic structure: signals are not independent of each other but form part of a system. Previous work has shown that the emergence of systematic structure increases learnability of a system, and that the pressures of transmission drive this emergence (Kirby, Cornish and Smith, 2008; Cornish, Smith and Kirby, 2013). Additionally, a link has been posited between systematic structure and the arbitrariness of a system's signals; that is, as signs become more arbitrary, the systematic re-use of signs increases, aiding learnability (Theisen-White, Kirby and Oberlander, 2011). We present a study that looks at how systematic structure arises in manual communication systems, using an experimental method that combines the Iterated Learning Model (Kirby, Cornish and Smith, 2008) and silent gesture (Goldin-Meadow, So, Özyürek and Mylander, 2008). Pairs of participants were asked to communicate a set of meanings to each other using only manual gesture, creating a set of gestures that were then transmitted as training to another pair. These gesture sets were passed on through transmission chains of five cohorts. Through this method, we are able to assess how systematic structure emerges through communication and transmission.

Using a combination of manual video coding and a novel video analysis technique, we propose that the systems participants produce develop from large, global pantomimes towards more language-like gestures, exhibited by a reduction in the size of gestures and an increase in category marking. Furthermore, we assert that the structure that gradually emerges in these systems is driven by learning mechanisms involved in transmission and interaction. The present study exploits the manipulations possible in laboratory experiments to explore questions relevant to observations of natural languages, particularly emerging sign languages. Our work adds to a growing literature on the cultural evolution of linguistic structure, and further expands it to the gestural modality, positing that the structures created here through modality-general processes bear modality-specific traits.

## **Modelling and the Dynamic Turn**

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Modern linguistics, with the incorporation of methodology from formal logic and the mathematical sciences, has undergone a revolution in recent times, one which has often been compared to a scientific revolution (à la Kuhn 1962, see also Stokhof and van Lambalgen 2011). Multiple formalisations and models have been developed for natural language phenomena as diverse as the semantics of quantifier- phrases and the syntactic resolution of anaphora and ellipsis. Prior to this, natural languages were often assumed to be unsuitable for formal analysis (see Tarski 1944) or suitable only for a taxonomic cataloguing of its structures (Saussure 1916, Bloomfield 1935, Harris 1951). Chomsky's groundbreaking *Syntactic Structures* (1957) changed that trajectory towards naturalism and arguably created a science of linguistics based around the core ideas of linguistic competence and generative grammar. However, the shift, aimed at isolating underlying biological or neurological structure, resulted in a movement which often disregarded the performance-based and social aspects of natural language use. This has in turn led to a dynamic approach to natural language, one which considers dynamic aspects of language production and use (such as processing times and cross-sentential dependencies, see Cann et al. 2012) within the remit of a competence grammar.

In this paper, I attempt to explain the nature of the scientific revolution that is modern linguistics in terms of its modelling practices. I argue that linguistics, like some variants of the scientific enterprise such as physics, chemistry and biology, incorporates a minimalist method of idealisation (Weisberg 2007). Roughly, this strategy aims at isolating the minimal causal basis which gives rise to a specific phenomenon. I show that the theory of a generative grammar or a device minimally capable of generating a(n) (discretely) infinite set of expressions from a finite set of rules is a clear case of this kind of modelling. I investigate this claim through the use of specific examples from formal language theory (i.e. idealisations in abstract syntax) in which grammatical sentences are modelled as sets of semantically empty strings arranged in terms of their complexity. I, then, link this to other issues in theoretical linguistics such as the idealisations involved in language acquisition and generative grammar itself.

Of course, scientific modelling is not a sufficient condition for scientific status and I take no position on the hotly contested debate as to whether linguistics deserves such a status. What my account does attempt to provide is a lens through which to appreciate not only the origins and aims of modern linguistics but also an explanation of the dynamic turn. My claim is that the dynamic turn, although often described as a revolution or marked departure from the mainstream, operates well within the modelling paradigm of the initial generative programme and the difference lies in the choices of the candidates for abstraction within the model. I hope to provide a sketch of the ways in which linguistic models aim to capture the causal basis of their target phenomena.

## **Investigating learner autonomy in a distance learning English classroom**

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With the development of technology and online resources there is an opportunity to move the traditional classroom into the virtual environment. Digital education is a very convenient way of learning, however, it requires a certain level of learner autonomy and self-directedness. Learner autonomy is viewed as a peculiarity of the individual who demonstrates intentional behavior with respect to learning activities (Siew Foen & Confessore 2010). When designing an online student-centred learning course five key elements should be taken into account - learner relevance, active learning, authentic learning, learner autonomy, and competence in computer technology, which determine students' satisfaction with digital courses (Ke & Kwak 2013). Moreover the role of the instructor and a significant level of peer-support in distance learning enhance students' learning experiences (Bedoya 2014; Noriko 2013; Furnborough 2012; Lee 2008; Zhang & Cui 2010). The students should make a good use of the available virtual tools to gain knowledge and take advantage of peer-support through discussion forums, chats, blogs, teleconferencing, and other types of interactive tools (White 2009). Distance education provides numerous benefits to students, however it is still not a flawless learning environment. The major criticism is that it dehumanizes the educational process (Tiene 2000; Van der Kleij et al 2009). Moreover technological advancements challenge the learning process and require augmentation of learner autonomy. It is vital for students to develop new skills, enhance their motivation, and dedication (Rogers & Wolff 2000).

The aim of this research is to investigate the connection between promotion of learner autonomy and students' overall satisfaction with a web-based distance English language learning course. The importance of this research lies in the fact that more and more educational institutions offer online English learning courses, which require students' intrinsic motivation to learn, their resourcefulness, initiative, and persistence. Moreover in our rapidly moving world, life-long learning has become a major part of our lives, and in light of availability of numerous online resources on learning English, it is important to add elements of autonomous learning to the English language curriculum. Thus, the research questions are the following: 1. How does the virtual learning environment affect students' autonomy and learning experiences? 2. How to improve distance learning courses to promote learner autonomy?

