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ABSTRACT BOOKLET

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Animacy and feature underspecification in L2 English Relative Clauses

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We account for an unexpected aspect of the acquisition of L2 English Relative Clauses (Rcs) by Russians, Chinese and Germans (RCGs), namely, the systematic avoidance of animate heads in Rcs introduced by ``that". This animacy restriction is not due to L1 transfer nor is it part of the target L2, English. We compare RCGs with learners from Romance languages (Brazilians, Mexicans and Italians) who do not show this animacy effect in their productions.

8,760 sentences containing an RC were drawn from a parsed[1]subcorpus of EFCAMDAT (Geertzen et. Al 2013) of intermediate learners (CEFR B1). EFCAMDAT is an open access corpus consisting of writtings submitted to Englishtown, the online school of EF Education First, an international school of English as a foreign language. The following were observed.

(I) **"that"-Rcs**: RCGs rely on the wh-strategy for relativisation; only 30% of their Rcs were "that"-Rcs, contrasting with 70% use by Romance learners.

(ii) **animacy**: unlike Romance learners, RCGs avoid animate heads in "that"-RCs ("women that work in this office …."), a statistically significant difference between the groups.

(iii) **multiple Rcs**: productive use by Brazilians at 15% of all RCs (e.g. "a girl with his father that played with an instrument to take money that people that listend to pay in Paris"); absent from Chinese.

(iv) **Non-head modifying Rcs**: produced by Chinese learners :``it is a love story that four girl lived together in Shanghai"; absent from Brazilian data.

(v) **Headless wh-Rcs**: All groups produce headless Rcs like ``who gets the most points is the winner". (Chinese: 56% of wh-RCs, Germans and Brazilians: 50%, Russians 30%).

(vi) **Timing of Rcs:** there were no L1 effects regarding the timing of Rcs; for all L1 groups Rcs become productive in late elementary levels (CEFR A2), preceding the introduction of Rcs in the curriculum where Rcs are not introduced until late intermediate levels (CEFR B2).

We propose that the apparent ``that" Rcs of RCGs involve an underspecified ``that" with a featural specification identical to that of the declarative subordinator, specifically with a negative value for the predicative feature (Hsieh 2015). By contrast, Romance learners transfer the predicative feature of the complementisor from their L1 , which yields productive ``that"-Rcs and multiple Rcs but no animacy effects. RCGs resort to the wh-strategy for relativisation, choosing ``who" for animate heads. With inanimates they use ``what" (non-target) and ``which" but also ``that" as a last resort yielding the animacy avoidance and overuse of wh-Rcs.

These facts show that L2 learners can transfer their combinatorial syntax of long-distance dependencies/RCS from early stages of acquisition but find the precise L2 featural specification challenging. We analyse finer L1 specific effects through varying degrees of featural underspecification between L1 and L2, thus hypothesizing that linguistic distance can be modeled through varying degrees of featural specification.

1The subcorpus was parsed with C&C Combinatory Categorial Grammar (Clark and Curran 2007).

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A parameter-hierarchy approach to Perfective Auxiliary Selection in Barese

In this presentation I discuss aspects of the syntax of Barese (upper-southern Italian dialect) Perfective Auxiliary Selection (PAS) in the context of early and modern Romance varieties. In the first Romance attestations (and, residually, in modern Italian, Occitan and French varieties, cf. Ledgeway 2012), PAS was(/is) determined by argument structure: transitives/unergatives with agentive subjects selected HAVE, whereas unaccusatives with non-agentive subjects selected BE (cf. Perlmutter's (1978) 'Unaccusative Hypothesis'; Burzio 1986). However, in later Romance varieties the original 'active-stative' alignment underwent gradual redetermination, turning sensitive to other discrete features, such as person/discourse-participant, tense, modality, finiteness. On a par with many upper-southern Italian dialects, Barese has abandoned the 'active-stative' PAS in favour of others based on:

1) *Person*: mainly [1/2] with **BE** vs. [3] with **HAVE** in the present perfect:

AUX	1SG	2SG	3SG	1PL	2PL	3PL	go out.PTCP	work.PTCP
BE	***so***	***si***	***jè*	***sìmə***	***sìtə***	***so*	*assùte*	*ffadəgàtə*
HAVE	*ʔagghjə*	***jæ*	***àvə***	*ʔavìmə*	*ʔavìtə*	***ònnə***	*assùtə*	*ffadəgàtə*

2) *Tense*: generalised **BE**(/HAVE) in the past, but (apparent) free alternation allowed:
   e.g. (*av*)***èvə*** *assùtə/ffadəgàtə* 'I had gone out/worked'

3) *Modality*: generalised **HAVE** with counterfactuals,
   e.g. ***avèssə****/**fòssə assùtə/fadəgàtə* 'I'd have gone out/worked'.

Crucially, these patterns of Barese PAS reveal diagenerational variation across younger (25-45 y.o.), mid-aged (45-65 y.o.) and older (65 y.o. onwards) speakers. These facts will be couched in a diachronic and comparative Romance perspective in order to account for their origin; moreover, variation will be readily accounted for in terms of major or minor complexity of semantic-feature specifications, such as [±participant]/[±singular], [±present] and [±realis] respectively.

The analysis of the Barese data follows Ledgeway's (2015) comprehensive parametric hierarchies identified for Romance PAS. Ledgeway's work, in turn, follows the theoretical assumptions of the framework developed in Biberauer, Holmberg, Roberts & Sheehan (2014; *i.a.*). In their view, (bundles of) features encoded on the relevant syntactic heads are hierarchically organised as language-specific (macro-to-nano-)parametric specifications, reflecting their major or minor complexity and prominence in terms of computation/acquisition. In the specific case of PAS, the features in question are associated with properties of the Infl-field. Following Kayne (1993), Ledgeway (2000), Roberts (2013), we treat auxiliary BE as the cross-linguistically 'basic', unmarked perfective auxiliary; by contrast, we consider HAVE as structurally more complex, hence more marked, inasmuch as it requires the incorporation of a covert head into BE in order to be spelled-out as HAVE. Hence, Barese PAS can be best analysed as a series of parametric settings [aspect > tense/mood > person], in which the option HAVE is more marked than the default BE in each environment of occurrence and across different generations of speakers.

Selected references: Biberauer, T., Holmberg, A., Roberts, I. & Sheehan, M. 2014. "Complexity in comparative syntax: the view from modern parametric theory" in F. Newmeyer & L. Preston (eds.), *Measuring Grammatical Complexity*. Oxford: OUP, pp.103-127. Kayne, R. 1993. "Towards a Modular Theory of Auxiliary Selection". *Studia Linguistica*, 47 (1): 3-31. Ledgeway, A. 2000. *A Comparative Syntax of the Dialects of Southern Italy: A Minimalist Approach*. Oxford: Blackwell. Ledgeway, A. 2015. "Parallels in Romance Nominal and Clausal Microvariation". *Revue roumaine de linguistique*, LX (2-3): 105-127.

A stationary frequency effect in Manchester English

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The impact of lexical token frequency on phonetic implementation has been argued to support Exemplar Theory in the following way (Bybee 2002; Pierrehumbert 2002):

(a) Synchronically, high-frequency words exhibit more coarticulation and reduction than low-frequency words (e.g. Dinkin 2008, Gahl 2008, among many others).

(b) This is because, in diachronic processes of lenition, frequent words change at a faster rate than infrequent ones.

(c) This is because high-frequency items suffer greater exposure to phonetic biases in production and perception than low-frequency items, which is then directly registered in phonetically detailed lexical representations.

However, hypothesis (b) has not been corroborated by actual diachronic observations, and does not logically follow from (a): as acknowledged by Hay *et al.* (2015), frequent items can be ahead of infrequent ones, yet change at the same rate. In this scenario, the impact of frequency gives rise to a **constant rate effect** à la Kroch (1989): the logistic curves of change for high- and low-frequency items exhibit different intercepts but equal slopes. The existence of CREs in phonology has been established by Fruehwald *et al.* (2013), and further evidence comes from Zellou & Tamminga (2014). As regards (c), the empirical predictions of Exemplar Theory remain unclear. Sóskuthy (2014) shows that, without *ad hoc* stipulations, the inertia of a large exemplar cloud cancels out the greater exposure to phonetic bias.

In this paper, we challenge (b) with evidence from a CRE in Manchester /t/-glottalling, which is strongly conditioned by token frequency. Crucially, there is no significant difference in the diachronic growth rates in high- and low-frequency words. We demonstrate this statistically using LOESS-smoothers, mixed effects logistic regression, and Kauhanen & Walkden's (2015) mathematical model of the CRE. Our data come from a socially-stratified sample (62 speakers born between 1926 and 1985; 9,187 tokens of /t/ auditorily coded). Figure 1 shows no significant difference between the curves of change across frequency bins. Figure 2 shows the results of applying Kauhanen & Walkden's CRE model, which uses time-invariant contextual biases to derive context-specific curves from a single logistic growth function for all frequency bins. Fitting this more constrained model, with the CRE built in, leads to no increase in error over a model with completely independent logistic curves.

Further support comes from generalized mixed-effects logistic regression, which shows that an interaction between frequency and birthyear does not improve on a model without the interaction (by AIC or BIC). We conclude that the evidence stacks in favour of a scenario in which high- and low-frequency words change at the same rate, thus providing support for a CRE in Manchester /t/-glottalling.

The absence of evidence for (b) suggests that alternatives to (c) should be considered. Frequency-driven CREs are consistent with modified versions of classical modular architectures in which neogrammarian innovation is effected through change in phonetic implementation rules referring to phonological categories in surface representations, whilst the impact of frequency is produced by orthogonal mechanisms (e.g. cascading activation, listener modelling).

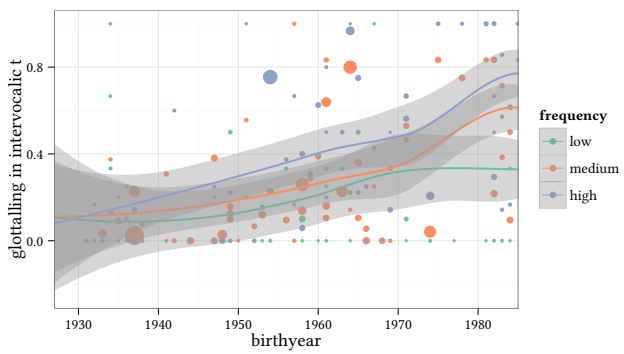

Figure 1

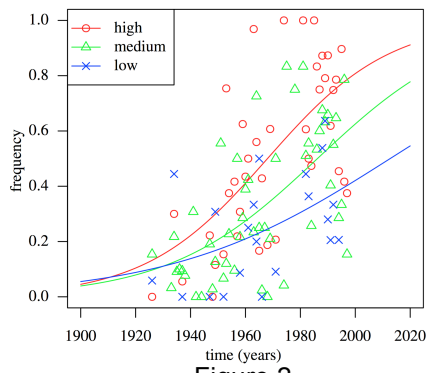

Figure 2

Dative = DOM: Syncretism rather than syntactic identity András Bárány

In several languages with differential object marking (DOM), *i.a.* Spanish, Hindi, Basque, case-marking of the direct object (DO) has the same exponent as DAT case on the indirect object (IO) in those languages. This paper suggests that this identity of form is due to syncretism of ACC and DAT rather than syntactic identity (*contra* Manzini & Franco 2016).

1 Data In languages with DOM, a proper subset of direct objects is morphologically distinguished from the complementary subset. In Spanish, Hindi, and Basque, the exponent of DOM matches that of DAT in each respective language. (1) shows this for Spanish.

(1) a. *Yo veo el libro.* [No DOM]
I see the book.

b. *Yo veo a la mujer.* [DOM]
I see DOM the woman.

c. *Yo doy el libro a la mujer.* [DAT]
I give the book DAT the woman
'I give the book to the woman.'

2 Against syntactic identity This paper presents a number of *arguments against the syntactic identity of* DOs with DOM and IOs with DAT in these languages. **First**, while theme passives, (2a), are freely available in Spanish and Hindi, *recipient or goal passives are impossible or restricted*, (2b). This is shown for Spanish (cf. also Mohanan 1994, Malhotra 2014 on Hindi and Wali & Koul 1997 on Kashmiri).

(2) a. *La mujer fue vista en la calle.*
the woman was seen in the street

b. **La mujer fue dada el niño.*
the woman was given the child
int.: 'The woman was given the child.'

Second, both Spanish and Hindi allow nominalisations of the *theme* argument of a verb. Neither language, however, allows this for goals (not shown). Reduced relatives illustrate the same pattern: theme arguments, whether they trigger DOM or not, can be relativised, but recipient or goal arguments cannot. This is shown in (3) for Spanish.

(3) a. *la mujer vista en la calle*
the woman seen in the street

b. **la mujer dada el niño*
the woman given the child
int.: 'the woman given the child'

Third, Spanish and Basque DOM objects can control depictive secondary predicates, but DAT cannot (Odria 2014: 295):

(4) a. *Juan$_i$ le$_j$ habló a María$_j$ borracho/a$_{i/*j}$*
Juan 3SG.DAT talk.PST DAT María drunk.M/F
'Juan talked to María drunk.'

b. *Juan$_i$ le$_j$ encontró a María$_j$ borracho/a$_{i/j}$*
Juan 3SG.DAT find.PST DOM María drunk.M/F
'Juan found María drunk.'

3 A spurious ABA syncretism Syntactic tests suggest that matching exponents of DAT and DOM show *morphological* rather than syntactic identity. Case hierarchies (Blake 2001, Caha 2009) where GEN intervenes between ACC and DAT are a potential problem for this view: syncretism of ACC and DAT gives rise to a so-called ABA syncretism. I argue, however, that this is a spurious ABA pattern. ACC and GEN are rarely both generally available as structural cases: GEN on objects is highly marked in Germanic, for example. Moreover, where we do find such patterns, as in Finnish (Kiparsky 2001) and Russian (Bailyn 2012), the partitive and the genitive (of negation), respectively, have been argued to be assigned by silent heads. ACC=DAT is thus well-formed in the verbal domain.

What is a perceptual category in L2? On the nature of sound representations in late learners of a second language with a smaller L1 phonological inventory

Fernanda Barrientos

While most research on L2 phonology focuses on production and perception of new phonemic contrasts, very few attempts on describing the nature of sound representations in perception have been made, and more particularly when two L2 categories are mapped onto the same L1 category during early stages of learning. Approaches such as the Native Language Magnet (Kuhl & Iverson, 1995) show the existence of a warping perceptual effect caused by prototypical tokens of an L1 category, while other approaches such as Flege's (1995) attempt to describe the acquired ability to perceive nonnative contrasts within phonological theory, claiming that creation of an L2 phonetic category is still perceptually bound to an L1 category. From an experimental perspective, Liberman et al. (1957) showed that phonemic representations trigger categorical perception, a phenomenon consisting of a correspondence between labelling and discrimination of tokens along a continuum between two different sounds with a phonemic status in the L2 speaker's grammar. Although this categorical perception pattern is not as consistent for vowels as it is for consonants (Gerrits and Schouten, 2004), it seems to be the only experimental approach that shows the presence of categories from a perceptual point of view.

This work focuses on the relation between labelling and discrimination of two L2 vowels that are mapped onto the same L1 category, and draw conclusions regarding the status of these newly created perceptual categories in the L2 speakers' phonological knowledge. The experiment is an extension of the Liberman et al. approach and it consists of a discrimination task and two different types of labelling: one with L2-like labels and another one with L1-like labels. Subjects were 20 native speakers of Spanish with high English proficiency and were asked to label and discriminate tokens of vowels along the /ɑ-ʌ/ continuum. While the L2-like labels ("is this a vowel like the one in the word "cup"?") aim to test the presence of a sound category that does not rely on any type of L1 transfer, the L1-like language mode and labels ("¿es esta una vocal como la de la palabra "mar"?") are looking for an explanation to possible miscategorization and/or reduced discrimination.

Results show a mismatch between labelling and discrimination, where L2 labels are assigned at chance level, but discrimination seems to be more accurate, reaching above chance level but without reaching ceiling. L1-like labelling results, on the other hand, show that tokens of both /ɑ/ and /ʌ/ are perceived as the Spanish vowel /a/. These results suggest that even fully proficient L2 speakers do not store representations of sounds in the same way that they do with L1 sounds; rather, their ability to discriminate along the continuum is better explained by an enhanced sensitivity to acoustic cues that are stored as a long-term representation in the phonetic module and are not mapped onto a phonemic category.

A comprehensive view on inflectional classification

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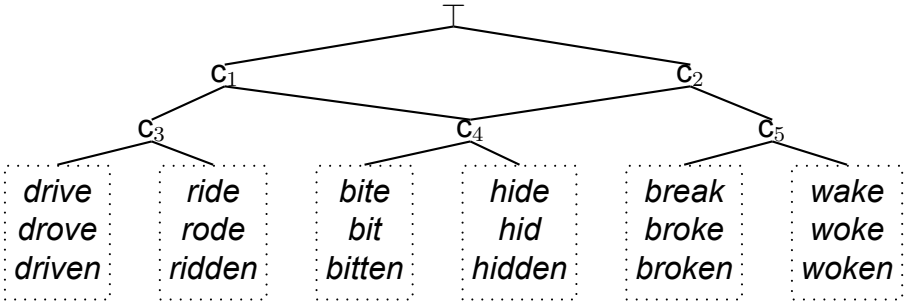
Descriptions of inflection class systems take many forms. Pedagogical grammars are often content with giving a broad classification in major classes. At the other end of the spectrum, various studies (e.g. Stump and Finkel 2013) presuppose a classification into fine-grained micro-classes that exhaustively partition the set of lexemes. The two types of classifications can be linked by assuming a hierarchically-organized system of classes (Corbett and Fraser, 1993; Dressler and Thornton, 1996).

In recent years, various efforts have been made towards inferring automatically inflection class hierarchies from paradigms (Brown and Evans, 2012; Lee and Goldsmith, 2013; Bonami et al., 2014). While they use very different methodologies, all these approaches rely on the assumption that the hierarchy takes the shape of a tree. However, this is not the only option available. An alternative is to assume that the class system takes the form of a semi-lattice, where one subclass may belong to more than one superclass, as the figure below illustrates with sample English verbs.



We argue that semi-lattices are more appropriate to the modelling of inflection class systems, as they capture directly the phenomenon of heteroclisis (Stump, 2006), where different aspects of a lexeme's paradigm relate it to different classes. Class c_4 above is such a heteroclite class: it exhibits the same alternation between base form and participle as c_3 (Xaɪ$C \sim X$ɪCən), and the same alternation between past and participle as c_5 ($X \sim X$ən). We propose a computationally efficient method for inferring the semi-lattice of all groupings of lexemes sharing some inflectional characteristics. Technically, this is done by constructing a graph where each lexeme is linked to the alternation patterns (Bonami and Beniamine, 2015) it instantiates, and then introducing a class for each set of lexemes that is the scope of at least one pattern. The resulting semi-lattice can be interpreted as a monotonous inheritance hierarchy in the spirit of HPSG (Pollard and Sag, 1994), where each class indicates which patterns are simultaneously satisfied by all its members. However, the hierarchy is abstracted from paradigms of unsegmented words (Blevins, 2006) rather than constructed from other primitives, and represents exact and complete information on the system. Unlike previous proposals, it captures by design noncanonical paradigms involving defectivity or overabundance (Thornton, 2012).

In the presentation, we will show that the proposed method produces hierarchies that are a lot denser than hand-designed classifications by linguists, but a lot sparser than the theoretical maximum. For instance, on a dataset of 5000 fully conjugated French verbs (Bonami et al., 2014) exhibiting 73 distinct inflectional behaviours, we get 332 classes out of the theoretically conceivable $2^{73} \approx 10^{22}$.