Sequential explanatory research design was adopted to answer the research questions. An online survey was distributed among two groups of undergraduate Russian students currently enrolled in an English language course: distance learners and campus-based learners respectively. That allowed the researcher to measure Self-Directed Learning Readiness in distance learners, and compare and contrast it to that of campus-learners. The survey findings were then followed by a series of semi-structured interviews in order to find out about difficulties students experience in online learning as well as their opinions on how distance learning courses could be improved to foster autonomous learning. Due to time constraints, this is a small-scale study, which, however, provides a

thorough insight into students' perception of their autonomy in distance learning English language courses.



## **Parsing wh-questions: Evidence from L1-Greek adults**

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Past cross-linguistic psycholinguistic research on the comprehension of syntactic filler-gap dependencies has revealed persistent difficulties (Omaki & Schulz, 2011; Papadopoulou & Clahsen, 2003). Particularly, the comprehension of object wh-questions has been problematic in adult monolinguals and bilingual children. Limited online research has been conducted on the processing of object wh-questions by adult monolinguals. Omaki et al. (2014) studied L1-English monolingual adults and found that in English bi-clausal wh-sentences the main clause interpretation was preferred. They suggest that this preference is due to the active dependency mechanism (Frazier, 1987; Frazier & Clifton, 1989; amongst others) in which the parser completes filler-gap dependencies as soon as possible. In an offline study, Rösch & Chondrogianni (2015) suggested that comprehension of wh-questions might instigate difficulties for bilingual children and be subject to the presence of cues. Rösch & Chondrogianni (2015) studied 5-year-old French-German-speaking bilingual children. They found that comprehension of sentence initially case-marked object wh-questions in German was poor in their bilingual children.

In this project, I am investigating the real-time processing of wh-questions in English-Greek first generation immigrants and heritage English-Greek bilingual children living in the UK. The aim is to investigate whether bilingual heritage speakers differ from newly-arrived bilinguals in their comprehension of wh-questions in both their L1 and L2 and when they compare to monolinguals by conducting a real-time processing experiment.

In this talk, I will present some preliminary findings from a pilot study on ten L1-Greek monolingual adults. Participants were tested on a picture-selection visual world paradigm eye-tracking experimental task designed in Greek. The picture template depicted animal triplets which performed the same action to one another. The two animals on the edges were of the same type, while the middle one was different (Friedmann et al., 2009). The experimental conditions consisted of three types of subject and object wh-questions: (i) double cued case-marked sentence initial wh-constituent and sentence final DP sentences (subject: Pjos skiouros skepazei ton lago to vradi? “Which squirrel covers the rabbit in the evening?”, object: Pjon skiouro skepazei o lagos to vradi? “Which squirrel does the rabbit cover in the evening?”), (ii) single cued case-marked sentence initial wh-constituent sentences (subject: Pjos kiknos filai to elafi dipla sto potami? “Which swan kisses the deer next to the river?”, object: Pjon kikno filai to elafi dipla sto potami? “Which swan does the deer kiss next to the river?”), and (iii) single cued case-marked sentence final DP sentences (subject: Pjo liontari pleni ton ipopotamo mesa sto potami? “Which lion washes the hippo in the river?”, object: Pjo liontari pleni o ipopotamos mesa sto potami? “Which lion does the hippo wash in the river?”).

The findings suggest that L1-Greek adult monolinguals tend to interpret subject single cued case-marked sentence final DP wh-sentences as object wh-sentences. In particular, the participants interpret subject wh-sentences like “Pjo liontari pleni ton ipopotamo mesa sto potami?” as object wh-questions by using the active filler-gap dependency strategy (Frazier & Clifton, 1989).

## **The Spanish middle passive analysed from a Cognitive Grammar viewpoint**

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Spanish is often analysed as having two distinct constructions to express the passive voice. The periphrastic variant contains the passivising element *ser* ('to be'); it is structurally similar to the English passive and can receive similar analyses, employing for example, Langacker's (1991, 2002) Cognitive Grammar. The focus of this presentation, however, is on the other construction: the so-called middle or reflexive passive (García-Miguel 1985). This is formed by the use of the clitic *se* plus a finite form of the content verb. Crucially, from the perspective of applying Langacker's analysis, it contains no passivising *be*.

The analysis of this variant has originated more disagreement than consensus amongst linguists. One line of thought claims that the use of *se* imposes a middle-voice construal in terms of grammatical voice and rejects the characterisation of these structures as passive (e.g. Quesada 1997 & 1998). Alternative analyses (e.g. Mendikoetxea 1999, Fernández 2003) argue that the distinction between middle and passive resides in the attribution of certain agentive properties (like volition) to the implicit agent of transitive events that, despite being structurally encoded as middle-voice constructions through the use of *se*, are conceptually passive.

This presentation applies Langacker's Cognitive Grammar approach, building on previous work by Fillmore (1968) on action chains, and broadly supports the latter view. However, a problem for a traditional Cognitive Grammar approach is the absence, noted above, of *be* as the passivising element in favour of a different one, namely the particle *se*. Nevertheless, it will be argued that some of the other key points in Langacker's approach to the English passive can be applied to both the periphrastic and the middle variant. Consequently, this raises the question of what is universal in passive constructions.

## Sub-sentential coherence: English free adjuncts and absolutes

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It has been noted in descriptive grammars of English (Quirk et al. 1985, Huddleston et al. 2002) that free adjuncts and absolutes pose several theoretical challenges, especially in relation to issues of grammatical control and the logical role they share with their matrix clause. The following examples demonstrate how the same free adjunct can give rise to different logical roles:

*Closing the window, Marija bruised her thumb.* (result)

*Closing the window, Marija spotted a thrush in the garden.* (simultaneity)

*Ronnie travelled from Inverness to Edinburgh, setting off for Newcastle just before dawn.* (anteriority)

*Ronnie travelled from Inverness to Newcastle, setting off for Edinburgh just before dawn.* (elaboration)

Different accounts (sparse though they have been) have accounted for these differences in interpretation in various ways, with some appealing to underlying syntactic (and hence semantic) representation (Berent 1973), others treating these differences as an essentially pragmatic phenomenon (Kortmann 1991), and some adopting an intermediate position that combines both semantic and pragmatic aspects (Stump 1985). In this talk, I argue that the range of interpretative options available to complex sentences featuring free adjuncts/absolutes is best explained as an essentially pragmatic phenomenon. Given the influence of encyclopaedic (and hence language-external) knowledge, a purely syntactic solution to this problem is both cognitively implausible and unparsimonious.