Going beyond the input: 3 factors and syntactic innovation

Theresa Biberauer (University of Cambridge & Stellenbosch University)

My objective is to outline a new generative model of language acquisition that accommodates the fact that the input acquirers receive does not reflect a single, invariant 'parent grammar', while still allowing us to understand (i) why transmission across speaker generations looks mostly successful, and (ii) why and how acquirers are able to innovate in distinctive ways in the absence of (unambiguous) input.

I assume a "three factors" (Chomsky 2005) model as in (1):

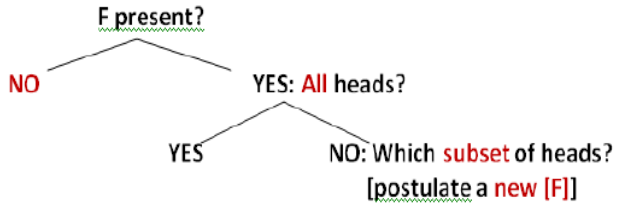
1. *UG (F1) + PLD (F2) + Maximise Minimal Means/MMM (F3) → I-language grammar*

Here UG is maximally minimal, supplying just a formal feature [F]-template (e.g. [uF]/[iF]), and the operations Merge and Agree. This interacts with specific aspects of the PLD (2) – **systematic departures from Saussurean arbitrariness**, which serve as cues to postulate [F]s – and the general cognitive (3rd factor) bias, MMM, which has the language-specific reflexes in (3-4), to produce I-language grammars.

2. (a) **doubling**, e.g. concord, agreement (Zeijlstra 2008); (b) **systematic silence**, e.g. null arguments, null complementisers, ellipsis; (c) **multifunctionality**, where seemingly "the same" morphophonological form serves distinct functions (Wiltschko 2014, Duffield 2014a,b); (d) **"basic" word order** and **movement phenomena**, which instantiate a higher level of Hockettian duality of patterning; and (e) **recursion** (Roeper 2011).
3. **Feature Economy** (FE): Postulate as few [F]s as possible.
4. **Input Generalization** (IG): Generalise postulated [F]s to as many environments as are compatible with the systematic regularities in the input.

(3) and (4) interact to produce **NONE>ALL>SOME learning paths** as in (5):

5.



Here NO [F]s satisfies both FE and IG; if an [F] is detected, positing it in ALL relevant domains satisfies IG but not FE; if [F] is absent in expected parts of the PLD, given the previous step (the domain specified on the basis of [F] is too large), restricting its domain to SOME subset of the previously specified domain by introducing a new [F] minimally violates FE and IG. Strikingly, exactly this kind of hierarchical successive division approach has been independently proposed for phonology (Dresher 2009, 2014) and lexico-cognitive and more general concept formation (Jaspers 2013, Seuren & Jaspers 2014, Bornstein & Arterberry 2010). That children approach acquisition tasks in this MMM-regulated way is, further, suggested by studies like Hudson Kam & Newport (2005). They show that children exposed to unpredictable variation in the input impose systematicity, regularizing it one of three ways:

6. (a) minimization: use the variable form **NONE** of the time
   (b) maximization: use the variable form **ALL** the time
   (c) linguistically governed selection: use the variable form in **SOME** grammatically defined subset of contexts, e.g. only with transitive Vs

When children go "beyond the input" we thus see the NONE>ALL>SOME options predicted by MMM-driven acquisition. This extends beyond experimental settings; the same options have also emerged in "real language" contexts. I highlight three: West Ulster English quantifier-float structures (Henry 2015), Afrikaans embedded V2 (Biberauer 2015), and non-standard English number-marking (Willis 2016).

Aspectual object marking in Libyan Arabic

Kersti Börjars, Khawla Ghadgoud & John Payne, The University of Manchester

Though it is not a common phenomenon cross-linguistically, there are a number of languages in which propositional tense, aspect and mood (TAM) is marked inflectionally within a noun phrase. In their survey of nominal TAM marking, Nordlinger & Sadler refer to 'the relative rarity of mood (and indeed aspect) marking' (2004:801). In this paper, we show that Libyan Arabic is an example of a language that marks propositional aspect on objects, though not inflectionally, and we provide an analysis of the data within Lexical-Functional Grammar (LFG).

In Libyan Arabic, direct objects of dynamic verbs can be either unmarked, as in (1-a), or preceded by *fi*, as in (1-b) and (1-c). While *fi* is systematically excluded when the governing verb takes the past form, as in (1-a), it is obligatory when the governing verb takes the form we will refer to as non-tensed. The interpretation is progressive as in (1-b), or habitual as in (1-c). When the interpretation is not strictly progressive or habitual, but for instance generic, the object is not marked by *fi* as illustrated in (1-d).

(1) a. Ahmed kle (*fi) el-kosksi.
Ahmed eat.PST.3MSG FI DEF-couscous
'Ahmed ate the couscous.'

b. Ahmed yakil fi el-kosksi tawwa.
Ahmed eat.NONT.3MSG FI DEF-couscous now
'Ahmed is eating couscous now.'

c. Ahmed yakil fi el-kosksi kol youm.
Ahmed eat.NONT.3MSG FI DEF-couscous every day
'Ahmed eats couscous every day.'

d. Ahmed yakil kosksi.
Ahmed eat.NONT.3MSG couscous
'Ahmed eats couscous.' (i.e. he is a couscous-eater)

It is apparent from the above data that *fi* has the role of enforcing a progressive or habitual interpretation on clauses headed by non-tensed verb forms. The progressive and the habitual are not distinguished in Libyan Arabic either by the verb forms they are associated with, or by *fi*. In order to unify the progressive and the habitual, we will assign to *fi* the single aspectual feature INTERIOR (terminology based on Stassen 1997:252).

In a different function, *fi* is simply the locative preposition 'in', and we show that in addition to the obvious cognitive connection between interior locative *fi* and interior aspectual *fi*, the two uses of *fi* are structurally indistinguishable, hence we analyse the objects marked by *fi* in (1) as PPs.

The analytical challenge which aspectual *fi* presents is that an element internal to the object contributes aspectual information to the clause containing the object. We provide a detailed analysis within LFG in which inside-out functional designators associated with *fi* ensure that the relevant aspectual features become associated with the clause (compare Nordlinger 1998). In our analysis, the non-tensed verb-form is not associated lexically with any tense or aspect features. In particular, the absence of aspect features means that *yakil* in (1) by itself has no value for INTERIOR (a specification which in the absence of any further contextual information will lead to a generic interpretation), but it will also be compatible with [INTERIOR +] as projected from aspectual *fi* (leading to a progressive or habitual interpretation, depending on the time-span involved). Our analysis can also account for the behaviour of non-tensed dynamic verbs embedded under stative verbs, which generally do not permit *fi*.

REFERENCES: NORDLINGER, RACHEL 1998. *Constructive case: evidence from Australian languages*. Stanford, CA: CSLI Publications | NORDLINGER, RACHEL & LOUISA SADLER 2004. Tense beyond the verb: Encoding clausal tense/aspect/mood on nominal dependents. *NLLT* 22:597–641 | STASSEN, LEON 1997. *Intransitive predication*. Oxford: Clarendon Press.

Multi-argument Realization and Directional Serial Verbs in Mandarin

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Mandarin Chinese utilises serial verbs to express motion and directions. Two types of verbs are observed: (i) Displacement/motion verbs (V_{dis}), e.g. song 'send', zou 'walk'; (ii) Directional verbs subdivided in: deictic directional verbs (V_{deic}), e.g. *lai* 'come', *qu* 'go' and general directional verbs (V_{gen}), e.g. *shang* 'ascend', *jin* 'enter'. V_{dis} always precedes V_{gen} and V_{gen} always precedes V_{deic}. It is observed that when the first verb is a transitive displacement verb, its directed object can appear after any verb in the verb string, resulting in two groups of word order alternations in (1) (2), similar to the Multiple Argument Realisation in the literature (Levin & Rappaport 2005).

(1) a. $V_{dis}V_{deic}$O ('send come soup'); b. V_{dis}O V_{deic}('send soup come')

(2) a. $V_{dis}V_{gen}V_{deic}$O ('send enter-come soup'); b. V_{dis}O $V_{gen}V_{deic}$('send soup enter-come'); c. $V_{dis}V_{gen}$O V_{deic}('send enter soup come').

And we find that the alternations differ in two perspectives. Firstly, the word orders in which the object directly follows V_{dis} (1b and 2b) are atelic while the others are telic. This point can be supported by a few tests such as in-PP, for-PP and telos-cancelling assertion tests. This means that the telic variants resemble resultative constructions in Mandarin in terms of word order and interpretation: 'send come soup' means 'sent the soup and it arrived'. Secondly, the traditionally called 'perfective aspect marker' *le* can only follow V_{dis} when V_{dis} is followed by the object, namely, the atelic variants. Adding *le* converts the atelic variants to telic.

Both traditional and modern studies consider the word order alternations in each group as equivalent. They generally adopt some kind of transformational approach which assumes one basic order from which the others are derived (Zou 1994, Paul 2004). However, the divergence illustrated above is not addressed. Besides, there is no evidence that one of the variants is actually basic. The difference in telicity shows that the variants are independent and should be generated separately. Sharing the spirit of Neo-constructional Approaches (Borer 2005, Ramchand 2010, etc.), this paper proposes an articulated structure in (3).

(3) $[_{vP}$ NP1 $[_{v'}$ v $[_{IAspP}$ IAsp $[_{RealiseP}$ Realise $[_{ResP}$ Res $[_{VP}$ NP2 $[_{V'}$ V $[_{PathP}$ Path]]]]]]]]

PathP describes the moving track of the object (NP2); ResP accommodates the resultative predicates. ResP and PathP cannot project at the same time. The word order alternation is the result of inserting verbs under different functional heads and different head movement requirement: V_{dis} is always under V while V_{gen}/V_{deic} can be under Res or Path; V always raises to Res while Path always stays in situ. Variants in (1) are derived by inserting V_{deic} under Res and Path respectively. Variants (2a) and (2b) are derived by inserting the compound V_{gen}-V_{deic} under Res and Path respectively while (2c) is derived by inserting V_{gen} under Res.

Realise is the position to insert the aspect marker *le* (cf. Sybesma 1999). When ResP is projected, V moves to Res and Realise cyclically, hence *le* follows directional verbs; when PathP is projected, V moves to Realise, hence *le* follows V_{dis}. The telicity difference is due to the IAsp head which is a place to calculate telicity (cf.Travis 2010). It bears an unvalued feature [Tel:], which can be valued by Res, Path and Realise. When it is valued by Res and Realise, the interpretation is telic. When valued by Path, it yields atelic interpretation.

By analysing the Mandarin data, the study shows the explanatory power of neo-constructional approaches in dealing with multiple argument realisation.

The self and its meaning: insights from Japanese

Rodanthi Christofaki
University of Cambridge

This paper argues that referring to the self has been traditionally discussed exclusively on the basis of data from English and other languages that function similarly in this domain, while by looking at crosslinguistic diversity we discover interesting differences that raise questions with regards to the self and linguistic relativity. More specifically, we learn from Perry (1979) that 'I' is an 'essential indexical' which expresses a first-person perspective, something that co-referring forms such as descriptions and names fail to do. This necessarily creates a sharp divide between indexicals and non-indexicals, with the first mapping directly to the self in this case, and the others offering mediated access to it. However, we know that there are languages that lack such a single unmarked indexical for the first-person such as Japanese, which reportedly has 51 1st person pronouns diachronically (Tsujimura 1968), and which routinely allows the speaker to refer to her/himself with an array of different forms such as descriptions and names. Specifically, a Japanese speaker may commonly alternate between different personal pronouns such as 'ore', 'watakushi', 'watashi', 'boku', 'atashi' etc. and descriptions denoting his/her kinship or professional role, or even his/her own name (Suzuki 1978, Morita 2008), something an English speaker typically seems to solely do via 'I'.

The question thus raised is what this apparent different between English-like and Japanese-like languages means for the semantics of self-reference crosslinguistically and ultimately for the concept of self. Pace strongly relativistic positions (e.g. Suzuki 1978, Wetzel 1994), this paper argues that the concept of the self can remain universal by accepting that different facets of the self may be highlighted in different occasions; assuming 'lexicon/grammar/pragmatics trade-offs' (Jaszczolt 2012), different languages can effectively express the same concepts. Based on this, I offer an analysis of how self-reference works in Japanese and attempt a classification on the basis of semantic criteria, as Japanese lacks grammatical ones such as person agreement. The different categories emerging from this classification call for discussing the role of non-truth-conditional meaning and speaker subjectivity, as well as the distinction between indexicals and non-indexicals. With regards to the concept of self, it is argued that when highlighting different facets of the self, the speaker's 'interpersonal variety of self-consciousness' (Peacocke 2014) is at play.

This analysis ultimately aims to make comparisons and connections with strategies employed across different languages, indicating that the difference between English-like and Japanese-like languages seems to be more quantitative than qualitative. As such, the plurality and heterogeneity of self-reference in Japanese may be explained without resorting to extreme relativity.

Where is the Linguistics in Natural Language Processing?

Stephen Clark, Oxford University

This workshop is concerned with how the application of general computational principles has led to advances in linguistic theory. I'd like to consider the reverse question: has the application of linguistic theory led to advances in Natural Language Processing (NLP)? (Here I am treating NLP as an engineering discipline separate from the scientific discipline of Computational Linguistics.) Arguably the rather puzzling answer to the reverse question is "no", despite many attempts to include theories of syntax, semantics and pragmatics in NLP systems. Examples include the use of syntax in language modelling and machine translation; model-theoretic semantics in question answering and textual entailment; and formal models of dialogue in dialogue systems. I will focus on one recent case study of my own, namely how to beat vector addition as a model of composition in distributional semantics.

Henry Sweet Lecture 2016

Verb Root Ellipsis

Bernard Comrie (University of California, Santa Barbara)
and Raoul Zamponi (Macerata)

Akabea [abj], an extinct language of the Andaman Islands, exhibits the phenomenon of Verb Root Ellipsis, whereby, under certain conditions, the root of a verb may be omitted, leaving behind affixes and clitics. The types extractable from the documentation of the language are as follows:

(a) the verb root is retrievable from the preceding conversational turn (1-2);
(b) the motion verb *ɔn* 'come, go' is clear from the context (3);
(c) the verb root *pere* 'strike' is apparently omissible context-freely (4-5).

The phenomenon is cross-linguistically rare; to the best of our knowledge, it is found otherwise only in Inuktitut [iku] of Canada, Kwaza [xwa] of Brazil, and Jingulu [jig] of Australia, with quite similar conditions applying across all languages – possibly significant differences across the four languages will be discussed. It is also unexpected, since the result is a strong of affixes and/or clitics without any root, in violation of the usual conception of affixes and clitics as bound elements.

Functionally, the phenomenon bears close similarity to verb ellipsis (including ellipsis of longer stretches including a verb) in English and many other languages. However, the phenomenon in these languages is crucially different formally in that when a verb is ellipted, all of its morphology disappears along with it, as in English *I am* in answer to *Are you leaving?* (ellipsis of verb *leave* along with the present participle suffix), or German *ich muss nach Leipzig*, cf. the non-ellipted version *ich muss nach Leipzig gehen* 'I must go to Leipzig' (ellipsis of the verb *geh-* 'go' along with the infinitive suffix).

Formally, verb root ellipsis is similar to the phenomenon of zero roots or root allomorphs for particular lexical items, e.g. Amele [aey] -Ø- 'get' (Roberts 1987: 279, 386-387, 390) or Koasati [cku] -Ø- 'give' (Kimball 1991: 102). This also gives rise to a sequence of affixes and clitics without an (overt) root. Both phenomena present the phonological problem of how to pronounce such a sequence. However, they also differ significantly in that the lexical item corresponding to a lexical zero root is always retrievable from the morphological structure of the word, while retrieval of an ellipted verb root typically requires reference to the broader context.

Verb root ellipsis is thus an unexpected (and indeed cross-linguistically rare) phenomenon with links to the more frequent phenomenon of verb ellipsis and the phenomenon, also rare cross-linguistically, of lexical zero roots. The scant available material suggests interesting universals and parameters of variation. Hopefully, more languages with verb root ellipsis will be identified, putting the study of the phenomenon on a broader footing both in its own right and in relation to adjacent phenomena.

Data

(1) atʃitek reg dama mek-ke
now pig flesh eat-nPST
'Eat some pork now!'

(2) yaba=da / wai dila=len d-o Ø-ke
NEG=COP FOC evening=LOC 1SG-II ZROOT-nPST
'No (lit. (it) is not). I will in the evening'

(3) an ŋ-ar-at-duru dele-ŋa=lat Ø-ke
Y/N 2-SP-PL-all hunt-NMLZ=ALL ZROOT-nPST
'Will you all (go) hunting?'

(4) d-o ŋ=ot-pere-ke
1SG-II 2.VII=SP-strike-nPST
'I will strike you on the head'

(5) d-o ŋ=ot-Ø-ke
1SG-II 2.VII=SP-ZROOT-nPST
'I will strike you on the head'

Abbreviations

ALL allative
COP copula
FOC focus
LOC locative
NEG negative
NMLZ nominalization
nPST non-past
PL plural
SG singular
SP somatic prefix
Y/N polarity question marker
ZROOT zero root

Roman numerals indicate different series of pronouns.

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Integrating probabilistic cognitive biases into grammar formalisms

Jennifer Culbertson, Edinburgh University

In this talk, I outline a solution for a longstanding problem in linguistics: how to formalize constraints on possible grammars while accounting for frequency differences among generable systems. To illustrate, I start with a typological universal of syntax describing an asymmetry among possible nominal word orders, Greenberg's Universal 18. I report results from laboratory experiments linking this universal to the cognitive systems of individual language learners. I then present a Probabilistic Harmonic Grammar model of learning, which critically includes a set of *soft prior biases*. This model is able to capture the behavioral data, which over generations of learners would drive the observed typological asymmetry. I argue that incorporating soft biases into models of grammatical competence thus provides a psychologically plausible mechanism capable of explaining important observations about likely human grammars.

Clitic pronouns in Archaic Chinese

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This paper provides evidence for the so far neglected existence of two non-personal clitic pronouns, *yǐ* and *yǔ*, in Archaic Chinese (10th c. - 3th c.BC). This new finding invalidates our received ideas about the nature of isolating languages. It challenges attempts to establish a link between the presence/absence of clitics, on the one hand, and the general make-up of the DP and NP, preposition-stranding, licensing of *pro* and ellipsis of the complement of functional heads, on the other (cf.Bošković 2015).

The clitics *yǐ* and *yǔ* occur in the verb-adjacent preverbal position. *Yǔ* indicates the comitative (cf. (1)), as does the preposition *yǔ* '(together) with'. *Yǐ* has as large a range of meanings as the preposition *yǐ*, among others theme (cf. (2)).

(1) Hòu fēi zhòng , wǎng [yǔ shǒu] bāng
sovereign be.without multitude have.not YU guard country
'If the sovereign did not have the multitude, he would have no one to protect the country with.' (*Shàngshū*, Dà Yǔ Mó 尚書·大禹謨)

(2) Nán shì sheng nán, zé [yǐ gào] yú jūn yǔ dà fū
Nán lady give.birth male then YI announce to lordship and great officer
'If Lady Nan gives birth to a male child, then announce [it] to the Lordship and the great Officers.' (*Zuǒzhuàn*, 左傳12·3·4/3)

While the antecedent of *yǐ* can be [+animate], *yǔ* only refers to a human antecent with a comitative role. *Yǐ* and *yǔ* are not stranded prepositions (whose complement has been extracted), because either there is simply no potential complement XP (cf. (2)) or the necessary movement operation would violate island constraints (cf. (3)):

(3) [$_{DP}$ [$_{TP}$ [Kě [yǔ wǎng]] zhě] yǔ zhī 'If there is anyone you can go with,
can YU go NOM join him then join him.'

Yǐ and *yǔ* are not orphan prepositions (with an *in situ* null pronoun complement; cf. Zribi-Hertz 1984) as e.g. French *avec* 'with'. *Inter alia*, a PP-analysis of verb-adjacent *yǐ* and *yǔ*: [$_{PP}$ *yǐ/yǔ Ø*] is incompatible with the fact that *yǐ*+verb can be the complement of the low adverbial head *ér*, which only selects a minimal verbal projection, thus excluding the presence of an adjunct PP: [$_{ErP}$ XP *ér* (*PP) *v*P]. By contrast, [$_{ErP}$ XP *ér* [$_{vP}$ Cl VP], is expected via the double status of clitics, X° and XP: this accounts for the X°-nature of the clitic pronouns themselves and the fact that like XPs, the clitic pronoun can occupy the specifier position of *v*P in Chinese.

Like pronouns, *yǐ* and *yǔ* can have an implicit discourse antecedent. When explicit, the antecedent for *yǐ* and *yǔ* must always occur outside the TP containing *yǐ* and *yǔ*, i.e. either in the topic position or in a preceding sentence. *Yǐ* and *yǔ* are A-bar bound, hence resumptive (clitic) pronouns; accordingly, the relation 'antecedent – clitic' involves an 'operator - variable' relation. This is unlike clitic pronouns in e.g. French which can be either A-bound or A-bar bound. However, *yǐ* and *yǔ* are on a par with the non-personal clitic pronouns *y* and *en* in French, insofar as the phi features (person, number, gender) are de-activated. (*Y* and *en* thus contrast with the personal clitic pronouns *le*, *la*, *les*, *me*, *te* etc.). The agreement relation (in the minimalist sense) between the clitic pronouns *yǐ* and *yǔ* and their antecedent can be established by a λ-feature (Adger & Ramchand 2005) or a [variable]-feature (Rouveret 2008). Importantly, it is not the antecedent DP itself, but rather the functional head hosting the DP, i.e. in the Chinese case the head Topic°, that functions as operator probing the unvalued [variable] feature on the clitic pronoun in TP. The functional head Top° in the sentence periphery inherits the relevant features from the antecedent DP via the spec-head relation (as e.g. noted for C in Irish by McCloskey 1990).

Case-alternations in Copular Sentences: a Cross-linguistic Perspective

Kajsa Djärv, University of Pennsylvania

We present a novel analysis of two types of copular constructions [CCs], connecting a set of previously uncorrelated syntactic observations with new data from Swedish and Polish. We discuss three areas in which these vary systematically in the two languages: interpretation, Case, and type of copular element. In Polish, Instrumental (Inst) vs. Nominative (Nom) Case on predicate NPs tracks the Verbal/Pronominal CC contrast (1). This has been claimed to reflect the predication/equation distinction (cf. Rohstein 1995, Geist 2007). Further, Sigurðsson (2006) shows that Equatives in Swedish allow only Nom, whereas *assumed identity* CCs allow both Nom and Accusative (Acc) Case (2). We propose a unified analysis of Polish and Swedish CCs, arguing that the key contrast between the two CC-types is that between stage-level (SL) and individual-level (IL) predication, (3). We argue that this affects the thematic properties of PredP, which in turn—given Burzio's Generalization, affects Pred's ability to assign Case: in SL-CCs, NP1 is thematically agent-like, and Pred thus assigns (Inst/Acc) Case to NP2. In SL-CCs however, NP1 is non-agentive, and Pred cannot assign Case. Hence, as a *last resort*, NP2 in non-eventive CCs gets Case inside of a lower clause—by hypothesis, a null Free Relative, where it receives Nom from T (cf. Heycock & Kroch 1999, Pancheva 2009). We predict that NP2 in SL-CCs pattern like a direct object, and NP2 in IL-CCs like a Relative Clause subject. This is borne out: in both languages, only SL-CCs allow extraction of NP2 (4) and reflexives as NP2 (5). Polish also has two possessive pronouns: 'swoja' (local antecedents), and 'jej' (elsewhere). For IL-CCs, only non-local 'jej' is grammatical (6). We also predict the Equative/'inherent property' readings of IS-CCs, given the 'universal'/'singular definite' ambiguity of Free Relatives (Jacobson 1995). We predict the following properties to pattern together: Stage+Verbal Copula+Inst/Acc vs. Individual+Pron Copula+Nom.

(1a) Jan jest lekarzem/*lekarz.
Jan is doctor.INST/NOM
'Jan is a doctor.'

(1b) Jan to (jest) lekarz/*lekarzem.
Jan PRON is doctor.NOM/INST.
'Jan is a doctor.'

(2a) Han *är* inte han/*honom.
He is not he.Nom/him.Acc
'He isn't him'

(2b) I mitt nästa liv vill jag vara dig/du.
I my next life want I be you.Acc/Nom.
'I my next life I want to be you.'

(3a) Jan (#to) jest widz.
Jan PRON is spectator.NOM.
'Jan is a spectator.' (Citko 2008)

(3b) Jan to nasz najwierniejszy widz.
Jan PRON our most.faithful spectator.NOM.
'Jan is our most faithful spectator.' (Citko 2008)

(4) [Dig/*du]$_i$ vill jag inte vara t$_i$.
you.ACC/NOM want I not be.INF t
'I don't want to be you.' (Sigurðsson 2013)

(5) Tylko próbuję być sobą
Only trying.1SG be myself.INST
'I'm only trying to be myself.'

(6a) Jan$_i$ jest swoim$_{i/*k}$ lekarzem.
Jan is his doctor.INST.
'Jan$_i$ is his$_{j/*k}$ doctor.'

(6b) Ona$_i$ to (jest) jej$_{i/*k}$ siostra.
She PRON is her sister.NOM.
'She$_i$ is her$_i$ sister.'

Selected References: Citko 2008. Small clauses reconsidered: Not so small and not all alike. *Sigurðsson 2006.* The Nom/Acc alternation in Germanic.

Being at the upper bound of reduced relative clauses

Jamie Douglas

I argue that considering the syntax and interpretation of present participle (PresPart) reduced relative clauses (RRCs) in English leads to a more fine-grained view of the v-domain edge and a more precise notion of an RRC's upper bound. The PresPart in English is obligatorily interpreted as progressive in full clauses, but not in RRCs (Williams 1975; Comrie 1976), e.g., the PresPart can be used with stative verbs and habitual meaning in RRCs, but not in full clauses, as in (1) and (2) respectively.

(1) a. the woman [resembling my mother]
b. the woman [who {resembles/*is resembling} my mother]

(2) a. the man [walking past my house every morning at 7.30am]
b. the man [who {walks/*is walking} past my house every morning at 7.30am]

A similar pattern is also found with Nepali participles, e.g. the non-past participle can be interpreted with either present or future meaning in RRCs. However, in full clauses, only the future meaning is possible with the non-past participle form.

For English, I argue that (i) the PresPart is not (morphologically) licensed by progressive aspect, and (ii) progressive aspect is external to the structure of RRCs. This differs from several recent proposals which have suggested that the PresPart is a progressive participle (see Bjorkman 2011; Harwood 2013, 2015) and is inside the structure involved in various phenomena, e.g. (low) VP ellipsis, VP fronting and expletive-associate constructions (see Harwood 2015; Ramchand & Svenonius 2014; Sailor 2014). On the surface, RRCs seem to use the same structure, but I will show that the situation is more complex, leading to more fine-grained functional structures.

I propose that the PresPart is morphologically licensed by a general imperfective aspect (ImpAsp) head via (reverse) Agree between INFL features and is spelled out in the position of the goal (not the probe), following Bjorkman (2011). In full clauses, the progressive interpretation results from the presence of a specific progressive aspect (ProgAsp) head. This selects ImpAspP yielding an obligatory progressive interpretation for the PresPart, as in (3a), so stative verbs and habitual readings are ruled out. In contrast, RRCs are not large enough to contain ProgAsp but do contain ImpAsp, as in (3b). Consequently, the present participle is (morphologically) licensed but it has general imperfective aspectual interpretation and so is compatible with stative verbs and habitual interpretations.

(3) a. [$_{\text{ProgAspP}}$ ProgAsp$_{\text{[PROG]}}$ [$_{\text{ImpAspP}}$ ImpAsp$_{\text{[INFL: IMP]}}$ [$_{\text{VoiceP}}$ *being*$_{\text{[INFL: IMP]}}$ [$_{\text{vP}}$ *V-ed*]]]]
b. [$_{\text{ImpAspP}}$ ImpAsp$_{\text{[INFL: IMP]}}$ [$_{\text{VoiceP}}$ *being*$_{\text{[INFL: IMP]}}$ [$_{\text{vP}}$ *V-ed*]]]

Independent support for a Bjorkman-style approach comes from negation and adverbs in RRCs. Consider the positioning of *unfortunately not* in full clauses.

(4) The men (*unfortunately not) have (unfortunately not) been (*unfortunately not) being (*unfortunately not) followed.

Unfortunately not can only occur between *have* and *been* and not between *been* and *being*. But whilst *been* cannot appear in RRCs, *unfortunately not* is perfectly fine.

(5) the men [unfortunately not (*been) being followed]

This strongly suggests that *been* (the perfective participle/auxiliary) is licensed by a perfective aspectual head but spelled out in a lower position (lower than *unfortunately not*). RRCs are too small to contain perfective aspect and so can never license *been*. However, they are large enough to contain *unfortunately not*. These sorts of facts are highly problematic for approaches where the auxiliaries/participles move to and are pronounced in their licensing positions (e.g. as in Harwood 2013, 2015), since if *been* is 'too high' to appear in RRCs, everything higher than *been* should be impossible in RRCs too, counter to fact.

Complex degrees and an unexpected comparative interpretation

Alex Drummond (QMUL) and Junko Shimoyama (McGill)

The classical analysis of degrees treats degrees simply as numerical values. A number of authors have argued that degrees must have a richer structure (e.g. Cresswell 1976, Grosu & Landman 1998, Rett 2008). We argue that degrees should be enriched such that it is possible, given a degree, to recover the associated scale. Our starting point is the comparative construction exemplified in (1), which in addition to having the ordinary 'strict' and 'sloppy' readings glossed in (1a)–(1b) also has the unexpected reading (1c):

(1) John defended himself more skillfully than OJ Simpson's lawyer.
  a. 'John defended John more skillfully than OJS's lawyer defended John.'
  b. 'John defended John more skillfully than OJS's lawyer defended OJS's lawyer.'
  c. 'John defended John more skillfully than OJS's lawyer defended OJS.'

At first glance, the only hope of deriving the reading glossed in (1c) is to find some way of licensing the rather odd form of ellipsis that the gloss itself suggests. We think, however, that a more revealing paraphrase of this reading is (2):

(2) John defended himself more skillfully than OJ Simpson's lawyer was skillful.

On this analysis, (1) is closely related to comparatives in which the complement of*than* is a pure degree expression (e.g. 'The kite flew higher than 100 meters'). The difference is only that the degree is specified indirectly via an individual which exemplifies it. That the kind of reading glossed in (2) is in general available for comparatives with the structure of (1) can be seen from (3), which on its most natural interpretation means not that the kite flew higher than the tallest building flew, but that the kite's altitude exceeded the tallest building's height:

(3) The kite flew higher than the tallest building. ('The kite flew higher than the t.b. is high.')

Naïvely, we might analyze (3) by passing as an argument to the comparative morpheme an $\langle \text{ed} \rangle$ function mapping the tallest building to its degree of height. This analysis is is sketched in (4)–(5); the context-dependent value of the null constituent F supplies the function:

(4) [[er F] [than the tallest building]] [λ_1[the kite flew t_1-high]]

(5) $[\![\text{er}]\!] = \lambda f_{\text{ed}} \lambda x_{\text{e}} \lambda P_{\text{dt}} \,.\, \max\{d \mid P(d) = 1\} > f(x)$

The problem with this analysis is that it does not restrict the value of F to ensure (a) that it is a function from buildings to their degrees of height (and not, say, to their degrees of width or weight); and (b) that it is a function from each building to the degree of its own height and not to some other height that may be indirectly associated with it (e.g. its architect's height).

We can do without F in a system where degrees have a richer structure. Following Rett 2008, we take degrees to be triples of (i) a point on a scale, (ii) a total ordering of the points on this scale, and (iii) a dimension (e.g. HEIGHT). Each dimension ψ determines a function ψ_{M} from individuals to points (Bartsch & Vennemann 1972). We assign to (3) the structure in (6):

(6) [er [than the tallest building]] [λ_1[the kite flew t_1-high]]

(7) $[\![\text{high}]\!] = \lambda d \lambda x \,.\, 1 \text{ iff } \exists u[d = \langle u, \geq, \text{HEIGHT}\rangle \wedge u \leq \text{HEIGHT}_{\text{M}}(x)]$

(8) $\mathcal{U}(\langle u, R, \psi\rangle) = u; \quad \mathcal{R}(\langle u, R, \psi\rangle) = R; \quad \mathcal{M}(\langle u, R, \psi\rangle) = \psi_{\text{M}}$

(9) $\max(P_{\text{dt}}) = \iota d . \exists u \exists R \exists \psi [d = \langle u, R, \psi\rangle \wedge P(d) \wedge \forall u'[P(\langle u', R, \psi\rangle) \rightarrow (R(u, u') \wedge \neg R(u', u))]]$

(10) $[\![\text{er}]\!] = \lambda x_{\text{e}} \lambda P_{\text{dt}} \,.\, \mathcal{R}(d)(\mathcal{U}(d), \mathcal{M}(d)(x))$ where $d = \max(P)$

The value of $\max(P)$ is defined in all cases where P holds only for degrees with a given ordering and dimension. The degree predicate $[\![\lambda_1$[the k. flew t_1-high]$]\!]$ holds only for degrees with ordering $\geq$ and dimension HEIGHT. The maximum degree for which this predicate holds determines, via $\mathcal{M}$, a function from individuals to the points they measure on the height scale. Thus, in virtue of (10), the point associated with the maximum degree of the kite on the height scale is compared to the point measured on the height scale by the tallest building. The analysis extends to the original case, (1), where $\mathcal{M}$ determines the function from individuals to the points they measure on the skill scale.

Cooperation and Quantity Implicatures

Giulio Dulcinati (UCL) *Nausicaa Pouscoulous (UCL)*

Implicatures, according to Grice's (1989), are afforded by the assumption that the speaker is cooperative. This aspect of pragmatic theory has received virtually no attention from experimental research (an exception is Pryslopska, 2013). We used a novel experimental paradigm to investigate the effect of manipulating the assumptions of cooperation between interlocutors. We predicted that participants would infer more implicatures from a cooperative interlocutor compared to an uncooperative one.

In Experiment 1 participants played an internet-based game in which they listened to descriptions of grids recorded by another (virtual) player and they had to select the grid that was being described from a range of four (3 visible and 1 hidden) as in Fig.1.

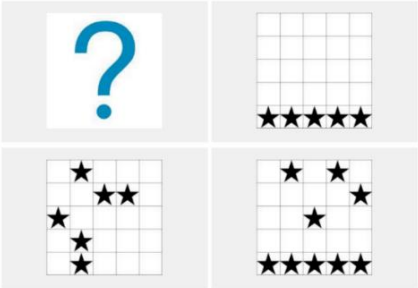

Figure 1. *Experiment 1: Choices shown in the experimental trial with description "Here the squares in the bottom row have a star".*

Participants were assigned either a cooperative or competitive condition. In the former the participant and the other player scored points together. In the latter the other player was the participant's opponent and gained points from their mistakes. Instructions made it clear that the other player could not give false descriptions. In experimental items, descriptions (e.g. *Here the squares in the bottom row have a star*) could give rise to an Ad Hoc quantity implicature (i.e. *no other slots have a star*). The choices in experimental items always contained a "pragmatic" grid (i.e. consistent with the implicature-enriched interpretation of the description) and a "semantic" one, inconsistent with an enriched interpretation (see Fig. 1).

The 39 participants of Experiment 1 were significantly more likely to select the pragmatic response in the cooperative condition compared to the competitive condition.

In Experiment 2 we made two changes: (i) we removed the pragmatic grid from all trials, so that the hidden grid became the "pragmatic choice" and (ii) we used scalar implicatures as well as Ad Hoc implicatures and each participant was assigned to either a *Some* or an *Ad Hoc* condition.

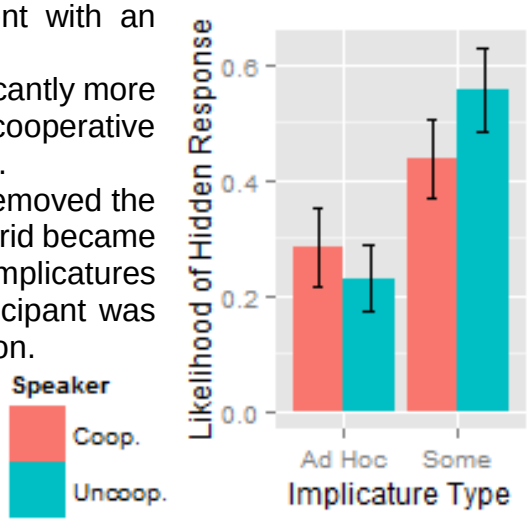

Figure 2. *Experiment 2: Mean likelihood of choosing the hidden grid in each condition.*

The 77 participants of Experiment 2 chose the pragmatic response (hidden grid) significantly more in the *Some* condition than in the *Ad Hoc* condition, which suggests that the *Some* implicatures are more robust than *Ad Hoc*. The effect of the Speaker manipulation (significant by items but not by subjects due to large subject variance) was in the same direction as in Experiment 1 for *Ad Hoc* implicatures (more pragmatic responses in the cooperative condition), but in the opposite direction for *Some*. The results of Experiment 1 and the trend of Ad Hoc implicatures in Experiment 2 are consistent with our original prediction: hearers infer more implicatures from a cooperative interlocutor. The inverse trend of scalar implicatures, which is in contrast with Pryslopska's (2013) findings, might either be interesting counter-evidence to our hypothesis or indicate that lexicalised implicatures interact differently with our paradigm. For example they may be perceived as part of the explicit content as in Doran et al. (2012) and gain special status in our paradigm for participants in the uncooperative condition who are alert to the rule that their opponent cannot lie.

The dating of *Beowulf* revisited

Aaron Ecay, Susan Pintzuk and Richard Zimmermann

The epic poem *Beowulf* is one of the best known extant Old English (OE) texts. Nevertheless, despite more than a century of scholarly debate, there is no absolute agreement on when it was composed. Diverse types of evidence – archaeological, anthropological, linguistic – support various dates of composition throughout the OE period between the seventh and the early eleventh centuries (see Neidorf 2014 for an overview). There is a growing consensus among scholars (e.g. Fulk 2014, Lapidge 2000), however, that non-syntactic evidence points to an early date for the poem. Linguistic contributions to this debate have primarily focused on the poem's meter and phonology. Although some grammatical criteria have been developed for dating (Amos 1980), they are not grounded within current generative syntactic frameworks but rather based upon word order and the selection of lexical items that do not necessarily reflect syntactic distinctions. In the research presented here, we attempt to remedy the lack of syntactic dating criteria by adapting Zimmermann's 2014 method of dating texts. We will show that the syntactic evidence supports a date very early in the OE period for the language of *Beowulf*.

Diachronic syntactic research over the past 50 years has established that most syntactic change occurs gradually, over the course of decades or centuries (Bailey 1973, Kroch 1989, Weinreich etal. 1968, a.o.). The gradual progression of change can be tracked quantitatively and provides the basis for Zimmermann's three-step method. First, for any particular syntactic change in progress, the frequency of innovative and conservative variants is measured in texts with known dates of composition. In doing so, a steady chronological progression can be observed, with the innovative variant gradually increasing in frequency at the expense of the conservative one and eventually replacing it entirely. Second, the same variants in the undated text are measured. Third, the frequency for the undated text is located on the progression line. Statistical methodology can be used to integrate the information from several disparate observed changes into a single estimate of the text's date of composition. In applying Zimmermann's method, we specify that each quantitative syntactic criterion must meet the following conditions: 1) The value of the criterion shows a coherent change in prose texts over the OE period; 2) there are enough data in *Beowulf* to evaluate the criterion; 3) *Beowulf*'s value falls within a plausible interval, based on the prose texts; and 4) the criterion does not systematically differ between OE poetry and prose. For the criteria meeting these conditions, the frequencies for *Beowulf* are positioned earlier than the earliest prose texts but in line with the gradual progression of innovative forms, confirming our hypothesis that the language of *Beowulf* is from the earliest stage of OE.