More specifically, I will argue that the interpretative problems posed by free adjuncts and absolutes are amenable to an analysis framed in Segmented Discourse Representation Theory (SDRT, Asher and Lascarides 2003, Asher and Vieu 2003), a coherence-driven, formally precise extension to Discourse Representation Theory (Kamp and Reyle, 1993). SDRT includes a range of rhetorical roles that are either truth-conditional (e.g. *elaboration*, *explanation*, *result*) or pertain to the form of the discourse segments they connect (*contrast*, *parallel*). SDRT has been applied fruitfully to a range of cross-sentential phenomena, but coherence at the sub-sentential level remains an under-researched area. I will demonstrate that the rhetorical roles present in SDRT are strikingly similar to the range of logical roles that previous accounts have attested for free adjuncts and absolutes and suggest that the latter group can be supplanted by the former. I will also explore how some of the tests (originally meant for establishing the nature of cross-sentential rhetorical relations) suggested by Asher and Vieu (2003) might be applied to complex sentences featuring free adjuncts and absolutes. If it were possible to show that parallels exist between the cross-sentential and sub-sentential inventories of rhetorical roles, this would lend valuable support to the thesis that these two different levels of underspecification are amenable to analysis in terms of the same theoretical machinery.

Time permitting, I will conclude by exploring how some other sub-sentential units may also be amenable to coherence-driven analyses. Rohde et al. (2011) have explored how factors relating to coherence are able to influence the attachment sites of integrated relatives in syntactic parsing, but, again, there remains work to be done in this area.

## Phonological models of Bulgarian vowel reduction

Mitko Sabev

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Contemporary Bulgarian has an inventory of six stressed vowels: /ε, i:, a, ə:, ɔ, u/. Vowel duration is reduced considerably in unstressed syllables, which causes significant F1 undershoot of the unstressed lower vowels, /ε, a, ɔ/. In most eastern dialects, unstressed vowel reduction (UVR) is a categorically neutralising process: in unstressed syllables, the members of each height-contrasting pair, /ε – i/, /a – ə/, /ɔ – u/, merge and are realised as [i, ə, u], respectively. However, the western dialects, including Contemporary Standard Bulgarian (CSB), display much less ‘orderly’ reduction patterns. Unstressed /ε/ is never realised as high as, and remains distinct from, /i/. The central and back vowel pairs typically undergo neutralisation in spontaneous and semi-structured speech (Andreeva et al., 2013); this creates an asymmetrical unstressed inventory of two front, one central and one back vowel, [ε, i, ə, u]. In addition, the neutralisation of non-front vowels may be incomplete: the difference between the F1/F2 distributions of unstressed /a/ and /ə/ remains statistically significant in careful speech (Sabev, forthcoming).

This paper looks at the extent to which different phonological models solve three problems that the data pose: cross-dialect variation, CSB incomplete neutralisation, and the asymmetrical unstressed inventory of CSB. An SPE-style feature analysis (Scatton, 1975), an OT approach (Crosswhite, 2001) and a ‘constituent’-based model (Harris, 2005) all ignore regional variation and focus on the symmetrical, categorical pattern found in eastern dialects, even though they refer to it as ‘Bulgarian’. Pettersson & Wood (1987), on the other hand, treat regional variation as varying generalisation of a single process; this view is problematic for a model of a single speaker’s phonological grammar. Barnes (2006) takes a phonologisation-based approach and acknowledges that in western Bulgarian UVR is non-neutralising but does not propose a formalised model that captures the patterns found in both western and eastern dialects. Flemming (2005) constructs a formal model of UVR that incorporates three constraints on sound systems – maximal distinctiveness of contrasts, minimal articulatory effort, and maximal number of contrastive vowels – in conjunction with stress-induced decrease in vowel duration. The model generates both symmetrical (eastern Bulgarian-like) and asymmetrical (CSB-like) inventories, while it also allows for non-neutralising undershoot. The model does not, however, predict clear patterns of neutralisation. Spahr’s (2014) model of positional neutralisation is based on strict, language-specific hierarchies of contrasts, where neutralised sounds are represented by non-terminal nodes in the hierarchy and are given an independent, phonetically interpretable phonemic status. He maintains that a single contrastive hierarchy (CH) underlies both Bulgarian dialect types and proposes an ‘implicational hierarchy’ that determines the order in which contrasts are eliminated from the CH. Although this is a rather elegant abstract model, it is in fact at odds with actual data. I weigh up the advantages of each model and assess the extent to which their weaknesses can be minimised. Finally, I consider a provisional exemplar-based approach to Bulgarian UVR and discuss the problems it could solve, as well as the difficulties it could face.

## The tone system in Dogri, and Indo-Aryan language

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In this talk, I will present a description of the Tone System in Dogri, an Indo- Aryan language spoken in the inner Himalayas of North India. A language with tone is one in which an indication of pitch enters into the lexical realization of at least some morphemes (Hyman, 2010). It is uncommon for Indo-European languages to show lexical tonal contrast with only fewer than 5% of the total languages reported to have tones. Till date, none of the work has focused on the tone system of Dogri and it is very much under described. Dogri has a rich prosodic system with contrastive tones, vowel length, consonantal length and vowel nasalization. Through this research, I aim to establish the lexical contrastive inventory, contextual processes and the phonetic realizations of tones in the language.

Dogri can be classified into three varieties- *Pahari*, *Kanddi* and *Maidani*. This paper explores the tone system of *Maidani* variety and gives a phonological account that explains the surface forms. The findings are a part of the on-going research on the topic and in this presentation I will discuss the preliminary findings. In my study, I have taken the Autosegmental approach (Goldsmith, 1990) for the analysis and have followed Hyman (2010), Snider (2014) and Pike's (1948) framework of tone system.

Based on the findings till now, I claim that *Maidani Dogri* has a two-way underlying contrast - [HL] and [LH]. [H] and [LH] exist as allotones. Following examples present the minimal pairs of the contrasts in mono and disyllables (1).

- |     |      |                 |      |          |
|-----|------|-----------------|------|----------|
| (1) | bāar | ‘outside’       | bâar | ‘spring’ |
|     | kāṛi | ‘time-period’   | kâṛi | ‘watch’  |
|     | ṭjā  | ‘tea’           | ṭjâ  | ‘desire’ |
|     | āaṭ  | ‘June and July’ | âaṭ  | ‘flood’  |

Next I propose that Dogri has a word-tone melody, in which [LH] and [HL] tones are predictable. Here, the only exception is the disyllabic loan words that form a separate category and are realized as [HL.L]. I show evidence that the contour on first syllable is triggered by either the /h/ deletion or the loss of aspiration. The same phonological process has been observed in Punjabi as well (Bhatia, 1975).

- |     |                     |              |           |
|-----|---------------------|--------------|-----------|
| (2) | <b>Hindi</b>        | <b>Dogri</b> |           |
|     | g <sup>h</sup> o.ṭa | kô.ṭa        | ‘horse’   |
|     | hi.ra               | î.ra         | ‘diamond’ |

In the final sections of my presentation, I will explore the phenomenon of Intonation and its interaction with the lexically specified tones in Dogri. Intonation is the use of pitch to contrast for the expression of discursal meaning and for marking phrases (Gussenhoven, 2004). I will show how in certain positions, intonation overrides the lexical tones and how in some contexts, lexical tones are not affected by the intonational contours.

## Revisiting and Defining Synonymy -- Collocational and Colligational Behaviour of Potential Synonyms

Juan Shao  
University of Liverpool

Although using synonyms seems to be very common in daily life, synonymy has never been unproblematic in language studies. Philosophers, linguists and language teachers have approached synonymy from various perspectives. However, basic questions need to be answered about synonymy, for instance, how to define synonymy, how to distinguish synonymy from co-hyponymy, and what are the criteria for words being synonymous.

The aim of this study is to suggest an empirical definition to synonymy and also propose an effective way to distinguish synonymy from co-hyponymy. Among the approaches used in recognition of synonyms, substitution is at least one of the most persistent criteria (Palmer 1981, Lyons 1981, Cruse 1986, Hoey 1991, Sinclair 1991, and Stubbs 2001). Traditionally, two words are considered synonymous in a sentence or linguistic context if the substitution of one for the other does not alter the truth value of the sentence. This explanation is shown to be not only ambiguous but impractical in determining whether candidate words are synonyms or not. Likewise componential analysis can also prove ineffective in defining synonymy and discriminating synonymy from co-hyponymy. Despite the deficiency of substitution and componential analysis in defining synonymy, no other approaches have been proposed so far.

Lexical priming, a corpus-driven linguistic theory offers an excellent explanation for the existence of key concepts in corpus linguistics such as collocation, semantic association, colligation and pragmatic association from a psychological perspective. It claims that people are primed to use words and phrases in particular ways through various encounters with these words and phrases in different contexts and co-texts. Through analogy between mental concordance and computational concordance, Hoey (2005:13) hypothesises 'every word is primed for use in discourse as a result of the cumulative effects of an individual's encounters with words'. More specifically, every word is primed differently in terms of collocation, semantic association, pragmatic association and colligations. Based on analysis of hyponyms of SKILLED ROLE OR OCCUPATION, Hoey concludes that the collocational and colligational behaviour of the co-hyponyms are too variable to routinely allow generalisation. However, in the meantime, the analysis of *result* and *consequence* shows that there are indeed shared primings in synonyms but they also differ in proportions in collocations, colligations, semantic association and pragmatic associations. If the claims hold true, it may provide us a potential approach in distinguishing synonyms from co-hyponyms.

This paper is to investigate whether it is possible to define synonyms and co-hyponyms by looking at the collocational and colligational behaviours of the lexical items. By examining a group of words including *outcome*, *aftermath*, *upshot*, *sequel*, *effect*, *end-product*, *by-product*, *fruit*, *result* and *consequence* within the framework of lexical priming, the study explores how corpus analysis of synonymous candidates might help to sort out synonyms from co-hyponyms and even subordinates.

## Acoustic correlates of vowel quality in English infant-directed speech

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Infants identify the acoustic cues that mark lexical distinctions in their native language within their first year of life. Vowel space expansion is a feature of infant-directed speech (IDS) and it is commonly assumed to facilitate infants' learning of vowel categories (Kuhl et al., 1997). This assumption, known as the *hyperarticulation hypothesis*, is somewhat contentious (Cristia and Seidl, 2013; Martin et al., 2015) and the properties of vocalic contrasts in this register merit further investigation. An increase in the amount of phonetic space that is used is not sufficient to infer that phonetic contrasts are enhanced in this register. To assess that contribution that hyperarticulated vowels make towards early phonetic learning, a fine-grained analysis of their acoustic correlates is required. Whereas other studies have only considered a subset of English vocalic contrasts, this study aims to examine the static spectral cues of all the vowels in the system. Additionally, the durational and dynamic spectral cues to vowel quality in English IDS will also be considered (see Strange and Jenkins, 2013, for a review).