One interesting result from this study was not anticipated at the outset: the criteria that violate condition 3 may also be those that violate condition 4. In other words, violation of condition 3 is due to systematic syntactic differences between OE prose and poetry and in fact can be used to predict these differences. This is most obvious for the syntax of OE pronouns, which normally move leftward from their merged position to a position at or near the left periphery of the clause. The five Zimmermann criteria that measure the behaviour of pronouns in *Beowulf* all violate condition 3, and Pintzuk 1999 shows that the syntax of pronouns in the prose is different from the poetry. In prose texts, the surface position of pronouns differs in main and subordinate clauses, while in the poetry the position is the same. Future research will demonstrate whether conditions 3 and 4 are necessarily linked in this way.

Cumulative readings beyond nominals (Patrick D. Elliott and Andreea Nicolae)

Certain embedded interrogatives give rise to cumulative readings with a plural subject. (1) is true just in case each witness remembered the answer to at least one sub-question of "Which Klansmen had been present", and the answer to each sub-question was remembered by at least one witness (Beck & Sharvit 2002, p. 148, see also Lahiri 2002).

(1) The witnesses remembered which Klansmen had been present.

This datum suggests that embedded interrogatives can denote pluralities of questions. We argue that two distinct routes to the cumulative reading must first be disentangled. Using evidence from group nouns, de Vries (2015) argues that both lexical and phrasal distributivity are independently needed in order to derive distributive inferences. Lexical distributivity is available so long as the argument has a salient part-whole structure even if it is not semantically plural, whereas phrasal distributivity involves a quantificational operator * in the syntax, which is taken to be licensed by plural agreement on the predicate, and as such requires the argument to be semantically plural. Group nouns with a plural VP allow for a reading not available with singular VPs, namely one where *for every child x, x is singing or x is dancing*. This reading comes about via phrasal distributivity, which is parasitic on plural morphology. We extend this distinction by showing that phrasal cumulativity, which we assume is implemented at LF via the ** operator (Beck & Sauerland 2000), is crucially dependent on plural morphology, evidenced by the fact that plural morphology on the verb licenses an additional reading for (2): *For each member of the winning team, there is a member of the losing team that s/he is kissing or hugging, and vice versa.*

(2) The winning team is/are kissing or hugging the losing team.

We argue that embedded interrogatives, despite not being morphosyntactically plural, nor triggering plural agreement, surprisingly allow for both kinds of cumulativity, as long as the question has a salient division into sub-questions. (3) is true in a scenario where: *for each detective, there is a sub-question that he has either found out the answer to, or is still investigating, and for each sub-question, there is a detective who has either found out the answer to it, or is still investigating it*. To account for this, we assume a type-shifter D_Q which takes a question of $<s,t>$ as its input and returns a plurality of salient sub-questions of type $<st,t>$. We posit the LF in (4).

(3) The four detectives found out or are still investigating which suspects escaped.

(4) D_Q([Which...])[the four detectives] ** $\lambda X \lambda Q$ X found out or are still investigating Q

Phrasal distributivity is not however generally available for questions with a salient part-whole structure, given the unacceptability of the inference in (5).

(5) Which boys come to the party depends on at least two factors. |/= whether J comes depends on at least 2 factors, whether B comes depends on at least 2 factors...

In order to account for the lack of phrasal distributivity, we make the following claim:

(6) **Condition on phrasal plurality**: The */** operator is de-licensed by the presence of singular agreement on the predicate.

This negative licensing condition correctly rules out phrasal distributivity with subject interrogatives, but not phrasal cumulativity with object interrogatives, since objects do not agree for number in English. It is further borne out by *coordinated interrogatives*, which only give rise to phrasal distributivity with plural agreement.

NPI Anti-Licensing in Peripheral Modifiers

Patrick Elliott and Gary Thoms

The puzzle: the fact that weak NPIs can be licensed in the restrictor of a universal quantifier (1) is often taken as strong evidence for monotonicity-based theories of NPI licensing (Laduslaw 1979, Homer 2009, Gajewski 2011, etc.). It has seemingly gone unnoticed that not all modifiers license NPIs in the restrictor. We observe that NPIs are licensed in restrictive relatives (1), but not PP complements (2a) or modifiers (2b) (the same general pattern holds for superlatives and *most* (3)). The sole exception to our generalization is *with*-PPs (4).

(1) I've read every review (which was) published in any magazine.
(2) *I've read every review {of any play | in any magazine}.
(3) *I've read most reviews {of any play | in any magazine}.
(4) I've read every review with any insight.

PP-Peripherality: this observation provides additional evidence that PP modifiers are "peripheral" with respect to other NP-modifiers such as adjectives, numerals and demonstratives. Adger (2013) proposes that PPs are base-generated high in the functional structure of the NP, above most other modifiers. One option would be to say that PPs are first-merged outside of the restrictor of the licensing determiner. However, it is unclear how to reconcile this with the fact that such modifiers are nevertheless *interpreted* as part of the restrictor. One might try to get round this by positing that universal quantifiers are particularly high within the NP, but then the NPI facts would become mysterious once more, and moreover the facts from superlatives would still fail to follow, since these are typically located quite low in the NP, below the peripheral position occupied by PPs (in the talk we show this with data from Celtic).

NP-internal A-movement: adapting proposals in Cinque (2006), we capture the PP-peripherality generalization by proposing that NP complements to P are first-merged within the restrictor of the determiner, but then undergo obligatory A-movement to a position external to it. We argue that this movement is case-driven – P is introduced as a Case assigner in a high peripheral position in the extended nominal projection. NP is then moved to a higher position above the PP. On this analysis, PPs undergo obligatory semantic reconstruction, and therefore contribute to the restriction of the determiner, but they undergo obligatory A-movement to a position c-commanding the determiner, i.e., the NPI licensor. The absence of NPI licensing in (1) then reduces to the fact that A-moved DPs headed by NPIs do not reconstruct for NPI licensing, as in (5a). We speculate that the effect in (5) (and indeed 2-3) follows from Safir's INP and CLP (2004), which we argue constrain the relationship between NPI and licensors.

(5) a. *Any evidence of wrong-doing doesn't seem to have been found.
b. Evidence of any wrong-doing doesn't seem to have been found.

(6) Independence Principle (INP): If X depends on Y then X cannot c-command Y.
(7) C-command Licensing Principle (CLP): If X depends on Y then Y must c-command X.

This predicts that (5b) is grammatical, since the NPI is contained within a complex NP. There is no violation of INP, since the NPI does not c-command its licensor (the determiner). Our analysis of NP-structure is then supported by the fact that the same effect is seen in NPs: NPIs which are more deeply embedded within PP-complements do in fact reconstruct for NPI licensing with *every*, as in (8).

(8) I've reviewed every piece of evidence of any wrongdoing.

In the talk, we account for *with*-PPs by arguing that they are reduced relatives.

Conclusion: far from providing crucial evidence in favour of a *semantic* theory of NPI licensing, we show that the pattern of NPI-licensing in the restrictor of a universal quantifier can only be accounted for if we assume that the licensing condition on NPIs is at least partially syntactic.

Are there boundary tones in Mandarin Chinese echo questions?

Edward Flemming and Helen Nie (MIT)

Mandarin Chinese echo questions are distinguished from declaratives by intonation alone, but it is not obvious that the distinction can be characterized in terms of the familiar elements of intonation. There are no obvious pitch accents or boundary tones distinguishing echo questions from corresponding declaratives because F_0 movements are primarily determined by lexical tones, so final F_0 is rising if the lexical tone of the final syllable is rising (fig. 1(a)), and falling if the tone of the last syllable is falling (fig. 1(b)).

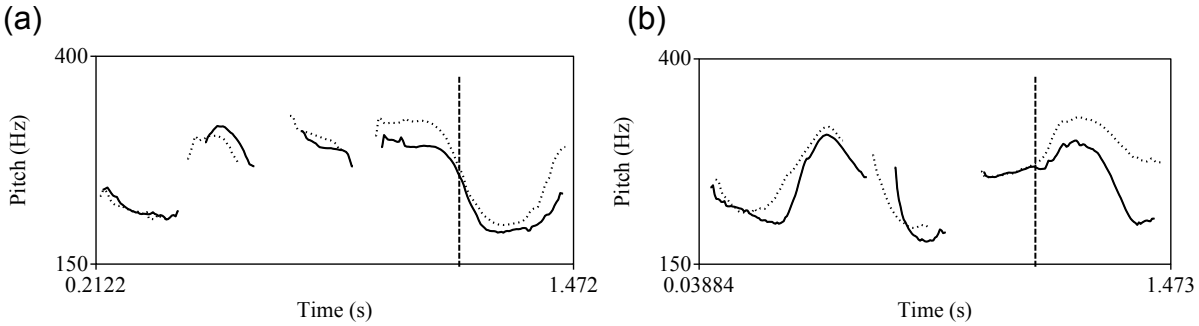

Fig.1. Pitch tracks of sentences produced as declaratives (solid lines) and echo questions (dotted lines). The sentences end with: (a) rising tone, (b) falling tone.

Mandarin echo questions can be realized with a higher/wider pitch range than declaratives throughout the sentence, but the greatest and most consistent difference is realized on the final syllable (fig. 1, final syllable onsets are marked with vertical lines) (cf. Yuan 2006). This difference has been characterized as a further expansion of the pitch range since high targets are raised but low targets may not be, as in the rising tone at the end of fig. 1(a). Although pitch range is used to mark focus, variation in pitch range at the edge of prosodic constituents has not been reported as an intonational marker in non-tonal languages, so this analysis of Mandarin questions implies an expansion of the cross-linguistic inventory of intonational elements.

In this study we explore the alternative hypothesis that question intonation actually involves a high boundary tone (cf. Peng et al 2005), but this tone is realized simultaneously with the final lexical tone. The F_0 trajectory on the final syllable is thus a compromise between the conflicting demands of the high final target imposed by the H% boundary tone and targets for F_0 levels and movements associated with the lexical tone, an analysis formalized in terms of weighted constraints (Flemming 2001).

These two analyses make distinct predictions. Compromise with H% raises the offset of all tones, so the high level tone is realized as a high rising tone, the rising tone is realized with a higher final rise, and the falling tone tends to fall less than in a matching declarative sentence, although its peak is also raised to preserve the target drop in F_0 for this tone. On the other hand the expanded pitch range analysis predicts that the magnitude of both rising and falling pitch movements should increase in questions, and the level high tone should be higher, but its slope should not be altered.

We test these predictions against recordings of 32 sentences, 8 ending in each of the four Mandarin tones, each read as both declaratives and as echo questions by 10 speakers of Mandarin. Pilot results support the predictions of the boundary tone analysis (as illustrated for rising vs. falling tones in fig. 1), suggesting that the familiar units of intonation are adequate for the analysis of Mandarin echo questions, as long as we allow for phonetic compromise between simultaneous tones.

The ‘General Fact’ copula in Yolmo and the influence of Tamang

Lauren Gawne, SOAS
Thomas Owen-Smith

Yolmo is a Tibetan language, spoken in Nepal. Like other Tibetan varieties a the language includes a number of evidential and epistemic distinctions encoded in the copula verb system. These include egophoric *(yìn)*, sensory *(dù)* and dubitative *(yìnḍo)*, which are all clear cognates with other Tibetan varieties. The final copula, *òŋge* is not attested in the evidential system of any other Tibetan language. This copula is used for general facts or generic knowledge (Hari 2010, Gawne 2014).

(1)	*dì*	*kágati*	*kyúrpu*	*yè*	(2)	*kágati*	*kyúrpu*	*òŋge*
	this	lemon	sour	COP.EGO		lemon	sour	COP.GF
	‘this lemon is sour.’					‘lemons are sour.’		

The *òŋge* copula is grammaticalised from the lexical verb *òŋ-ke* ‘come-PRES’. While no other Tibetan language has this copula, Tamang has the form *[1]kha-pa* ‘come-NMLZ’, which can be used in a similar construction. As in Yolmo, this has a sense of a regular occurrence, but is not used for the same degree of generic knowledge.

(3)	*khale*	*khale*	*nepali-no*	*Khaire*	*kha-pa*
	someone	someone	Nepali-FOC	brown-haired	come-NMLZ
	‘Some Nepalis are also blond/brown-haired.’				

Yolmo and Tamang have been known to have close sustained contact in the Melamchi area (Clarke 1980), and we argue that the presence of *òŋge* in Lamjung Yolmo is an example of a cross-linguistic evidential calque. In this paper we illustrate similarities and differences in the distribution of the general fact evidential in these two languages, drawing on our fieldwork data and existing documentation. Nordhoff (2011:118) notes that the grammaticalisation of a lexical verb ‘to come’ into a copula form is cross-linguistically rare. These forms in Yolmo and Tamang therefore provide useful insights into grammaticalisation and semantics and use of evidential forms.

Abbreviations

COP copula, EGO egophoric, FOC focus, GF general fact, NMLZ nominaliser, PRES present tense

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Morpho-phonological transparency and rhyme

Amy Goodwin Davies, Hezekiah Akiva Bacovcin, and Robert J. Wilder

In a lexical decision study, we find priming effects for regular English past-tense words preceded by words rhyming with their stems (*meal* priming *peel-ed*). The same priming effect is not observed for irregular English past-tense verbs (e.g. *mink*→*sank*). These priming effects are dissociated from phonological priming through rhyming controls (T3, tables below). We do not find similar priming effects for regular or irregular English stems preceded by words rhyming with their past-tense forms (*yield*→*peel* and *plank*→*sink*).

Morphological priming for targets preceded by primes sharing a stem (e.g. Amenta and Crepaldi 2012) can be taken as evidence for decomposition of a morphologically complex word into stem and affix. However, as hypothetical morphological relationships are often confounded with semantic/phonological factors, morphological priming effects have been attributed to semantic/phonological relatedness between words (e.g. Gonnerman et al. 2007). Rhyme priming can probe morphological priming: If subjects decompose morphologically complex words, then *peel-ed* should be facilitated by *meal* because *peel* and *meal* rhyme. In previous work using this paradigm, we used phonological controls to rule out alternative interpretations of the effect that are based on early obligatory decomposition of words with certain phonological properties, or phonological embedding of the stem.

In the regular and irregular conditions, the following 3 primes and 3 targets were crossed in a Latin square design (18 conditions total):

Regulars: (p-t=past-tense)

Prime	**Target**
P1. stem rhyme (*meal*)	T1. stem (*peel*)
P2. p-t rhyme (*yield*)	T2. p-t (*peeled*)
P3. unrelated (*fog*)	T3. p-t control (*shield*)

Irregulars:

Prime	**Target**
P1. stem rhyme (*mink*)	T1. stem (*sink*)
P2. p-t rhyme (*plank*)	T2. p-t (*sank*)
P3. unrelated (*world*)	T3. p-t control (*dank*)

Auditory prime and target stimuli were presented to subjects over headphones in an online continuous lexical decision task. Primes immediately preceded targets. 38 native speakers of American English were recruited through the university subject pool.

Using mixed effects models, significant effects were observed for regular English past-tense words primed by words rhyming with their stems ($p<0.01$, predicted effect size=78ms), providing evidence for decomposition. This effect was not observed for irregular English past-tense words primed by words rhyming with their stems ($p=0.53$). Priming effects were not observed for the regular control target ($p=0.27$), nor the irregular control target ($p=0.07$). Significant effects were not observed for regular English verb stems preceded by words rhyming with their past-tense forms ($p=0.32$), indicating an asymmetry in the processing of past-tense forms and stems of regular verbs. Significant effects were also not observed for irregular English verb stems and words rhyming with their past-tense forms ($p=0.35$). Significant priming effects were observed between all primes and targets which rhymed (i.e. P1→T1, P2→T2, P2→T3), replicating the well-established rhyme priming effect (e.g. Slowiaczek et al. 2000).

The asymmetry between regular and irregular verbs suggests the priming effect for past-tense words preceded by words rhyming with their stems is restricted to morpho-phonologically transparent forms. In future work, the role of morpho-phonological transparency can be explored with semi-weak English verbs. The asymmetry between past-tense and stems of English regular verbs is consistent with a view of morphological processing in which stems are activated in processing past-tense forms, whereas past-tense forms may not be activated whilst processing stems.

Frame setters and the microvariation of subject-initial V2

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[1] Microvariation and V3. The empirical focus of our paper is the contrast in (1): what looks like a V3 pattern (and similar data are attested) is acceptable in West Flemish (WF), while it is unacceptable in Standard Dutch (StD):

(1) *StD/ √WF Als mijn tekst klaar is, ik zal je hem opsturen.
when my text ready is I will you him send
'When my text is ready, I will send it to you.'

The contrast in (1) does not follow from a general ban on V3 patterns in StD since this language displays various sentence types in which a regular V2 pattern is preceded by a 'main clause external constituent' (Broekhuis and Corver 2016). For instance, *relevance conditionals* (2) and temporal clauses followed by non-declarative V2 clauses (3) are acceptable in both WF and StD:

(2) √StD/ √WF Als je honger hebt, er ligt kaas in de koelkast.
if you hungry are, there is cheese in the fridge

(3) √StD/ √WF Als er morgen een problem is, wie kan ik (dan) bereiken?
if there tomorrow a problem is, who can I (then) reach

Our account hinges on two main ingredients: (i) we develop a syntax/semantics for *Frame Setters* such as the temporal clause in (1); (ii) in the spirit of Postma (2011) and adopting the Force/Fin typology for V2 (Poletto, 2013, Wolfe 2015), we argue that WF and StD differ in terms of the derivation of subject initial V2 declaratives.

[2] The syntax of frame setters. The initial adjunct in (1,3) is compatible with all illocutionary forces and lacks prosodic and interpretative integration with the main clause. We argue that the adjunct is merged in a position higher than left-peripheral positions occupied by fronted constituents in V2 patterns. Interpretatively, the adjunct provides a frame that can restrict the evaluation conditions of the proposition expressed by the main clause, particularly so in narrative contexts. We propose that the adjunct is merged as a Frame Setter in a position external to the main clause and combines with a fully fledged V2 clause. The Frame Setter is the specifier of a functional head that selects a CP/ForceP to create a type of topic-comment structure (4) interpreted as a *structured meaning* (5) (Krifka 1992). The Frame Setter can restrict the evaluation conditions of the main proposition through a (possibly null) resumptive element in a temporal/modal projection which picks up the denotation of the adjunct restricting the evaluation conditions of the main clause proposition (Bhatt and Pancheva 2006, Ebert et al. 2014). For the V3 structure (4) to receive the interpretation (5), the initial adjunct needs to be in a local relation with the temporal/modal projection hosts the resumptive (Demirdache & Uribe-Extebarria 2004, Cinque 1999).

(4) $[_{FrameP}$ [Adjunct]$[_{ForceP}$ V2-clause]] (5) $[\![[[XP][(\lambda v_i)YP]]\!] = \langle [\![XP]\!],(\lambda v_i)[\![YP]\!]\rangle$

[3] The microvariation of subject-initial V2 declaratives. In both StD and WF non-declarative V2 patterns (3), V2 movement of the finite verb to Force creates a head chain Force-Fin-T that builds the required local configuration:

(6) WF/StD: $[_{ForceP}$ WhP $[_{\mathbf{Force}}\mathbf{Vfin}]$ $[_{FinP}$ t_{whP} $[_{\mathbf{Fin}}$ $\mathbf{t_{vfin}}]$ $[_{SubjP}$ … $\mathbf{t_{vfin}}$..

StD and WF differ in the derivation of subject initial V2 declaratives: in WF the finite verb moves to Force (7a), in StD it remains lower (7b). As a result, the Frame setter does not attain the required local relation with the temporal domain in StD:

(7) a. WF: $[_{ForceP}$ Subject $[_{Force}$ $\mathbf{Vfin}]$ $[_{FinP}$ $t_{subject}$ $[_{Fin}$ $\mathbf{t_{vfin}}]$ $[_{SubjP}$ … $\mathbf{t_{vfin}}$

b. Dutch: $[_{ForceP}$ Subject $[_{Force]}$ … $[_{FinP}$ $t_{subject}$ $[_{Fin}$ $\mathbf{Vfin}]$ $[_{SubjP}$ ….

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Competing sources of contact-driven variation: Tunisian Arabic schwa-epenthesis

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In intonational phonology, adjustments in contexts of tonal crowding have mostly been of 'tune to text', with either compression or truncation of the tonal contour to fit the segmental string (Grabe 1998/2004). Cases of 'text to tune' accommodation are also reported, however. In Standard European Portuguese (SEP), a phrase-final vowel is appended to utterance-final words ending in a sonorant consonant, in yes-no questions with a bitonal boundary tone (H+L* LH%) in read and spontaneous speech, and in vocatives (H* !H%) (Frota et al. 2015). In English loanwords into Bari Italian (BI), the incidence of schwa-epenthesis is variable across speakers and found only in read speech, but similar structural factors are relevant, with epenthesis found most often in context of a bitonal boundary tone, in yes-no questions (L+H* L-H%) and in non-final position in lists (L* L-H% or H* H-^H%), and with similar effects of metrical structure (more epenthesis on monosyllables) and segmental content (more epenthesis after a final voiced consonant) (Grice, Savino, Caffo, & Roettger 2015).

We explore here a text-tune adjustment phenomenon in Tunisian Arabic (TA), observed in yes-no questions and not previously reported in studies of TA intonation (Aloulou 2003, Knis 2004), nor in studies of any other Arabic dialect. In our data, the final nuclear accent in yes-no questions is commonly a late peak rise (L*+H) followed by a complex boundary tone (H-L%), with a schwa-like vocoid frequently appended to the last lexical item. We use TA corpus data to establish the distribution of schwa-epenthesis according to tonal contour, metrical structure and segmental content, as well as potential variation across speakers and speech styles (scripted/unscripted).

Speech data were collected in Tunis with twelve L1 TA speakers (6F); all are fluent in French which is taught in schools from age 10. Various sentence types were embedded in a role-play dialogue read in pairs, with metrical structure of the last lexical item in each sentence systematically varied (stress on antepenult, penult or final syllable). We extracted a set of yes-no questions (*ynq*, N=68) and a set of control sentences of other types (declaratives/wh-questions) in which the last lexical item matches that in one of the *ynqs* (N=55), and a set of vocatives (N=12). We also identified tokens of schwa-epenthesis in spontaneous speech: yes-no questions in Map Task data (Anderson et al. 1991) and list items in a Dialogue Continuation Task (cf. Frota & Prieto 2015). All data were qualitatively analysed by the authors based on auditory impression, by reference to the pitch contour, spectrogram and waveform using Praat (Boersma & Weenink 2015).

We find schwa-epenthesis in 54% of read speech *ynqs*, but this varies by gender: female speakers display more epenthesis (76%) than male speakers (32%). However, the primary conditioning factor is prosodic context due to presence of a bitonal boundary tone: no epenthesis is produced by any speaker on any utterance bearing a simple rise or fall. For example, one speaker produced a vocative with a L*+H H-!H% contour and schwa-epenthesis was observed in this case, but not in any other vocative (which bore rises L*+H H% or falls H* L%). Unlike SEP and BI, there is no effect of metrical structure (epenthesis occurs on words with final, penult or antepenult stress) or segmental content (epenthesis occurs on words ending in vowels, sonorants and obstruents). Unlike BI, epenthesis was produced here in spontaneous yes-no questions by the same speakers who produce them in read speech, but was not found in non-final position in lists.

Although our findings suggest text-tune adjustment in TA may be contact-driven (cf. Ng, 2013), the patterns here do not quite match those in Portuguese and Italian. We close by exploring an alternative potential source of contact: complex boundary tones in other Arabic dialects, in which tonal crowding is, however, resolved by tune-text adjustment rather than text-tune.

The story of the perfect: ambiguity and functional load as explanations of morphosyntactic change.

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It is still a widely held view that language change might be mysteriously and teleologically directed towards achieving greater fitness (see e.g. Croft 2009: 81, with references). Greater 'linguistic fitness' is often associated with avoiding ambiguity and misunderstanding, as well as maintaining a manageable functional load – if the functional load of a construction gets out of hand, it could lead to rampant ambiguity and therefore potentially damage 'fitness'. In this paper, I will demonstrate that teleological explanations involving the avoidance of ambiguity as a result of an increased functional load do not prove fully satisfactory if one traces the development of the perfect in English.

The English perfect goes back to complex transitive clauses centred around the stative lexical verb *have*, with subsequent reanalysis of the participial object complement as a main/lexical verb (i.e. *I*$_{S}$ *had*$_{V}$ *the fish*$_{DO}$ *(in the state of being) caught*$_{OC}$ > *I*$_{S}$ *had*$_{AUX}$ *caught*$_{V}$ *the fish*$_{DO}$). The perfects of intransitive verbs, on the other hand, developed from copular sentences with linking *be* (cf. fossilised survivals such as *I'm done/finished*). One of the major shifts in the history of English is the gradual displacement of *be* by *have*. *Be* is often said to have been ousted from the role in question because of its greater functional load as an auxiliary for the perfect, progressive, and passive, which could lead to potential ambiguity (see Mustanoja 1960: 501, Traugott 1972: 145, Zimmermann 1973, Fischer 1992: 261-2, Denison 1993: 366, 1998: 136, 183-4, Kytö 1994: 182, 1997: 18, 28, Elsness 1997: 246, Kilpiö 1997, Rissanen 1999: 215, Fischer and van der Wurff 2006: 142, among others). The combination of *be* followed by the past participle of a verb that had both transitive and intransitive uses could be construed as perfect, as well as passive, or a resultative stative, as in: *It was grown/developed*.

Things, however, are not as straightforward as the foregoing account might suggest. Firstly, instead of being 'neatly' restricted to the perfect, *have* seems to have dramatically increased its functional load over time, fostering a greater diversity of constructions it can participate in, including passive-like constructions (e.g. *He had a book given (to) him*), causatives, and modal semi-auxiliary uses. Secondly, much later we see the rise of passives with *get* and even what looks like a nascent perfect-like construction with *get*, as in: *You got your homework done, Jason?* (example from Biber et al. 2002: 112). The alternative *have*- and *get*-passive structures appear in puzzling competition with passive *be*, although *be* is not expected to face such competition now that it is arguably less ambiguous after being 'relieved' of its duties in the perfect. Finally, the demise of *be* as a perfect auxiliary does not seem to go hand in hand with a higher proportion of passive *be*. Corpus data will be adduced showing that, throughout the history of English, non-copulative *be* has always served predominantly as a passive auxiliary, with the figures for the *be*-perfect being negligible in all relevant periods (Kilpiö 1997). Crucially, there are no signs of ambiguity increasing or decreasing over time if actual usage is looked into. Moreover, potential ambiguity persists to this day in *They were frightened* (passive or copular *be* – see Quirk et al. 1985: 167ff.). Based on a case study featuring an examination of a sample of texts, I conclude that the reasons for this displacement cannot be straightforwardly attributed to functional load, but should be sought elsewhere, including frequency effects, language contact and natural cognitive processes of reanalysis.

Modeling Phonological Structure: Connecting Theory and Data

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Computational modeling is playing an increasingly central role in phonological theory and argumentation. In this talk, I discuss several interrelated factors driving this methodological shift and discuss examples of recent insights in phonological theory that computational approaches have enabled. One strength of modeling is that it enables rigorous evaluation and comparison of (complex) theories' formal properties and empirical predictions for typology, language acquisition, and even language change over time. Many of these predictions can otherwise be hard to anticipate. Another contribution of modeling, especially statistical modeling, is that it enables explicit, testable connections between phonological theory on the one hand and corpus and experimental data on the other, which are themselves playing increasingly prominent roles in phonology. These connections have already led to a range of novel results that refine our understanding of phonological structure, learning, and change.

“Zero”-past tense in Korean is an illusion

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In Korean, the present tense is assumed to be morphologically “zero” (1a), in contrast to the past tense, which has the overt morpheme *-ess* ‘PAST’ and its employment is obligatory (1b). However, there are apparent instances of “zero”-realization of the past tense in certain environments like (2).

(1) a. John-i pang-ul *mek*(-*Ø*)-*e*.
John-NOM bread-ACC eat(-Ø)-DECL
‘John eats bread’

b. John-i pang-ul *mek**(-*ess*)-*e*.
John-NOM bread-ACC eat*(-PAST)-DECL
‘John ate bread’

(2) a. John-i pang-ul *mek*-ko, (kuliko) Mary-ka bap-ul *mek-ess-e*.
John-NOM bread-ACC eat-KO (and) Mary-NOM rice-ACC eat-PAST-DECL
‘John {ate/*eats} bread and Mary ate rice.

b. John-i pang-ul *mek*-ko cip-ul *naga-ess-e*.
John-NOM bread-ACC eat-KO home-ACC go.out-PAST-DECL
‘John went out his home after he {ate/*eats} bread’

As regards (2a), Chung (2001), for example, analyzes it in the following way: the verbal complex of the first conjunct is a TP whose head is morphologically a “zero’-morpheme in and of itself (3).

(3) $[[_{TP}$ … mek_{V}(-$Ø_{T}$)]-ko] …

This author ultimately suggests that (2a) is corresponding to (4), where the verbal complex of the first conjunct bears the overt past tense morpheme *-ess*.

(4) John-i pang-ul *mek-ess*-ko, (kuliko) Mary-ka bap-ul *mek-ess-e*.
John-NOM bread-ACC eat-PAST-KO (and) Mary-NOM rice-ACC eat-PAST-DECL
‘John ate bread and Mary ate rice.

In short, this solution amounts to say that Korean allows both the present and the past tense being realized as “zero”. But the problem of this account is such that the past tense by “zero’-morpheme is not productive (cf. (1b)), in contrast to the present tense, which is always “zero” in Korean. In addition, such a “zero’-morpheme for the past tense cannot apply to the case of (2b), repeated in (4) where the presence of the overt morpheme *-ess* leads ungrammaticality.

(4) John-i pang-ul *mek*(**-ess*)-ko cip-ul *naga-ess-e*.
John-NOM bread-ACC eat(*-PAST)-KO home-ACC go.out-PAST-DECL
‘John went out his home after he ate bread’

Finally, differently from the cases above-mentioned, in Korean, neither the future tense nor other aspect-related markers can surface as “zero” at the interface between PF and morphology. In this paper, I will be presenting that those cases where the past tense appears to be “zero” can be alternatively analyzed in different ways; in the case of (2a), it is an instance of low-coordination where two vPs are coordinated (but with no ellipsis therein), and the verbal complex of the first conjunct is a vP rather than TP; and in (2b), the verbal complex of the adjunct clause is a gerundive which cannot bear finite past tense marker, and thereby surfacing as “zero”. For this analysis to properly work, I will adopt Kang’s (1988) idea on Korean verbal morphology: the morpheme *-ko*, which appears in a number of different environments including (2), is an instance of “Morphological Closure (MC)” whose main function is to close off the bound root form of the Korean verbs at the interface between PF and Morphology, as well as another instance of MC by *-ci* observed in Korean negation (cf. Hagstrom 1995, 1996). Finally, I will extend the analysis to account for Korean gapping, where the missing verb containing the past tense marker is also artificial; there are two different types of gapping.

Eleni Kapogianni

The meaning of oxymoronic propositions: loose talk, metaphor, and irony

This paper examines the truth-conditional meaning of propositions containing oxymoron, i.e. the adjacency of two semantically contradictory terms (Partington 2011). It is shown that truth conditions can be assigned only upon the completion of a local (sub-propositional) operation that would reconcile the semantic contradiction. It is then argued that these local modifications can range from cases of loose talk (Sperber & Wilson 1985), to cases of metaphorical use and cases of ironic reversal. Finally, it is shown that these meaning modulations are facilitated by the fact that oxymoron is constructed on the basis of expressions that have "flexible meaning" (Recanati 2010:290) and are subjective, relying on the speaker's perspective: relative (scalar) adjectives, intensifiers, and evaluative expressions (Athanasiadou 2006).

Instances of oxymoron such as "happy accident" and even "beautiful disaster" require a minimal departure from literality (Recanati 2004), whereby one of the two terms is modified in a way that eases the semantic contradiction. On the other hand, examples like "deafening silence" would require the metaphorical interpretation of one of the terms ("deafening", in this case, would be metaphorically interpreted as "shocking" or "highly meaningful") which constitutes a different process and perhaps a more significant departure from the literal meaning (cf Carston 2002).

Ironic uses of oxymoron are even more intriguing: "those nice racist bastards" is a blatant case of irony that conveys a highly negative evaluation. Irony has to operate on (take scope over) the term that is in contrast with the conveyed evaluation. This means that irony, although typically a nonliteral phenomenon, can operate at a sub-propositional level, an observation that has implications for the debate regarding the level at which truth-conditions are assigned: arguably, if a higher-level pragmatic phenomenon can have access to the sub-propositional level, then truth conditions must be applied to the intended rather than the logical/semantic meaning (in agreement with the radical contextualist view).

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Naive parameter diachrony, with and without biases

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The naive parameter learner (Yang 2002) operates in a space of n binary parameters as follows: at each presentation of input token, the learner picks one of the 2^n possible grammars according to a distribution of parameter probabilities p_i (i=1, …, n) so that the ith parameter is set on with probability p_i and off with probability 1-p_i, and attempts to parse the input using this grammar. If parsing is successful, *each* current parameter setting is rewarded according to linear reward–penalty learning (a general-purpose reinforcement learning algorithm; e.g. Narendra & Thathachar 1989), and if parsing is unsuccessful, *each* current parameter setting is punished with linear reward–penalty learning. Learning is thus naive in the sense that the learner never knows which parameter settings are to blame for any given unsuccessful parsing event.

This naivety notwithstanding, it can be shown that the learner's usage probabilities p_i for the values of the n parameters do converge, under favourable circumstances, to the target grammar (Yang 2002). What has not been explored in detail in the literature are the *diachronic consequences* of naive parameter learning. If multiple such learners are ordered in a succession of (non-overlapping) generations, one feeding into the next, to what distribution (if any) do the parameter probabilities p_i tend over inter-generational time, and what is the effect of the relative weak generative capacities ("grammatical advantages" in Yang 2000, 2002) of the different parameter settings on this evolution?

In this paper, we present a systematic investigation of this question with the help of computer simulations, assuming, for simplicity, that the n parameters are independent. We find that in certain cases – when the weak generative capacities of the competing parameter values have suitable magnitudes – the system behaves as the 2-grammar (1-parameter) special case in Yang (2000), with one parametrically specified grammar overtaking another one along an S-curve. However, for other settings a completely different picture emerges with the system tending to an equilibrium state of *stable variation*, a behaviour which is demonstrably impossible in the 2-grammar special case.

We then generalize the model by introducing *biases*, either in learning or in production, on top of the linear reward–penalty learning mechanism. We demonstrate that this extension gives rise to an even more complex dynamics: with production biases, *escape from the superset* – a diachronic trajectory tending to a state of stable variation between a superset grammar and a subset grammar – becomes possible, whereas biases applied at learning give rise to the more powerful behaviour of *retreat to the subset*, where a subset grammar actually ousts its superset counterpart. Both escape from the superset and retreat to the subset are, however, impossible if no learning or production biases are in operation.

These results, then, imply that stable variation can arise purely from competition between a number of grammatical options without these competing variants having to specialize for function (*pace* Wallenberg 2013), and that naive parameter learning, when combined with suitable biases, can explain retreat to the subset, a well-attested diachronic pathway (in phonological change at least, in the form of mergers, which reduce the number of forms generated by the grammar).

Beneath the surface: Abstract morphology in historical code-switching

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This contribution explores grammatical morphemes in historical code-switching. It is based on the idea that the realization of morphemes in mixed constituents is constrained by the abstract morpho-syntactic structure of the languages involved, as has been proposed within the synchronically oriented *Matrix-Language-Frame (MLF) Model* (Myers-Scotton 2002). The aim of the contribution is to show how the MLF model can account for code-switching patterns in historical data. After a brief outline of contrasting views (Sankoff & Poplack 1981; MacSwan 2005; Myers-Scotton 2008) I present the results of an empirical study based on three corpora selected to allow for systematic treatment of morpho-syntactic differences with respect to typological, diachronic and genre-related aspects (Latin-Middle English sermons; Latin-Early New High German theological discussions; Modern German-English code-switching personal letters & conversations). Selected examples from the corpora focus on the (non-)occurrence of grammatical morphemes at theoretically relevant switch points, especially those labeled *outsider late system morphemes* under the MLF model (marked in bold):

(1) kep þe depis in turbulat**-o** se**-ø**.
(2) **die** Critic**-i** Latin**-i** woll**-en** es deriv-**ir-en**.
(3) Na, let's fahr'**-ø** nach England...

The realization of agreement and finiteness markers is the same in all three corpora and confirms the predictions of the MLF model with respect to the expression of grammatical categories on verbs. However, the realization of number, gender, and case on nominals in the historical corpora diverges systematically from the contemporary data and clearly contradicts the model, as embedded language morphemes occur in positions where the MLF model allows only matrix language morphemes. I propose that the systematic morpho-syntactic differences between the corpora can be employed as markers for specific code-switching conventions in the respective speaker communities, in our case the normative attitude towards Latin. I conclude that the MLF model is a valuable tool for assessing the structure of historical code-switching, which may serve to enhance our understanding of the interaction between abstract structure and pragmatic considerations in bilingual communication.

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Ellipsis and syntactic information

Yusuke Kubota and Robert Levine

Whether ellipsis requires positing abstract syntactic representations has been debated extensively in the syntactic literature. The goal of the present paper is to critically review some of the most persuasive arguments presented to date for a structural analysis of ellipsis by Kennedy (2003) and Kennedy and Merchant (2000) (K&M) and offer an alternative analysis which eschews abstract syntactic structures, couched in a recent variant of categorial grammar called Hybrid TLCG (Kubota and Levine 2012, 2015).

Kennedy's (2003) and Kennedy and Merchant's (2000) argument for a syntactic analysis of ellipsis center on the following types of data:

(1) a. *Otis is a person who$_i$ I admire t_i because close friends of PG$_i$ are famous.
b. Otis is a person who$_i$ I admire t_i because close friends of PG$_i$ seem to.

(2) Pico wrote a more interesting novel than he {a. did / b. *wrote} a __ play.

The parasitic gap data in (1) illustrates the argument succinctly. The point is that the contrast between (1a) and (1b) mirrors the contrast between (1a) and the non-elided counterpart of (1b) (*...seem to admire* __). This follows straightforwardly in a structural analysis, but remains mysterious in a purely interpretive approach. That is, if ellipsis licensing is just a matter of recovering the meaning of the missing material, (1b) should be as unacceptable as (1a), since neither contains a real gap within the VP. The comparative deletion pattern in (2) is somewhat more complicated, but the point is essentially the same. According to K&M, a purely interpretive analysis for (2a) would not only fail to rule out (2b), but would also lack independent motivation since English does not exhibit prenominal adjective ellipsis in syntactic environments other than (2a).

While Kennedy and K&M are right in identifying problems with purely interpretive approaches, the conclusion they draw that these data motivate a structural analysis seems too hasty. We argue below that the relevant facts receive straightforward accounts in a non-structural approach as long as appropriate distinctions are encoded in the syntactic *categories* (as opposed to full syntactic *structures*) of 'elided' expressions.