The acoustic correlates that evidence contrasts in the linguistic input play a major role in theories of perceptual learning. Many current approaches implement distributional statistics over the acoustic signal as a core learning mechanism. Maye, Werker, and Gerken (2002) propose that infants track the frequency with which acoustic correlates occur in the linguistic input and determine their contrastive status on this basis. For such an approach to be successful, the correlates found in the signal must map on the language's category structure. In adult-directed speech, formant distributions show overlap across categories (Hillenbrand et al., 1995), presenting a major challenge for probabilistic learning. An unsupervised computational model that attempts to recover vowel categories from Hillenbrand's data is hindered by this overlap (Feldman, Griffiths, and Morgan, 2009). Therefore, two additional factors found in IDS may mitigate this ambiguity and facilitate learning. Firstly, the expansion of the vowel space seen in IDS may enhance contrasts, separating them in the acoustic space. Further to this, looking at the distributions of further cues may assist the learner. Vowel duration, changes in spectral quality and the formant transitions at vowel onset and offset are stated to cue vowel quality in English (Hillenbrand et al., 1995; Strange and Jenkins, 2013). These additional cues may permit distributional learning to proceed through the use of multidimensional clustering or, following Toscano and McMurray (2010, 2012), integrated cues.

This work will present results from phonetic analysis of the American English IDS vowel data found in the Brent corpus (Brent and Siskind, 2001), accessible through CHILDES (MacWhinney, 2000). The analysis will consider the speech of eight mothers produced in unstructured sessions of play. A preliminary analysis of three speakers shows that considerable overlap across categories occurs in F1, F2 and vowel duration. For these speakers, hyperarticulation does not result in trivially separable categories. The goal of further analysis is thus to determine whether additional acoustic dimensions do provide the consistent cues to the vowel categories found in American English. The study will also investigate whether the combination or integration of multiple acoustic dimensions allows for successful categorisation without the need for external supervision.

## **Remodelling the semantic network of up The approach from the Theory of Lexical Concepts and Cognitive Models**

Yukiyo Takimoto  
Bangor University

This paper deals with the semantics of the spatial particle *up* within the Theory of Lexical Concepts and Cognitive Models (LCCM Theory) developed by Evans (2009). Spatial particles such as *up* are widely known to be associated with various kinds of distinct senses to exhibit polysemy (e.g., Lindner 1981; Tyler & Evans 2003). To make the point clear, let us consider the following examples:

- (1) a. The flower cheered her up                      b. He walked up and said hello  
      c. We drank up the wine yesterday            d. The computer is up

All the examples from (1a) to (1d) include the spatial particle *up*. However, each instance of *up* appears to indicate a distinct sense. That is to say, it seems that each use of *up* refers to ‘positive mentality’ in (1a), ‘proximity’ in (1b), ‘completion of event’ in (1c), and ‘active state’ in (1d). Then, how is the interpretation of each *up* produced? How are these distinct senses connected with each other in the mind?

Since the first successful attempt to demonstrate that grammatical markers such as spatial particles are meaningful on their own, many scholars have paid much attention to the semantic characterization of spatial particles (e.g., Brugman 1983; Herskovits 1986; Lakoff 1987; Vandeloise 1991; Kreitzer 1997). While each study attempts to offer a better characterization for the semantics of spatial particles, there has been no consensus as to how the distinct senses associated with the same spatial particle are derived and stored in the mind.

Based on Evans (2009, 2011), this paper assumes that a wide variety of distinct senses associated with *up* are derived from various sorts of spatial scenes involving upward orientation. This assumption is substantiated by the historical fact that non-spatial senses such as ‘completion of event’ in (1c) tend to emerge after basic spatial senses are fully established. Furthermore, this assumption is supported by the notion of experiential correlation (Grady 1997) that one experience comes to be correlated with the other as a consequence of humans interacting with the world outside. Put another way, this follows as a consequence of humans interacting with spatial scenes involving upward orientation gives rise to the implicatures that have little or nothing to do with physically upward orientation which are in turn semantized as non-spatial senses.

Remodelling the semantic network of *up* might lead to offering a more psychologically realistic characterization for the relationships among the distinct senses associated with the polysemous items such as spatial particles.



## **Does Productive Vocabulary Knowledge Predict L2 Oral Ability?**

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University of Reading

Certain researchers (Read, 2000) suggest that, since vocabulary testing has a tendency to focus on eliciting its construct in isolation, it is crucial to examine the validity of such vocabulary tests especially focusing on how their test scores relate to other domains of L2 systems (e.g., speaking). Whereas numerous lexical studies have been explored within the realm of reading (e.g., Qian, 1999), there has been a lack of research examining the link between L2 vocabulary knowledge and other aspects of general linguistic proficiency (e.g., writing, listening, and speaking). In particular, the relationship between L2 productive vocabulary knowledge and L2 speaking performance has remained open to further investigation. Specifically, L2 vocabulary research has yet to examine the link between such productive vocabulary tasks and L2 learners' actual speaking performance, especially at a spontaneous level.

In this regard, the current paper investigated whether, to what degree, and how L2 learners' productive vocabulary knowledge is predictive of multiple dimensions of their spontaneous speech production. A total of 39 university-level Japanese learners of English with varying levels of L2 proficiency completed a productive vocabulary knowledge task (Lex30; Meara & Fitzpatrick, 2000) as well as a spontaneous speaking task (e.g., picture narratives; Derwing & Munro, 2009). In the Lex30 task, the learners were asked to write up to four response words associated with each of 30 predetermined cue words with 15 seconds given per cue word. After misspellings were corrected and each of the response words was lemmatized according to strict criteria (Bauer & Nation, 1993), the point scores were calculated in reference to frequency-based criteria (high vs. low). In the speaking task, learners' speech was assessed in terms of its overall comprehensibility (i.e., native speakers' intuitive judgment of ease of understanding) and fluency (i.e., optimal speech rate), as well as lexical appropriateness and richness.