The key difference between (1a) and (1b) is that the missing VP in the latter is itself missing an NP. In Hybrid TLCG, 'gapped' expressions are assigned syntactic categories transparently encoding the number and type of missing expressions via the 'order-insensitive' slash $\upharpoonright$ (not available in CCG). Our analysis exploits this syntactic category encoding of gap-containment, assigning distinct categories to the VPs in (1a) and (1b) (VP vs. $\mathrm{VP}\upharpoonright\mathrm{NP}$). Thus, the VP *seem to* in (1b) is assigned the following category/meaning pair once the identity of the 'elided' VP is anaphorically resolved:

(3) seem to; $\lambda x\lambda y.\mathbf{seem}(\mathbf{admire}(x)(y))$; $\mathrm{VP}\upharpoonright\mathrm{NP}$

This is exactly the same category/meaning pair as its non-elided counterpart. Thus, with a suitable mechanism for parasitic gap licensing, the well-formedness of (1b) falls out in exactly the same way as the well-formedness of its non-elided counterpart.

For the comparative deletion/pseudogapping case in (2), we think that a reassessment of the judgment patterns is called for, since (4), which is structurally identical to (2b), improves considerably over the latter according to our consultants:

(4) (?)In the Leipzig era, Bach occasionally composed more intricate CANONS than he had composed FUGUES in his earlier life.

We thus take it that the source of the unacceptability of (1b) is not combinatoric. There still remains the question of how to derive the right interpretation for (1a) without assuming unmotivated prenominal adjective ellipsis process. In the full paper, we show that such an analysis in fact falls out straightforwardly from an independently motivated analyses of comparative deletion and pseudogapping in Hybrid TLCG.

An important difference between the traditional syntactic analysis and our approach is that the latter predicts that only syntactic information encoded in the syntactic categories of the missing expressions is relevant for ellipsis licensing. This is exactly in line with the recent findings (cf. Chung 2013, Barker 2013, Yoshida et al. 2015) that ellipsis in natural language is only 'partially' sensitive to syntactic information.

Syntactic theory and the science of (language) history

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Through the pioneering work of Ringe, Taylor and Warnow (2002), Gray and Atkinson (2003), mathematical procedures from evolutionary biology have been introduced into historical and taxonomic linguistics and applied to traditional phonological and lexical data. These quantitative developments have been a crucial step toward a scientific approach to the study of history. The rise of modern natural sciences has been supported not only by the adoption of a quantitative and experimental view of research, but also by a style of inquiry based on idealization and deduction of observed phenomena from very general abstract hypotheses. This line of inquiry has been reproduced with some success in synchronic linguistics by trends in cognitive science and formal grammatical theory, for instance representing crosslinguistic diversity as descending from a limited set of deep and interacting syntactic differences (parameters of universal grammar). Longobardi and Guardiano (2009) introduced methods for importing the deductive style of formal grammar into the study of language phylogenies and for assessing the value of controversial parametric hypotheses (as developed in Longobardi et al. 2013).

We present a database of over 80 binary syntactic parameters set for 50+ languages from 4 continents, encoding the syntax of nominal phrases in such languages, each in the form of a string of binary values (or of null states predicted by the deductive structure of the hypotheses). This database is meant to preserve the deductive depth and predictive intricacy of highly axiomatized syntactic analyses, while improving on the empirical coverage by a full order of magnitude on previous practice (Baker 2012 calculated that the average number of languages compared in formal analyses involving parameters rarely exceeds 4 per article). The same dataset and associated hypotheses have been evaluated against various standards of adequacy:

A) crosslinguistic descriptive adequacy – a typologically wide and high-resolution coverage can be achieved on a specific module of grammar (DP structure) in terms of relatively few abstract syntactic characters

B) a high degree of historical adequacy – these characters return plausible phylogenies for four different domains:

1. IE languages
2. Macro-Uralic languages
3. Macro-Altaic languages
4. Microvariation samples, based on the Northern and Eastern Mediterranean areas

The insights obtained from the database can be used to explore historical issues beyond independently known language taxonomies:

C) significant cross-family gene-language correlations among Eurasian populations

D) the possibility of formally evaluating the relative position of the IE, Uralic and Altaic phylogenies above, within a wider set of other Eurasian and American languages.

Our results so far indicate that capturing phylogenetic signals with a model embodying a high degree of universal hypotheses about language is not only possible, but also recommendable for the purposes of statistical reliability; and that deeply deductive approaches advocated by some modern cognitive theories are crucial in the scientific foundation of the study of human history.

Unifying the syntax of overt and implicit evaluation

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Evaluative expressions are two-place predicates denoting a relation between a propositional constituent and an individual holding an evaluative attitude towards it. Two common realizations of such predicates are (i) adjectives predicated of nominalised sentential subjects (1) (or, alternatively, used as attributive modifiers of nouns, such as fact, which can take sentential complements, e.g. the unfortunate fact that...), (ii) sentential adverbs (2). In both cases, the evaluator argument may or may not be overt, the other argument is a proposition presented as a fact (see Bonami & Godard 2008), while the content of the evaluative attitude necessarily corresponds to the meaning of the adjective/adverb. In this paper I will argue that so-called 'ethical datives', i.e. (usually weak) non-argumental/non-truth-functional pronominal forms with a surface distribution similar to that of argumental pronouns, constitute a further type of construction realizing evaluative predicates. Specifically, I will argue that, semantically, ethical constructions only differ from (i) and (ii) in that the object of evaluation is an event rather than a proposition, while ethical datives have the same internal syntax as evaluative adverb phrases (3). As opposed to (ii), the evaluator argument is always overt, while the head is an underspecified silent adverb.

Overt adjectives/adverbs license an evaluator PP, with different adjectives/adverbs (in fact, roots) potentially selecting different Ps (cf. unfortunately for me/surprisingly to me). Being semantically empty, hence virtually root-less, silent adverbs do not license an overt P that could in turn license the evaluator´s Case. In such a construction, only datives denoting discourse participants (hence pronouns, usually of 1st/2nd person) can survive, by being attracted by a high Applicative head with a [+Participant] feature (cf. Michelioudakis & Kapogianni 2013, Georgala 2012). In its first-merged position within the vP, i.e. embedded inside the PP complement of a silent adverb, the ethical clitic cannot c-command other arguments of the vP, which accounts for its inability to A-bind lower arguments, as opposed to other dative clitics (4). Overt adverbs are further obligatorily attracted to the specifier of a high clausal projection, namely EvalP (cf. Cinque 1999), which forces them to obligatorily scope over (sentential) negation, aspect etc. On the contrary, silent adverbs need not be attracted by $Eval^0$, which explains the correlation between the evaluation optionally scoping over or under negation and the fact that they are possible even in clauses lacking projections as high as EvalP, e.g. conditional clauses (5).

The overt realization of the evaluator argument of an overt adverb/adjective may cancel the default speaker-oriented interpretation. Nevertheless, in the latter case, the implicit evaluator is syntactically represented, as it can control into (and thus marginally license) non-finite adverbial clauses (6). Equally represented is the evaluative relation between the (overt) ethical clitic and the event, as it corresponds to an irreducible and non-cancellable inference about a discourse participant holding an evaluative attitude (see diagnostics in Michelioudakis & Kapogianni 2013), even though its precise content is only inferred pragmatically.

(1) It is unfortunate (for us) that Paul came late.

(2) Unfortunately (for us), Paul came late

(3) $[_{vP}\ [_{AdvP}$ ADVERB [P $[_{D(P)}$ Evaluator]]] $[_{vP}$ ...]]

(4) {Tis_i ediksa (IO)/ *tis_i prosecho (ethdat)} ton eafto-tis_i (Greek)
Her.CL showed her.CL take-care-of the self-her 'I showed her herself/took care of herself (for her)'

(5) a. Den mu pandreftikes ´You did not marry on me´ ¬>pos. eval./ neg.eval.>¬
b. An (*distichos) (mu) arjisi... 'If (unfortunately) (to my disappointment) (s)he is late...'

(6) ?$Silegondas_i$ dedomena, distichos $EVAL_i$, i omilites itan fidoli
Collecting data, unfortunately the speakers were too quiet

RHETORICITY & INQUISITIVITY

1. **Core Question**. Given that rhetorical questions (RQs) are not truth-conditional, yet express less inquisitive epistemic perspectives, how can the non-canonicity of questions, viz. rhetorical interrogatives, be given a unified treatment within the framework of Inquisitive Semantics (IS), recognising the overt exponents of inquisitive operators cross-linguistically (South Slavonic, Chimane, Mandarin, English, etc.).
2. **Empirical motivation**. The analysis rests on the empirical observation that Q(uestion) particles may optionally co-occur in *wh*-Qs, in which case they bear the interpretational signature of RHET(oricity).

(1) Šta (**li**) radiš?
what (Q) do.2.SG
"What (*on earth*) are you doing?"

SerBo-Croatian (1), like most modern Indo-European languages, obey the 'Doubly filled COMP' filter (DFCF). However, the violation of DFCF may obtain: in such cases, the construction yields a rhetorical question, as shown in (1).
3. **Sketch of an analysis**. I propose to treat non-truth-conditional perspectives as issues, in the theoretical sense of IS (Ciardelli & Groenendijk, 2012; Ciardelli et al., 2013). The analysis retains a single lexical entry for the Q particle, corresponding to $\mathrm{C}^0_{[i\mathrm{Q}]}$, with the semantics of an operator performing Inquisitive closure (=?), i.e. raises as an issue the denotation of the proposition expressed by $[\![\mathrm{TP}]\!]$ and introduces the disjunction of the negation of $[\![\mathrm{TP}]\!]$ without it leading to a tautological issue state. Stated below are LF entries for wh- and polar-questions, partly based on Chierchia & Caponigro (2013).

(2) $[\![\mathrm{CP}_{[i\mathrm{Q}]}]\!] = [\![?]\!]([\![\mathrm{TP}]\!]) = p \vee \neg p = \lambda p\big[p = 1 \vee p = 0\big]$

(3) $[\![\mathrm{CP}_{[i\mathrm{Q},i\mathrm{WH}]}]\!] = [\![?]\!]([\![\mathrm{TP}]\!]) = \lambda p\big[\lambda P \lambda Q \exists x[p = \lambda w[P_w(x) \wedge Q_w(x)]]\big]$

I propose that the rhetorical Qs, with the DFCF violating signature, take, by contrast, an epistemically anchored world variable over which ? performs closure. This will be shown to result from contextual allosemy as the violation of the doubly filled COMP filter provides the local context for the interrogative head to be interpreted rhetorically. The analysis will derive the '*surprise*-effect' using Heim's (1992) covert operator as employed elsewhere to similar effect. (Romero 2015, *int. al.*)
4. **Discussion & extension: contextual allosemy**. We extend the analysis by capturing the interpretational effect that the DFCF has on availability of rhetoricity, which we take to instantiate structurally constrained allosemy (conceptually on a par with allomorphy or allophony, *à la* Marantz 2011, 2012). The locally conditioned spell-out of the interrogative morpheme at the semantic (Σ) interface should, as follows from the general principles of grammatical architecture, be on a par with mapping to Σ.

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Adjunct Islands in Swedish

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The Mainland Scandinavian (MSc.) languages Swedish, Norwegian and Danish have been argued to allow extraction from *strong islands*, constructions that are assumed to be opaque for movement operations and that do not permit extraction in other languages. Island extractions are interesting from a syntactic point of view because they violate locality constraints that are assumed to apply universally. One type of island extraction that has received very little attention so far is extraction from adjunct clauses, as exemplified in (i) for Swedish.

(i) [Den filmen]$_i$ grät jag [när jag såg $\_{}_i$].
this movie cried I when I saw
'I cried when I saw this movie.'

However, extraction appears to be possible only from a restricted subset of clauses. To identify the conditions that enable extraction from adjuncts in the MSc. languages, I have investigated semantic and syntactic restrictions on the possibility of extraction in Swedish. In my talk I will present the results of this study. I show that extraction from adjunct clauses in Swedish is constrained by several factors.

First, extraction possibilities are influenced by the semantic relation between the events described in the adjunct and in the matrix clause, a condition that has been shown to constrain extraction from non-finite adjuncts in English (see Truswell 2007). Truswell's approach predicts that extraction is more acceptable if the two events described by the matrix and the adjunct VP are related by a *contingent relation* such as causation or enablement, which makes it possible to subsume the matrix and the adjunct VP under a single event. I will show that semantic contingency has an impact on the possibility to extract from finite adjuncts in Swedish, and I will discuss different strategies to explain how a semantic factor such as contingency can interact with syntactic locality.

Second, extraction is constrained by the degree of syntactic integration of the adjunct clause. A distinction can be made between *central* and *peripheral adverbial clauses* (Haegeman 2012), where central adverbial clauses modify the matrix event and are merged low in the structure, whereas peripheral adverbial clauses have a discourse structuring function and are merged higher. Extraction is degraded when it occurs out of peripheral adverbial clauses, which are less integrated with the clause that they modify. Furthermore, differences in the internal syntax of adjunct clauses are shown to have an impact on extraction possibilities.

In sum, the possibility of adjunct clause extraction in Swedish is constrained by several conditions. Nevertheless, Swedish (and the other MSc. languages) still stand out in allowing extraction from at least a subset of finite adjunct clauses. This is considered to be impossible in other languages. The results of this study thus have consequences for different theories of island constraints, since any explanation of the Adjunct Island Constraint has to be flexible enough to accommodate the cross-linguistic variation regarding adjunct islands, as well as the varation between different types of adjuncts observed in my data.

A Relative Clause Source for Participant Nominalizations

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Participant nominalizations (PNs) profiling a clausal participant, such as agentive, instrumental and locative nominals, are usually treated on a par with common noun phrases (e.g. Comrie and Thompson 1986:349). I explore a syntactic source for PNs, proposing that they are derived through the same mechanism that derives relative clauses. Following a raising analysis of relative clauses, I propose that a null NP, corresponding to the participant being profiled, and interpreted as "person", "thing", "place", and so on, raises to the specifier of a nominal CP resulting in a structure similar to that of other syntactically derived relative clauses. The proposal recasts early transformational grammar assumptions (Lees 1960), which derived participant nominals from a sentential relative clause, mainly supported by paraphraseability observations:

1. a. player = one who plays

Additionally, the proposal formalizes certain typological trends that capture morphosyntactic similarities between the expression of PNs and relative clauses in Austronesian (e.g. Zeitoun 2002), Tibeto-Burman (Matisoff 1972), Unto-Aztecan, and other language families.

Evidence for the proposal is drawn from recent work showing that PNs present a number of aspectual distinctions, e.g. eventive vs. non-eventive (Rappaport & Levin 1992) or episodic vs. dispositional nominals (Alexiadou & Schäfer 2010), frequently with expressed verbal arguments (2.b) which are sometimes obligatory (2.c).

2. a. John is a teacher. (Profession Interpretation)
3. b. John is an occasional teacher of modern art. (Relative Clause Interpretation)
4. c. John is a devourer *(of fine food).

PNs allow for apparent violations of i-within-i effects exactly as relative clauses do (5-6) (Jacobson 1993).

5. a.* Every picture of its own self/frame should be destroyed.
6. b. Every lover of his own self should not be accepted in the group.

Finally, PNs always allow for a non-intersective interpretation of modifying adjectives, based on an adverbial source (7a-7b) (Larson 1998).

7. a. Mary is a beautiful woman. (Unambiguous: Intersective)
   b. John is a beautiful dancer. (Ambiguous: Intersective -Adverbial)

Additional, evidence that these nominals involve a relative clause source comes from Malagasy PNs where the verbal voice morphology within each type of PN matches the voice morphology on the verb within the relative clause profiling the corresponding participant. Thus, in (8.a) the external argument of the verb can become the head of a relative clause only when the verb is marked with agent morphology. The same restriction applies to the formation of agentive nominals (8.b).

8. a. ny olona (izay) n.i.vídy boky ho an'ny mpianatra …
   DET person (that) PST.V.buy books for' DET student
   'The person (that) bought books for the student…'
   b. ny mp.i.vidy boky ho an'ny mpianatra dia ny mpampianatra
   DET NMLZ.V.buy books for' DET student TOP DET teacher
   'The buyer of books for the student is the teacher.'

Similar facts hold for languages in the Tibeto-Burman and Unto-Aztecan families. The parallelism between relative clauses and PNs is thus not only theoretically sound but also typologically supported.

Gradience in synchronic variation and gradual diachronic change: A case study

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This paper investigates the cross-dialectal variation in the morphology of the verb 'to have' in Northern Italy against the backdrop of recent interest in the relationship between gradience, gradualness and grammaticalization (Traugott & Trousdale, 2010). The focus of the discussion is on interpreting synchronic variation as different stages reached by a gradual process of grammaticalization, and on identifying its trajectory. When the term *gradience* is used in the context of gradualness and diachronic change, it is understood chiefly as either the lack of strict boundaries between categories or as the organization of members within a given category. In this paper we offer a further interpretation of the term, i.e. gradience as the manifestation of varying degrees of bondedness (in the sense of Lehmann 2002:131) between two elements. We also investigate how gradualness manifests itself in grammaticalization, i.e. diachronic change that diffuses across structural patterns along a hierarchy. This research draws on data from the ADL-II (Goebl, 2012).

In the so-called 'dialects' spoken in Northern Italy, Latin HABERE 'to have' is found fused with a reduced version of the locative clitic *ghe* 'there', yielding the form *gavér(e)* (cf. Italian *avere*) 'to have'. A close investigation reveals that this 'fusion' shows varying degrees of cohesion, both across dialects and within the same dialect, depending on variables such as lexical vs. auxiliary use of 'to have', and on the presence of pronominal clitics. Specifically, *gavér* (G-form), which is assumed to be the result of the grammaticalization of the locative *ghe* onto *avér* (A-form), is the dominant form with lexical 'have', while it is outnumbered by the A-form with the auxiliary. In addition, the G-form is generally inhibited by the presence of pronominal, ad-verbal clitics, with which the A-form surfaces instead. Finally, there is variation within infinitive forms, both lexical and auxiliary: in the majority of dialects infinitives are realized as the A-form, and only in a minority as the G-form. There is also a third form, *avérghe*, with *ghe* enclitic on the verb (AG-form), which prevails over the G-form. In the light of these three variables, a sketch of the trajectory of the grammaticalization of *ghe* can be attempted:

1. lexical < 'bare' auxiliary < clitic + auxiliary < infinitive

Assuming the infinitive's special status (cf. Bach & Esher, 2015) in that it is the last form to undergo a change, and given the significant presence of AG-forms, it is possible to speculate on the diffusion of the process. It started with finite, lexical forms with overtly realised subjects: in this first phase the change would have been driven by semantic factors in that *ghe* would have had its locative function and the subject would have expressed the location of the possession. Syntactic factors would have driven subsequent stages, witness the way clitics inhibit the G-form and the way grammaticalization is being extended to infinitives (the scarcity of G-forms also seems to suggest that analogy is not the favoured method of diffusion in this case).

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Abstract representations from realistic input

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A centerpiece of generative linguistics is the claim that children learn language from rather poor input. With passive exposure to some 25,000 words per day, children receive a large amount of input. However, they do not have direct access to correct analyses for the linguistic expressions they encounter, nor do they receive reliable feedback about their own productions. Thus, fully supervised learning algorithms, which presuppose exactly the knowledge that children are trying to discover, are not realistic models of learning. Of more interest are semi-supervised algorithms, which develop abstract representations and grammars from examples of unanalysed input using minimal additional information. This additional information takes different forms in different models.

Here, I will present several computational studies of words and word-formation patterns that use semi-supervised algorithms. They achieve significant success in generalising from observed surface forms to new examples in Arabic, English, and Turkish. They differ in what additional information is leveraged to achieve this success. Key information ranges from detailed observations (especially, output-output correspondences) to general cognitive propensities, such as a propensity to assign hierarchical structure or to assume that similar things have similar behaviour. Innate factual knowledge plays a lesser role. These observations lead to insights about what linguistic theory should look like.