Overall, the learners' productive vocabulary scores were found to be significantly correlated with their L2 comprehensibility and fluency. However, these scores were unrelated to lexical appropriateness and richness ( $p > .05$ ). The results indicate that, since L2 learners with higher productive vocabulary tend to have more robust and accessible lexical networks, they are able to produce in their L2 without too many pauses and repetitions at an adequate tempo, which in turn makes a positive impact on their overall L2 comprehensibility. However, most of the L2 vocabulary knowledge elicited via Lex30 did not appear to predict how often the learners were able to use complex lexical items, nor whether they could use such words in a contextually appropriate manner during their spontaneous speech production.

## On the necessity of recognizing specificationally-categorizing copular clauses

Wout Van Praet & Kristin Davidse  
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Copular clauses have traditionally been categorized as either identifying or categorizing (or “predicative”). The first type is often defined as specificational, in that it involves specifying a value for a variable; the second in terms of class-membership.

We argue, however, that identifying and specificational clauses cannot be equated. Sentence (2) does not specify a value for a variable, but is still identifying, in that it sets up a one-on-one relation between two uniquely referring NPs. We follow Declerck (1988) in acknowledging that identifying clauses can thus serve two functions: specification (1) and description (2).

(1) *The culprit was **Kim**.*

(2) *Bill Gates is the **founder of Microsoft**.*

We propose to make an analogous subcategorisation for categorizing clauses (Davidse 2010), whose semantics we elucidate not in terms of the logical notion of ‘class-membership’ but in terms of a correspondence relation between instance and schema, which can naturally accommodate a graded assessment of the instance vis-à-vis the schema, as in (3) (Davidse 1992; cf. Langacker 1991). When the relation between instance and schema is construed ascriptive (3), the ascriptive complement realizes type-attribution (Langacker 1991: 67); when construed specificationally (4), the instance (‘values’) is specified as meeting the criteria of the schema (‘variable’). Treating the latter as categorizing copulars reveals generalizations that are lost in the tradition that views them as identifying (e.g. Halliday 1994).

(3) *Ezekiel is very much **a visionary**.*

(4) *A solution [variable] would be **indexation** [value].*

In support of the specificational analysis of clauses such as (4) we will verify their reversibility (4’), i.e. subject- complement switch (Huddleston 1984), as reflected in differing agreement and case, and to be distinguished from fronting of the complement found with ascriptive clauses (3’).

(3’) ***A visionary** Ezekiel is.*

(4’) ***Indexation** [value] would be a solution [variable].*

Regarding information structure, we discuss the typical information foci (marked in bold), viz. on the ascriptive complement (2)-(3) and on the value specified for the variable (1)-(4).

Furthermore, Van Praet (2013) hypothesizes that, in specificationally-categorizing clauses, be can be graded only when the instance/value (5) and not the schema/variable (5’) is subject (5). An instance can correspond more or less with a schema, whereas a schema is always fully schematic of its instances.

(5) ***Basalt** is very much an example of a volcanic rock.*

(5’) *?/\*An example is very much **basalt**.*

## **Absence, Inference, and Ideation: Soldiers' Descriptions of Violent Actions in Personal Narratives of the First World War**

Matthew Voice

School of English, University of Sheffield

This paper is concerned with what Halliday (1973) describes as the 'ideational' macro-function of language, 'the interpretation and expression in language of the different types of process of the external world' (314), which I explore in the diaries, letters, and memoirs of British soldiers of the First World War, with emphasis on their descriptions of violent events in which the writers themselves are positioned as agents. While Bourke (1999) has suggested that soldiers who describe such experiences develop a narrative 'myth of agency' (358) through which their actions become meaningful, I focus here on the linguistic strategies which redescribe or make downplay the causal relationship of the individual to such experiences (cf. Scarry, 1987: 66-78), where language gestures towards personal violent actions as central to narrative, yet renders them at least partially absent within the language of the text. As Hynes (1990: 183) puts it, 'the truth about war was a matter of language – and especially of the words you did *not* use'; the language of the soldiers themselves shows a careful management of personal identity in the ideational function of their language, often masking or complicating their most morally complex personal actions, and this research aims to outline the linguistic processes involved in these often roundabout (re)presentations of events, and its impact upon both the narrative and the reader.

In order to understand how soldiers' narratives negotiate representations of their own violence, and how particular linguistic forms influence the accessibility of experience, my analysis is broken into three parts. First, I explore how the cognitive segmentation of experiences into discrete events and actions (e.g. Zacks and Tversky, 2001) where the choice between describing events as lower order (e.g. checking the sights, pulling the trigger) and higher order (e.g. helping to win the war) act identities influence the extent to which actions and events are relatable to long-term goals and personal identities. Within these segmentation choices, I examine the lexicogrammatical structure of clauses concerned with describing personal acts of violence, exploring the potential of grammar to function as a 'covert operation' (Butt et al., 2004: 170) working 'beneath the threshold of consciousness' to explicate, redescribe, or omit the causal relationships between actors and objects, as well as the ability of readers to infer these relationships despite their linguistic circumvention. Finally, I argue that this careful negotiation, as opposed to total omission, of violent events within the narratives sampled can often be explained through their narrative position as the 'most reportable event' (Labov, 2006), imparting meaning to the narrative as a whole, despite (or perhaps because of) its moral tensions. As a result of the joint constraints of narrative and personal identity, I show that a combined consideration of the cognitive, lexicogrammatical, and narrative aspects of linguistic action realisation is a valuable way of engaging with the liminal relationship between experience and language.

## **Acquiring Different Types of Morphology: The Role of the Grammatical Type of the Mother Tongue in Second Language Acquisition**

Svenja Wagner

Albert Ludwigs Universität Freiburg

My study, which lies at the interface between linguistic typology and language acquisition, investigates the effect of the morphological language type of one's mother tongue on the acquisition of isolating, inflectional, and agglutinating languages. The results I would like to present at the conference are part of my ongoing Master's research project. While most studies on second language acquisition have been carried out in sub-fields of phonology and grammar, my own research examines the grammatical type as a whole in order to investigate whether there could be universals in second language acquisition that are based on the overall structure of a language's grammar and the constructions it entails. Due to its focus on superordinate categories, findings of my research could lead to novel insights and predictions on a large scale.