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On the locus of case licensing in Lak

Introduction. Case licensing has been a matter of a long-standing debate. In this paper, I argue that case licensing is done configurationally (cf., Marantz 1991, Bobaljik 2008, Preminger 2014, Baker 2015, Baker & Bobaljik 2015, a.o.), but unlike the previous proposals I show that in Lak, a Nakh-Dagestanian language, all case calculations are done in vP, rather than TP. Lak is a morphologically ergative language: **(i)** subjects of intransitive clauses (unergative and unaccusative) pattern with internal arguments of transitive clauses with respect to case marking: they are absolutive; **(ii)** external arguments of agentive transitive verbs have ergative case, **(iii)** Lak experiencer verbs have their external arguments in dative or locative cases. Lak agreement is always controlled by an absolutive argument (Gagliardi et al 2014).

Masdars. Lak has a number of deverbal nominalizations, whose properties vary with respect to their degree of noun-ness. In this paper, I discuss only one type –*masdars*. Masdars are deverbal nouns (El'darova 1999, Abdullaev 2010), which have both verbal (TAM marking, agreement) and nominal properties (case, gender, number). Lak has two types of masdars, which have two sets of properties –one is formed with the suffix –*awu*, while the other one –with –*šiwu*. The *awu*-masdars are formed by adding the suffix to the verbal root, while the *šiwu*-masdars are formed on the basis of participles or infinitives (El'darova 1999: 180-181). The *awu*-masdars can express two aspects (perfective and durative), whereas the *šiwu*-masdars can express all aspect and tense specifications. Both masdars can form nouns on the basis of the verbal root 'can', but the two nouns have two distinctive meanings: the *awu*-masdar has a meaning of possibility/ability *buˀx-awu*, whereas the *šiwu*-masdar has a meaning of probability *buˀxan-šiwu*. The two masdars are associated with two types of modal meanings: root/ability and epistemic, respectively. Following Butler (2003, 2006), I assume that the two types of modals correspond to two syntactic structures of different sizes, i.e., the root/ability modals are vPs, whereas epistemic modals are at least TP. Based on the TAM facts and modality differences, I suggest that the *awu*-masdars are vP-nominalizations, whereas the *šiwu*-masdars are TP-nominalizations.

Case in masdars. Lak masdars (*awu* and *šiwu*) are characterized by an interesting property –they preserve the case alignment of verbs they are based on. First, masdars formed on the basis of intransitive verbs have their arguments as absolutive marked. Second, masdars derived from transitive verbs with agentive subjects have their external argument bearing ergative case and their internal argument bearing absolutive case. Lak has ergative/genitive case syncretism for nouns, thus making it difficult to argue for the ergative case in masdars. This case syncretism is not absolute, however: there is a context, where Lak distinguishes the two cases, namely, personal pronouns. The pronoun in the transitive clause appears in its ergative form rather than genitive, thus proving that external arguments in transitive masdars have ergative case. Transitive verbs with dative marked experiencer external arguments and absolutive internal argument preserve this case distribution in nominalizations. The facts presented above demonstrate that case domain in Lak is just a vP (cf., Gagliardi et al 2014, Polinsky et al to appear), which requires adjustments to the original case algorithm (Marantz 1991) and its subsequent developments.

Types of cases in Lak. All Lak cases can be divided into 3 classes: **i)** inherent/lexical (dative); **ii)** structural (absolutive); **iii)** PPs (spatial cases). Unlike a popular view on ergative being an inherent case, associated with an agent theta role (Woolford 2006, Aldridge 2008, Legate 2008, a.o.), I argue that ergative is a structural case in Lak based on its imperfect association with the agent theta role: not all agentive arguments are ergative: 1) they are absolutive with unergatives; 2) some non-agentive external arguments are ergative. Furthermore, the ergative case is not preserved in a number of A-movements: raising, biabsolutives, and causatives. The behaviour of ergative in these constructions is different from dative: ergative changes to either absolutive or dative/locative, while dative is always preserved in these constructions.

Case algorithm in Lak. First, inherent/lexical (dative) cases are assigned. Second, if a DP is not case-marked and c-commands another DP in vP, it gets ergative case. Finally, if DP does not have any case, it gets a default/unmarked case, i.e., absolutive.

A non-derivational account of possessive applicative constructions

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In several languages of the Americas, for example Salish languages (Kiyosawa 2004), Chol (Vázquez Álvarez 2011), Tseltal (Shklovsky 2012), and Mi'gmaq (Hamilton to appear), possessors which appear to be internal to the phrase headed by the possessed nominal can control agreement on the verb, and this agreement pattern is obligatorily accompanied by applicative-like morphology. This is (at least on initial inspection) in violation of constraints in many syntactic theories which state that agreement can only occur between elements in the same local domain (e.g. Gadzar and Pullum 1982; Gadzar et al. 1985). This type of construction also occurs in Chimane, a near-isolate language spoken in lowland Bolivia. The paper proposes a non-derivational 'mediated locality'-type account of possessive applicative constructions based on new field data from Chimane.

In the default internal possessor construction, the possessor does not control agreement on the verb (1a). But some possessors which are internal to object NPs can control agreement on the verb, and in such cases the applicative suffix *-bi* obligatorily occurs (1b).

(1) a. *Mi* *nạij-tye-'* [*ococo* *Juan-si'*] ?*(=*mu'*).
you see-CLF-3SG.F.O frog(F) Juan(M)$_i$-F =him$_i$

b. *Mi* *nạij-bi-te* [*ococo* *Juan-si'*] (=*mu'*).
you see.CLF-APPL-3SG.M.O frog(F) Juan(M)$_i$-F =him$_i$
'You saw Juan's frog.'

Shklovsky (2012) analyses a very similar construction in Tseltal. He assumes that applicatives project their own phrase. He argues that the possessive phrase is incorporated into the applicative phrase, meaning that the internal possessor can control the agreement on the verb. His analysis can account for certain facts about the construction, for example the obligatory occurrence of the applicative morphology. However, Chimane favours an alternative approach which involves a rearrangement of grammatical functions.

The apparently non-local agreement relation between verb and internal possessor in Chimane can be accounted for by positing a clause-level 'proxy' (Polinsky 2003) of the internal possessor which mediates the agreement relation between the verb and possessor. Evidence for this mediating proxy can be seen in the optional occurrence of the clause-level clitic pronoun =*mu'* 'his' in (1b). Crucially, this element is not easily available in the canonical construction in (1a), which indicates that it is only present in the possessive applicative construction. The optional occurrence of the clitic pronoun and the obligatory occurrence of the applicative suffix together imply a rearrangement of grammatical functions in Chimane, as opposed to a derivational operation – the external proxy of the internal possessor functions as the primary object of the verb, while the phrase headed by the possessed nominal is demoted to a secondary object function. The internal possessor can thus control verbal agreement in Chimane via anaphoric binding of the clause-level clitic. An analysis of the possessive applicative construction in Chimane is formulated in the LFG framework.

Phonological Weakening in the initial position of Southern Italian. Is it really lenition?

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In Neapolitan (N.) voiced stops lenite in initial position: [b, d, g] alternate with [v, r, j ~ w ~ v]. The strong variant is found only in post-consonantal position, after N.C or in a geminate formed by *Raddoppiamento Sintattico* 'syntactic doubling' (RS). The data are striking because they oppose the predictions derived from positional strength: strong sounds should be found in strong positions and they should weaken in weak positions. Traditionally, the disjunctive context: {C, #}_ (word-initially or after a coda) is strong, while the intervocalic and post-vocalic contexts (V_V and V_#) are weak.

This positional strength relation is built into theories such as the 'Coda' Mirror (Ségéral & Scheer 1999, 2008). It is noteworthy therefore that N has the opposite pattern to the more typical Tuscan (T.), with its initial strength: T. [di:**θ**o] vs. N. [**r**i:to] *dito* 'finger'. One potential CVCV solution would be to parametrize the presence of an initial CV (Scheer 2012): T. [CVd$^{[strong]}$ito] vs. N. /d$^{[weak\ (\sim r)]}$ito/. However, there are no relevant differences between RS in T. and N., so the difference must be sought elsewhere. Indeed, this data is also problematic for another model of lenition: licensing inheritance (Harris 1997). In N., lenition is also foot-initial and therefore should not be subject to weakening: **v**(^{j}àto) 'lucky', (pòve)ra **v**(èstia) 'poor beast'.

It is our argument that, paradoxically, the data does not contradict theories of inherent initial strength, rather it supports them. Southern Italian initial weakening is not lenition, after all, voiceless consonants are not reduced in these 'weak' root-initial: cf. [tots:ə] *tozzo* 'piece (of bread)'. Instead, we propose that the weakening forms part of certain (quasi-)morphological paradigms:

(6) Quasi-morphological alternations

Simple Noun	weak	[**v**à:sə]	***b**acio*	'kiss.n'
Three Noun	strong	[tre**b:**àrkə]	*tre **b**arche*	'three boats'
DEF article Sg	weak	[a-**v**òk:ə]	*la **b**occa*	'the mouth'
DEF article Pl	strong	[e-**b:**òk:ə]	*le **b**ocche*	'the mouths'
NEG	strong	[nu-**b:**erə]	*non **b**ere*	'do not drink'
S-	strong	[z-**b**ìŋə]	*scappare*	'escape'
N-	strong	[^{m}-**b**ɔ:lə]	*in **v**olo*	'in flight'
N- (LOC)	strong	[**m:**ok:ə]	*in **b**occa*	'in mouth'

There is no lenition in root-initial position. Indeed, it is only a strong position (root initial) that can host a strong/weak contrast and therefore act as a locus for the pattern. This is why, cross-linguistically, the initial position is preferred to host this kind of morphological exponence: West Atlantic, Celtic, Bantu (Kula 2002), and Nivkh (Shiraishi 2006). We claim, therefore, that (perhaps) universally, root-initial C1s are inherently strong. In fact, any consonant, voiceless or voiced, can occupy the root-initial position depending on the quasi-paradigm, where strength and weakness is determined by phonetic interpretation of a particular syntactic head: [o-**v**i:nə] 'the wine (count noun)' [o-**b:**inə] 'the wine (mass noun)'.

Focus Fronting and the Definition of Contrastivity

Vieri Samek-Lodovici (UCL)

Focus fronting is generally maintained to be caused by contrastive focalization (e.g. Rizzi 1997 for Italian, Neeleman&Vermeulen 2012 – henceforth 'N&V12' – for English). The definition of contrastivity, however, is still being debated, leaving the analysis of focus fronting on shaky grounds. Furthermore, several scholars have proposed that contrastivity is a primitive of information structure like focalization and topichood (Molnár 2002, Repp 2010, N&V 2012), making an accurate understanding of its nature even more necessary and urgent.

This talk examines the definitions of contrastivity proposed in Krifka (2008) and N&V12. Besides being highly seminal, these two studies share an identical definition of focus in terms of alternative semantics (Rooth 1985, 1992), enabling a meaningful comparison. They also offer precise definitions of contrastivity, allowing for clear predictions about its presence/absence even in contexts not discussed in the original papers. I will examine many such contexts, including open questions, closed questions, corrective foci, two subcases of confirmative foci, and two subcases of additive foci. I will assume that focus fronting is triggered by contrastivity, and then assess each definition against the availability of focus fronting. For each definition, let A be the set of contexts where contrastivity is predicted present, and B the set of contexts where focus fronting is possible. The definition where set A best matches set B is the most accurate one and the one we should adopt.

I will show that at least two contexts favour N&V12's definition over Krifka's. For N&V12, contrastivity is present whenever a sentence implies the denial of at least one of the alternative propositions evoked by focalization. For Krifka (2008), instead, focalization is contrastive when an evoked alternative is already in the common ground and contrasts with the proposition expressed by the uttered sentence. Both definitions make identical predictions for simple focalization contexts, correctly predicting that the answers to open question are non-contrastive (thus disallowing focus fronting) while corrective statements are contrastive (hence allowing for focus fronting). Diverging predictions only emerge under subtler contexts. For example, in the confirmative focus context (1) below, sentence B1 does not contrast with any proposition in the common ground and is thus non-contrastive for Krifka. The same sentence B1, however, may convey the implicature that John hit only Tom and no other boy, and is thus potentially contrastive for N&V12. Since focus fronting is possible (B2), N&V12's definition is the more accurate one for this context. Similarly, in the additive focus context (2), if Bill, Jack, and Tom are the only contextually relevant children – say the three children of speaker A, who has no other children – then B1 involves contrastive focalization for Krifka, because it contrasts with A's statement in the common ground, but it is non-contrastive for N&V12, since there is no other child that Bill might have hit, and hence the denial that Bill hit some other child can be neither constructed nor implied. Since fronting is ungrammatical (B2), N&V12's definition is once again to be preferred.

(1) A: John hit TOM yesterday.
B1: Yes, John hit TOM_{Foc}.
B2: Yes, TOM_{Foc}, John hit.

(2) A: Bill hit JACK, yesterday
B1: Yes. He hit TOM_{Foc}, TOO.
B2: ?? Yes. $TOM_{Foc,}$ he hit, TOO.

As I will show, neither definition perfectly accounts for the entire distribution of focus fronting. Yet, N&V12 will emerge as the most accurate one, providing us with an empirically supported definition of contrastivity and a firmer account of focus fronting.

Phonological time travel: ‘counterfeeding from the future’ - Ollie Sayeed

In OT with Candidate Chains (OT-CC; McCarthy, 2006), the grammar can contain global constraints on derivations. In particular, there are constraints on the precedence relation determining which of two processes should happen first; a constraint PREC(ID(high),ID(cont)), for example, assigns a violation to every instance of i) an ID(high) violation appearing after an ID(cont) violation, and ii) an ID(cont) violation appearing without an ID(high) violation preceding it. Wilson (2006) discusses one implication of this: in the effect called ‘counterfeeding from the past' (CFFTP), a non-transitive ranking of precedence constraints can lead to a process being blocked only if fed by a certain other process earlier in the derivation.

Here, I discuss another effect possible in OT-CC, which I call ‘counterfeeding from the future'. The mirror image of CFFTP, a process can be blocked only if it will itself feed a certain other process *later* in the derivation. Consider Wilson’s Finnish processes A, B, and C, expressed as in Rule-Based Phonology (RBP):

A: C → ∅ / _#
B: e → i / _ #
C: t → s / _ i

An OT-CC implementation of this derivation can add an interesting twist using the precedence constraint relating A and C.. Let PREC(C,A) be the constraint requiring that C be *before* A. The constraints in the grammar can be ranked such that we see counterfeeding from the future.

/tek/	*C#	PREC(C,A)	*ti	*e#	MAX	IO(HIGH)	IO(CONT)
⟨tek⟩	*!						
⟨tek, te⟩		*		*	*		
⟨tek, te, ti⟩		*	*!		*	*	
⟨tek, te, ti, si⟩		**!			*	*	*

In this ranking, the chain (tek, te) is the winner, because of the precedence constraint PREC(C,A) assigning two violations to the longer derivation. If the input is /pek/, such that raising (A) wouldn't feed assibilation (C), we see the chain (pek, pe, pi). In other words, word-final raising is blocked precisely when it would feed assibilation later in the derivation.

I discuss the relevance of these two effects - counterfeeding from the past and from the future - for comparing the empirical adequacy of OT-CC and RBP. I show that in fact, RBP is able to compute grammars with both kinds of effect, but only using abstract segments that never surface. Briefly, this can be done by an extra rule mapping the target segments to some /X/ in the `paradoxical' environment, and then mapping everything back again at the end of the derivation. RBP then wouldn't strictly be falsified if these effects were discovered. Conversely, the absence of these effects is compatible with OT-CC, given that not every computable grammar is necessarily attested, and so we might explain their non-existence on extra-grammatical grounds. I conclude that whether or not phonological time travel exists isn't directly relevant to the question of which theory is true: RBP can survive if these effects exist, and OT-CC can survive if they don't.

Agents in focus: "Optional" ergativity in Jaminjung and information structure

Eva Schultze-Berndt

The influence of information structure on the presence or absence of ergative marking in languages with "fluid A(ctor)" or "optional ergative" systems has recently received considerable attention. A number of works addressing differential argument marking from an optimality-theoretical perspective (e.g. Legendre et al. 1993; Aissen 1999; De Hoop & Malchukov 2007) employ a general notion of "prominence" or "(argument) strength" – variably encompassing a high rank on the animacy hierarchy, discourse topicality, perfectivity of the clause and volitionality of the A referent – rather than the specific information structural notions of focus, contrast, or topic/actor switch found in some other discussions. However, employing such a broad notion of prominence is difficult to operationalise and leads to conflicting results when applied to individual languages.

This paper reports on a corpus study of the factors influencing overt case marking of A arguments in Jaminjung, a Mirndi language of Australia, based on prosodic and positional criteria for the identification of topical and focal constituents. The results reveal an interaction of information structure with additional factors corresponding to those relevant for consistently split ergative systems (cf. Malchukov 2015; McGregor 2010): speech act participant status and animacy of the agent, tense/aspect, and the degree of effectiveness of the event on an undergoer. Since 70% of A arguments are ergative-marked this can be regarded as the default; unmarked As can be accounted for by assuming an overarching principle of Economy which allows for omission of case-marking if the A status of the argument expression in question is expected. For example, while As are nearly categorically marked in focus position, the expectation for topics to be As results in the absence of ergative case on around 40% of topical As. Conversely, the expectation for speech act participants to be As makes ergative-marking redundant even in focal position, while the expectation for inanimates to be non-As results in near-categorical ergative marking regardless of information structure. Due to a second principle of *INDEX (Malchukov 2008), ergative marking is frequently absent with state of affairs that are low in effectivenes, and in parenthetical speech framing constructions. The findings show that rather than conspiring to yield "strong" and "weak" arguments, the different factors constitute competing motivations for the presence (or absence) of overt case.

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A parameter hierarchy for the Romance *faire-infinitif*

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Varieties of French, Spanish, Italian, European Portuguese and Catalan have the *faire-infinitif* construction (FI) whereby the complement of some causative verb has (i) dative case on transitive causees (1a-b), (ii) V(O)S order (1a-b), (iii) an animacy requirement on causees, (iv) a ban on reflexive *se/si* causees, and (v) a reduced structure (see Kayne 1975, Guasti 1993, 1997, Bordelois 1974, Zubizarreta 1985, Raposo 1981, Gonçalves 1999, Villalba 1992, 1994):

(1) a. Il fera [boire un peu de vin **à son enfant]** (Fr.)
he make.FUT drink.INF a bit of wine to his child
'He'll make his child drink a bit of wine.'

b. Il fera [chanter **son enfant]**
he make.FUT sing.INF his child
'He'll make his child sing.'

Intensive investigation has also revealed the following micro-parametric differences between languages: (i) passivization and long *se/si* passives (OK in Italian and EP, but not the other languages) (2), (ii) the behaviour of embedded reflexive/anticausative verbs (no *si/se* in Italian or EP, overt *se* in modern Spanish, French, and Catalan) (3), (iii) object clitic climbing (obligatory in Italian, EP and French, optional in some varieties of Spanish and Catalan), (iv) the case of intransitive causes (DAT in some Spanish and French varieties).

(2) O carro foi mandado arranjar aos mecânicos (pelos pilotos). (EP)
the car was ordered fix.INF to.the mechanics (by.the pilots) (Gonçalves 1999)

(3) Il vento ha fatto dissipare/*dissiparsi le nubi. (It.)
the wind has made dissipate/ dissipate=SI the clouds (Zubizarreta 1985)

I propose that alignment in FI is subject to the same parameters of variation seen in ergative languages: Italian and EP are equivalent to high absolutive syntactically ergative languages, Standard French to syntactically ergative mixed absolutive languages, Catalan to morphologically ergative languages and some French and Spanish dialects to split-S systems. This variation in the case/agreement properties of FI can be modelled via the same parameter hierarchy developed by Sheehan (2014, in press) for ergative systems. This is as expected if (a) the causee is introduced by a high Appl in FI, hence the animacy requirement (following Ippolito 2000), and (b) all thematic heads are subject to the same parameters of variation concerning their ability to assign inherent and structural Case and trigger movement.