To this end, I have conducted an artificial grammar learning study with 39 participants whose native languages were either German, English, or Turkish, representing the three language types under investigation. In the study, participants were given tasks involving basic grammatical features in three artificial languages that again each represented one of the morphological types. My main research question for the analysis was whether the likelihood of correctly formed constructions was dependent on the mother tongue, the target language and on whether the construction of the features under investigation is the same between L1 and L2 or different.

A mixed effects logistic regression in R yielded several conclusive results. Firstly, only the variables of target language, feature, similarity of the features in L1 and L2, and the subjects' background knowledge in linguistics had a statistically significant effect on the likelihood of a correctly formed construction. Secondly, the analysis showed that the variable of mother tongue does not have a significant effect. In other words, how easy or difficult a learner will find a foreign language seems to be dependent on several factors, but apparently not on the mother tongue per se. This is supported by the fact that the agglutinating language type was the most difficult across all three groups of L1 speakers. Concerning second language acquisition, these findings support theories of universal markedness and they dissent from those predicting considerable influence exercised by the mother tongue. Instead, the results suggest that there are some languages that are generally more difficult to acquire than others. As the results were highly significant in the regression model, I am determined to investigate this topic further. In the end of my talk, I am therefore going to outline which new and scientifically relevant questions arise from my present findings and how they can be approached empirically.

## On Event Structure in Chinese Syntax: *Le* is a Telicity Marker

Chen Wang

Queen Mary University of London

Unlike English, Mandarin Chinese does not have a grammaticalized tense system, but only a full-fledged system of aspectual markers, which includes five members: perfective markers *you* (有), *le* (了) and *guo* (过) as well as imperfective markers *zai* (在) and *zhe* (着) (Huang et al 2009).

Among these five markers, *le*, due to its wide distribution and irregular behavior, has attracted more attention than others. Based on its position, the appearance of *le* is grouped into two cases: word-final *le*, in which *le* appears immediately after the verb, and sentence-final *le*, in which *le* is attached to the end of sentence. Only word-final *le* is analysed as aspectual marker in the traditional wisdom. But there are times when the distinction is not clear-cut, such as in intransitives. Therefore, I propose two tests that can distinguish the two versions of *le*. The first one is based on the fact that only word-final *le* is compatible with adverbial phrase *cai* (才), which extends that the event happened later than expected. And the second test takes advantage of the fact that word-final *le* only co-occurs with epistemic modals but not deontic ones.

In the literature there are various views on the definition of word-final *le*. Some scholars like Huang et al (2009) claim that verbal *le* must be an aspect marker since it can occur in both past and future time. Others think it should be included in the predicate or temporal structure. Researchers holding this kind of view include Sybesma (1997, 1999), who claims that *le* is a resultative predicate as well as Melchert (1980) and Li (2000), who argues that *le* conveys that something happens anterior to a certain point in time, hence a marker of anteriority. But none of them can provide any explanation on fact that *le* cannot occur in atelic situations.

My main point here is that *le* is a telicity marker in Chinese syntax. It is related to the aktionsart of predicate and is an inner aspect head. In order to support this view, I examine its occurrence and the result shows that *le* is only compatible with telic eventualities. Then I review some of the classic tests on the distinction of telicity and atelicity, including adverbial modification test, progressive test, coordination test, and 'jihu' insertion test. It turns out that the four tests point to an identical result which only supports my proposal.

Finally I discuss some irregular behaviours of *le* in the traditional view and argue that *le* with its core function as telicity marker is also a perfective marker in some circumstances. This provides an account for the phenomena that atelic structures cannot have episodic meaning in Chinese, which is unexpected within the precedent ideas. A structure from an exo-skeletal approach is then proposed to capture this behaviour of *le* as well as some cross-linguistic data from Scottish Gaelic and English, which gives a hint on the possibility that outer and inner aspect may have a close relationship.

## **To /i:/ or not to /i:/: An articulatory, acoustic and sociophonetic study of Swedish Viby-i**

Fabienne Westerberg

English Language, University of Glasgow

The high-front vowel /i/ has a strong presence in vowel phonetics; it is one of the cornerstones of the vowel quadrilateral, its equivalent cardinal vowel is one of the few that can be articulatorily defined, and it is present in most of the world's languages, even when the vowel inventory is very small (Schwartz et al 1997). The vowel also exists in Swedish, which has a densely populated vowel system, however in some dialects its realisation is distinctly different from the /i/ of other European languages.

This unusual /i/ variant is known as Viby-i, named after Viby in central Sweden where it was first studied. Its auditory quality has been described as 'thick', 'dark', 'buzzing' or 'damped', and it is known to occur “in several scattered dialects, both in rural areas and in the city dialects of Stockholm and [Gothenburg]” (Björsten & Engstrand 1999: 1957). The articulatory properties of Viby-i are long-disputed due to the small number of studies about this vowel, only one of which includes articulatory data (see Schötz et al 2014). Furthermore, the vowel shows signs of regional or social variation (e.g. Björsten & Engstrand 1999, Schötz et al 2014), and informal observations suggest that it can reflect social identity, e.g. in Stockholm where it is commonly associated with prestige, affluence, and young 'trendy' speakers (Bruce 2010: 135; Elert 1995: 45).

The present study sets out to account for the articulatory and acoustic properties of Viby-i, as well as any possible regional or social stratification, in the Stockholm and Gothenburg dialects of Swedish. The primary data collection method is ultrasound tongue imaging (UTI), a new technique that makes it possible to observe the tongue's movements during speech by placing an ultrasound probe under the chin. The technique is particularly well-suited for vowel study as it is able to produce a video image of the tongue surface from root to tip, and record this at a high frame rate suitable for natural speech. It is also more accessible than alternative methods such as magnetic resonance imaging (MRI) or electromagnetic articulography (EMA).

At this stage, recordings are still in progress, but an overview of the UTI data suggests that the tongue gestures associated with Viby-i are highly variable, even within Stockholm and Gothenburg respectively. Similar results were found in a small study carried out for my undergraduate dissertation, where tongue configurations ranged from a high-front, sharply upward-sloping tongue shape, to a lower, more bunched articulation, to an extremely low, flat tongue gesture. No acoustic analysis has yet been carried out, but some differences in acoustic output are expected, particularly between the two cities. I will also be investigating whether differences in articulation or acoustic output are related to demographic factors such as gender, age, or socioeconomic group. The results from this year will form part of my pilot study, with more extensive research to be carried out on location in Sweden next year.

## Access to contextual information and the emergence of structure in asymmetric communication games

James Winters

LEL, The University of Edinburgh

When engaging in a communicative event, having access to contextual information is a useful resource for reducing uncertainty about the intended meaning. As such, in constructing and interpreting utterances, a language user must not only rely on encoding meaning in linguistic forms, but also on what can be integrated from the contextual information at hand. With this in mind, the present talk aims to discuss two questions: (i) How do speakers modify their behaviour based on access to contextual information? (ii) What types of system transitions should we expect given this differential access to contextual information?

To investigate these questions, we trained participants on an artificial language that was ambiguous in whether it referred to the dimensions of *shape* or *colour*. These participants were then placed in a asymmetric communication game, where they were assigned fixed roles of either a *speaker* or a *matcher*. To test for the effect of contextual information, we manipulated whether the speaker had access to the target and distractors the matcher saw (*Informative*) or just the target in isolation (*Uninformative*). We also modified the number of context-types participants were exposed to across trials. For *mixed* context-types, half of the trials consist of contexts in which shape is relevant for discrimination and half in which colour is relevant. Conversely, for *shape-relevant* contexts, the context-type remains consistent across trials, with shape being the only relevant feature for distinguishing a target from its distractors. This gives us four conditions: *Informative Mixed*, *Informative Shape*, *Uninformative Mixed*, and *Uninformative Shape*.

Our results show how context-type and access to contextual information interact in terms of influencing both speaker behaviour and the types of systems that emerge during communication. In the mixed conditions, the initially ambiguous languages tend to evolve toward compositional systems. However, of these compositional systems, only the ones in the Informative Mixed condition show a greater likelihood of having forms being conditioned on the context-type, as evident in the existence of marked (e.g., *kewu mopola* to specifically refer to the blue blob) and unmarked forms (e.g., *kewu* to refer to all blob-shaped stimuli) depending on whether the context is a shape-relevant or colour-relevant one. This is in contrast to the unambiguous compositional systems that emerge in the Uninformative Mixed condition. For the shape-relevant conditions, where the context-type is stable across trials, we observe a higher proportion of underspecified systems. But whereas in the Informative Shape condition, where underspecification is dominant, the Uninformative Shape condition shows a greater degree of individual variation, with the initial strategies employed by speakers being determinants of whether a system evolves to be underspecified or compositional.

## **Modelling the Role of Theory of Mind in Language Evolution**

Marieke S. Woensdregt

Language Evolution and Computation Research Unit, University of Edinburgh

One striking feature of human language, when compared to the communication systems of other animals, is that it is ubiquitously used to convey honest information (i.e. declaratives as opposed to imperatives). Such honest signalling poses an explanatory challenge for evolutionary theory because it involves giving away information to the benefit of the receiver at the cost of the signaller (e.g. Ale et al., 2013). Modern theories of the evolution of honest signalling do not just place the selective pressure for this trait in environmental circumstances (e.g. collaborative foraging), but rather point to the interaction (mutual enforcement) between language and other socio-cognitive traits that are uniquely high-developed in humans (e.g. Sterelny, 2012; Tomasello et al., 2012; Whiten and Erdal, 2012). Two of these traits that have been put forward as providing positive feedback for each other are language and theory of mind.

Theory of mind - the ability to reason about the mental states of oneself and others - plays a crucial role in language use and acquisition. To be able to communicate successfully both speaker and hearer need to have a model of each others knowledge and interests, and the space of overlap between them (i.e. their common ground). The other way around it has also been argued that language is crucial for the development of full-blown theory of mind in humans (Heyes, 2012; Heyes and Frith, 2014), through providing (i) labels for mental states (ii) representational structures for mental states, and/or (iii) conversation about mental states.

Although the interplay between language acquisition and theory of mind development on an individual level can be investigated through experimental and observational studies, the effects of this interaction on a population level and evolutionary time-scale are less straightforwardly explored; especially if we assume that most (if not all) of this effect is instantiated through cumulative cultural evolution rather than biological adaptations.

In order to investigate these effects we present an agent-based model of communication in which theory of mind plays an active role. Agents in this model are required to learn a function that allows them to infer which meanings are more salient for the interlocutor than others, ultimately allowing them to be more successful in communicating and acquiring new vocabulary. We explore the effects of such an individual-level interaction of cognitive capacities on the population-wide dynamics of establishing and maintaining a stable signalling system thereby connecting proximate and ultimate causes of language evolution.



## Useful information

All talks will take place in 3.10/3.11 of the Dugald Stewart Building (● on map). All refreshment breaks will take place in the common room on the 7<sup>th</sup> floor. For parallel sessions, session **a** will be in 3.10 and session **b** will be in 3.11.

WiFi can be accessed through Eduroam.

If you have need help of any kind, please get in touch with a committee member (pink badges), or any of the people listed below.

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For those who are not provided with lunch, Edinburgh has a great selection of cafes and eateries in the area.

- |                          |   |
|--------------------------|---|
| 1. Union of Genius       | soup cafe                                     |
| 2. Rudy's                | sandwiches                                    |
| 3. Peter's Yard          | Swedish café with lunches, cakes and coffee   |
| 4. Sainsbury's           | Supermarket                                   |
| 5. The Nile Valley Café  | Sudanese café with falafel wraps and more!    |
| 6. Mosque Kitchen        | Very affordable curry house                   |
| 7. Potter Shop, Potterow | small shop with sandwiches, drinks and snacks |