The parameters in the relevant hierarchy are: **Basic alignment parameter**: Does transitive high Appl assign theta-related DAT? > **Input generalisation:** Does this generalise to all high Appls? > **Feature economy**: Is this restricted to [+volition] high Appls? > **EPP parameter**: Do all Appl_{DAT}s bear an EPP in L? **> Structural Case parameter**: Are Appl_{DAT}'s Φ-features supressed in L?

Obligatory clitic climbing takes place where the embedded object has moved to spec ApplP, a position in which it is c-commanded by the causative but not the lexical verb. Only in Italian and EP where Appl loses the ability to assign a structural Case is the embedded object Case-licensed by the causative verb. This offers a new principled perspective on the different degrees of monoclausality in FI (see Wurmbrand 2015 on voice vs. size restructuring).

Roberto B. Sileo
For the themed session 'Truth-conditions and perspectival meaning'

Truth-value judgments and racial and ethnic language: an illusionary trap and a radical contextualist way out.

Racial and ethnic slurring lexical items, such as "chink", "nigger", or "Paki", pose an interesting challenge for truth-conditional semantics and pragmatics, since their speaker-oriented meanings can sometimes prove difficult to capture by truth and/or falsity assessments. While, at first sight, it would seem reasonable to purport that only a bigot who holds a derogatory attitude towards a certain target can agree with the truth of the proposition expressed by an utterance of "X is a [slur]", the proposal that such a proposition is to be regarded as false (Hom 2008) is not unanimously supported. Based on the view that no human being is to be derogated due to her race, nationality and/or ethnicity, a claim with which I entirely agree, Richard (2008) claims that slurring utterances such as "Only [slur] live here" are not "aptly evaluated in terms of truth and falsity"; while Predelli (2013) suggests that only a given slur's "character" (its nationality component), and not its derogating "bias", contributes to truth-conditional meaning.

My contextualist approach to racial and ethnic slurs stands on (i) the theoretical claim that truth-value assignments may not exclusively derive from the specific lexical items that speakers employ; and (ii) the results of an empirical survey conducted in the United Kingdom: when invited to assign either true, false or neither true nor false truth-values to contextualized slurring statements, participants considered them to be true in 77% of the targeted cases (explanatory comments in the survey evidenced that participants were fully respectful and non-bigot individuals and that they occasionally made false and/or neither true nor false selections as a result of overanalyzing the relevant contexts but not as a result of their respectful and non-discriminatory convictions). In the same way that "painted green leaves" are found, *à la* Travis (2008), to be considered "green" by a decorator and "not green" by a botanist, slurring language may be considered to be false (or neither true nor false) at the level of the output of the syntax (no one is to be derogated because of their nationalities), but true at the level of contextualized communication.

The question is now how contextualist a semanticist can (and should) go. After assessing the relevance-theoretic account (Sperber and Wilson 1995) and Recanati's (2010) truth-conditional pragmatics, I argue that racial and ethnic slurring language is more adequately accounted for by the radical contextualist approach provided by Jaszczolt's (2010) Default Semantics. I claim, in a nutshell, that racial and ethnic slurring language forms embed two well-differentiated components, a nationality-determined layer of meaning, and a personal and affective evaluation, and that both dimensions of meaning are apt to contribute to truth-evaluable propositions, the extent of such a contribution varying from context to context.

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Linguistics Association Lecture 2016

Non-discrete structures in grammar

Paul Smolensky, Johns Hopkins University

A number of long-standing debates in linguistics arise from the insufficiency of any single categorical structural analysis for explaining the full range of empirical facts characterizing a particular phenomenon. In this talk, I argue that for some such phenomena the best analysis involves non-discrete or gradient representations. In such representations an individual structural position is occupied by a blend of multiple symbols active to continuously varying degrees. Such representations can alternatively be viewed as built of symbols each of which occupies a gradient blend of multiple structural positions. This type of representation arises naturally within a grammar formalism deploying Gradient Symbolic Computation, a general cognitive architecture which leverages principles of computation in the brain to make progress on fundamental issues in linguistic theory.

Blocked particle verb movement in German and Hungarian: A unified analysis

Chenchen (Julio) Song, Gonville & Caius College, University of Cambridge

German and Hungarian both have verb movement into the discourse domain (GER: V2-driven; HUN: Focus-driven) and both have separable verbal particles (GER: some; HUN: all). When verb movement takes place, separable particles are stranded (GER: clause-final; HUN: after verb). However, in both languages we observe a peculiar phenomenon--sometimes movement out of particle verb is blocked. This happens to certain types of particle verbs in German (1)-(2) and a specific context (infinitival) in Hungarian (3).

(1) a. **Du meldest uns voran/*anmeldestuns vor/*voranmeldest uns.* (German)
b. *…wenn du uns voranmeldest.*
"…if you preregister us." (Double-Separable-Particle=DSP; Haider 2010: 60)

(2) a. **Spart er bau/*bauspart er?* (German)
b. *…weil er bauspart.*
"…because he building-saves" (Backformation; Vikner 2005: 88)

(3) a. ***Kit*** *hív-tál meg/*meg-hív-tál?* (Hungarian)
whom call-PST.2SG PFV
"**Who** did you invite?" (Finite clause; verb>particle)
b. *Nem tud-tam* ***kit*** *meg-hív-ni/*hívni meg.*
not know-PST.1SG whom PFV-call-INF
"I didn't know **whom** to invite." (Infinitival clause; particle>verb; É. Kiss 2002: 202)

Previous studies have tackled each of these phenomena with different explanations, e.g. OT-style rule conflict (Zeller 2001, Haider 2010), lexical-morphological uncertainty (McIntyre 2002, den Dikken 2003, Vikner 2005), optional verb movement or projection (Bródy 1990, É. Kiss 2008), PF effect (Koopman & Szabolcsi 2000), etc. This study develops a unified analysis from a new perspective. Crucially, we solely rely on one generative engine (Syntax) and one essential operation (Recategorization).

In Distributed Morphology (Halle & Marantz 1993, 1994 et seq.), categorization is the merger of Root and categorizer. We define recategorization as the merger of a categorized unit with another categorizer (cf. Arad 2003). Since categorizers are phase heads (Marantz 2001), we expect some Phase Impenetrability Condition (PIC; Chomsky 2001) effect. Depending on the timing of recategorization, PIC has different manifestations.

We analyze prefixed particle verbs with a double-layer categorizer model, including an initial categorization layer (*v*-√; base verb) and a secondary modification layer (Akt-√; particle). Akt is an extension of the categorizer ("uninterpretable verbalizer") and must be adjacent to *v*. Therefore, in order to accommodate a second particle (as in German DSP), another *v* must intervene, which sends the lower Akt-*v* to Spell-Out and blocks the complex verb in situ. On the other hand, in backformation verbs, another *v* is used to change the existent lexical category and again the complex verb is blocked in situ. What is revealed here is that V2 movement only targets the initial *v*-√ in a workspace, which may have to do with the different types of Merge, i.e. Pair-Merge for initial categorization and Set-Merge for (workspace-internal) recategorization. Only Set-Merge is subject to PIC. In Hungarian, recategorization is the side effect of the infinitive suffix *-ni*, which involves an [N] category (cf. É. Kiss 1987, 2002). This in effect restructures the embedded complex verb into an "argument" of the matrix verb and blocks its internal components from interaction with external syntax. We assume this [V]→[N] recategorization happens in a trans-workspace fashion (similar to initial categorization), where the recategorized infinitive verb is not subject to PIC in the matrix workspace and still mobile as a whole.

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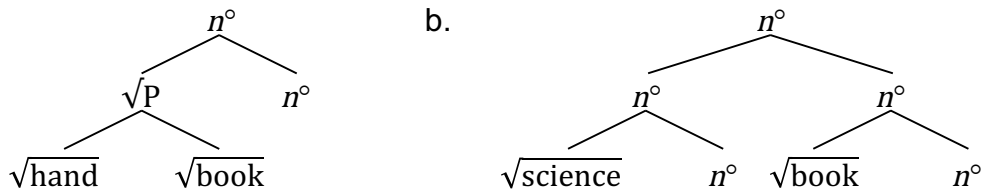
*Recursion of (Root) Compounds

1. Intro. Study of compound nouns sometimes notes a distinction exemplified in (1): the examples in (1a) are more idiomatic (or less decomposable) than those in (1b).

(1) a. handbook, pancake b. science book, chocolate cake

In Distributed Morphology, this distinction can be derived by categorisation of the two morphemes in the compound (here by null *n*°) either after or before they are merged to one another (See Harley 2009, who terms examples like (1a) 'root' compounds):

(2) a. b.



2. In Hebrew grammar, structures akin to (1a,b) are termed *compounds* and *constructs* respectively. In addition to idiomaticity, Borer (2009) provides several syntactic-semantic distinctions between the two structures. I present two, for reasons of space:

(3) batey xolim *Compound* interpretation: 'hospitals'
house$_{PL}$ patient$_{PL}$ *Construct* interpretation: 'houses for patients'

(4) Compounds do not allow a pronominal head. Constructs do:

šney batey xolim ve-**exad** le-yetomim
two houses patients and-**one** of-orphans
*'two hospitals & one orphanage' / ✔'two houses for patients & one for orphans'

(5) Compounds do not allow pronominal reference to their non-head. Constructs do:

Mitat xolim$_1$ ve-beyt-**am$_1$**
Bed patients$_1$ and-house-**theirs$_1$**
*'The patients$_1$' bed & their$_1$ hospital / ✔'The patients$_1$' bed and their$_1$ house'

3. Equivalent English data show this distinction applies crosslinguistically:

(6) a. *Two textbooks & a hand **one** b. ✔two history books & a science **one**

(7) a. *Bob cooked pan$_1$cakes then washed **them$_1$** up
b. ✔Tina read a science$_1$ book as **it$_1$** was her favourite subject

I account for (4-7) with an initial claim, based on (2): $\sqrt{\text{roots}}$ cannot be pronominalised or coreferrent with a pronoun. (Based on Borer, nor can they co-ordinated or elided.)

4. Recursive structures present problems for (2). I present a generalisation about compounds & idiomaticity that has not hereto been identified: *all recursive 'compound' structures are constructs*. (8) tests this with pronominalisation of the compound head:

(8) I bought a sheet music book and a jazz history **one**

Put differently, no three-or-more word 'compound' is idiomatic. This is problematic for DM frameworks in which idiomaticity is derived via categorisation: what prevents merger of additional roots (to the node labelled √P) before merger of *n*°?

I thus propose compound & construct derivation (ie. idiomatic vs. non-idiomatic structures) are governed by rules as in (9) (I use Harley's terminology for consistency).

(9) a. *Compounds*: Root + Root = Phrase b. *Constructs*: Phrase + Phrase= Phrase

5. A consequence of this analysis is that the domain of idiomaticity is simply under the node √P (ie. a node derived by merger of one root to another). Categorisation may thus not bear on idiomaticity, in contrast to, eg. Marantz (1997) and Embick (2010).

Computation and Explanation in Linguistics

Mark Steedman, University of Edinburgh

The talk will claim that computational theory has been (or at least should be) of help to linguists in two ways. First, having to think about how to make the mapping between text and meaning actually work is immensely helpful. The reason it is helpful is that the relation between linguistic form and meaning must in fact be very direct---otherwise children couldn't learn the former by hanging the rules and lexicon of their first language onto the latter, which is what Chomsky assumed (Aspects:32). It doesn't actually seem to matter that we don't really know what the semantics really looks like. Remembering that the semantics of a relative clause can be defined in terms of the computational process of abstraction---that is, as the definition of a property or function in terms of other ones---focuses the study helpfully, in comparison with a purely structural account in terms of movement.

Second, seeing the problem of grammar from the point of view of automata such as the PDA, rather than in terms of static rules, gives linguists access to a much finer-grained view of the degrees of freedom available to the theory of grammar than was apparent from the eternal silence of the infinite spaces between context-free grammars and the more expressive layers in the original Chomsky Hierarchy. In particular, it draws our attention to the more linguistically reasonable Linear Context-Free Rewriting Systems (LCFRS/MCF) and Indexed Grammars (IG), and their respective much more restricted "near context-free" sub systems, Tree Adjoining Grammar (TAG) and Combinatory Categorial Grammar (CCG)

This isn't quite the same as claiming that "grammar formalisms founded on logic, probability or information theory, and neural networks" are linguistic theories in their own right. Linguistics has to start with phenomena, and computation does no more than provide an inductive framework for generalizing about those phenomena, and for comparing the degrees of freedom in the available theories with each other and with the degrees of freedom in the data, much as the calculus did for Newtonian mechanics, or group theory for particle physics.

For example, if the semantically transparent context-free GPSG treatment of long-range dependency in English proposed by Harman and Gazdar had actually covered the full range of long-range dependency phenomena attested in linguistic data, then (despite arguments to the contrary in Aspects:210 and Chomsky 1984) it would clearly have been a theory with very few degrees of freedom indeed in comparison with the transformational theory, since there are many fewer context-free grammars than there are type 0 or type 1 languages, and therefore many fewer constraints that need to be stipulated to capture the class of languages actually attested.

The fact that GPSG failed to capture the full attested variety of multiple long range dependencies should not make us lose sight of the need to limit the degrees of freedom in the theory. What we should try to do instead is to find a computational level that is just more expressive enough to capture the (relatively few) phenomena that are genuinely trans-context-free. The talk will show how, by being computational in this sense, CCG provides such an explanatory theory.

On some surprising contractions in Scots dialects

Gary Thoms, David Adger, Caroline Heycock and Jennifer Smith

It is well-known that the distribution of contracted auxiliaries (CAs) in English is partly determined by syntactic factors: for instance, CAs are impossible when they are followed by a gap or an ellipsis site, as shown by (1).

(1) a. She's late, and {he is/*he's}, too. b. I wonder who {it is/*it is}.

This restriction, which we call the *CA-Gap restriction* (CAGR), holds strongly for speakers of many dialects of English (perhaps all), and its effect has also been detected in quantitative studies of contraction as well (MacKenzie 2012). However in Scots dialects there is one particular structural configuration in which it appears that CAGR is violated: in what we call *discovery tags* (DTs). DTs are made up of a locative element *here/there*, a subject and a finite verb; the verb is typically *be*, as in (2a), but it is also possible with *come* and *go*, as in (2b,c). Word order depends on the subject type: if the subject is a pronoun, the order is typically LOCATIVE-DP-VERB (call these pronoun-DTs); if the subject is an r-expression, the order is LOCATIVE-VERB-DP (call these DP-DTs). DTs are used when a speaker has just located some individual after not knowing where it was until recently, and they are used across the English-speaking world, although there is dialectal variation in the use of TGs with *come* and *go*.

(2) [spotting Tam in a crowd] a. There he is! b. There he goes! c. Here he comes!

(3) a. There's Tam! b. There goes Tam! c. Here comes Tam!

Scots dialects show a range of additional options when it comes to the structure of TGs with the copula. In central belt Scots (CBS), it is possible to repeat the locative element, either after *be* in pronoun-DTs (4a,b), or after the subject in DP-DTs (4c). These seem to be monoclausal structures, as there are no prosodic breaks when CBS speaker produce these examples (unlike with speakers of other dialects), and in the pronoun-DTs the auxiliary typically contracts onto the subject for all subject pronouns. In a subset of CBS dialects (west central Scots, WCS), pronoun-DTs with contracted auxiliaries are possible when the subject is *it* (5a), and within that subset there is another subset of dialects spoken in Glasgow (Glasgow Scots, GS) which allows contracted auxiliaries with all other pronoun types as well (5b-e; to varying degrees).

(4) a. Here it's here. b. Here I'm here. c. There's Tam there.

(5) a. Here it's! b. Here I'm! c. There you're! d. There he's e. There they're!

These fact are remarkable given that the CAGR holds elsewhere in GS.

Analysis: for standard DTs, we propose that the initial locative is a locative predicate which has been moved to a specifier of some X in the CP-domain; we identify X as a mirative complementiser MIR, an evidential-like head which encodes speaker surprise at new information (DeLancy 1997). The subject in DP-DTs is in situ in the vP, much like in locative inversion (Culicover & Levine 2001); the low position for subjects in DP-DTs is shown by the fact that when pronouns occur there, they can't be nominative and the verb has default agreement. We show that *come* and *go* in DTs are light verbs.

(6) [watching a video] a. There's me! c.*There am I! d. *There am me! [etc]

For CBS, we propose that the doubling effect is due to the fact that Scots dialects have grammaticalised fronted *t/here* into an overt MIR head (we support this with evidence of similar particles in the language) which can co-occur with the locative predicate in the base position. In GS we derive (5) from doubling structures with a null locative predicate. We propose a novel account of the CAGR in terms of *Clitic Group formation* (Hayes 1989), and argue that the difference between the null locative predicate and ellipsis/gaps wrt supporting a CA follows from ordering the formation of Clitic Groups before lexical insertion but after ellipsis/copy deletion: with movement/ellipsis, CAs are anomalously grouped with Clitic Groups which subsequently become empty (Anderson 2008), but with a null locative predicate the emptiness of the right-adjacent Clitic Group is 'visible' to the prosodic derivation and so clitic is incorporated leftward.

Syntactic ergativity and word order in Polynesian

Rebecca Tollan (U. of Toronto) & Lauren Clemens (U. at Albany, SUNY)

Overview: This paper argues for a unified account of syntactic ergativity (i.e., A-bar movement restrictions upon ergative (ERG) but not absolutive (ABS) arguments; cf. Deal (2016)) and variable word order in Polynesian. We focus on the closely related languages Tongan and Niuean; while both are morphologically ergative, only Tongan exhibits syntactic ergativity. Extending Coon et al.'s (2014) account for Mayan languages (see also Aldridge (2004)), we argue that the locus of ABS in Tongan is high (T^0), with movement of the ABS argument into a case licensing position (the *v*P phase edge) trapping the ERG argument in situ. In contrast, Niuean ABS is assigned low, by $Voice^0$ (cf. Massam (2006)), such that the ABS argument is not required to move. Crucially, we also claim that this difference in the locus of ABS explains why Tongan, but not Niuean, allows variable post-verbal word order.

Syntactic ergativity in Tongan: While both ERG and ABS arguments relativize with a gap in Niuean (Longenbaugh & Polinsky, to appear), only ABS arguments relativize with a gap in Tongan (1); the ERG subject relative requires a resumptive pronoun (2) (all Tongan data is from Otsuka (2000)).

(1) e fefine$_i$ ['oku 'ofa'i 'e Sione __$_i$]
DEF woman PRS love ERG Sione
'The woman who(m) Sione loves'

(2) e fefine$_i$ ['oku ***(ne)**$_i$ 'ofa'i 'a Sione]
DEF woman PRS RP love ABS Sione
'The woman who loves Sione'

Niuean and Tongan also differ with respect to which arguments participate in raising: in Niuean, either the ERG or ABS argument may raise out of an embedded clause (Seiter, 1980). In Tongan however, only ABS may raise; ERG cannot (Otsuka, 2000).

Analysis: In Niuean (3), both core arguments receive case from $Voice^0$. In Tongan (4), the object moves into a local configuration with T^0 – the *v*P phase edge – in order to check ABS case, blocking the ERG argument from moving out of the *v*P.

(3) Niuean: [$_{TP}$ T [$_{vP}$ [$_{VoiceP}$ *SUBJECT* Voice$_{ERG,\ \mathbf{ABS}}$ [$_{VP}$ V *OBJECT*]]]]

(4) Tongan: [$_{TP}$ T$_{\mathbf{ABS}}$ [$_{vP}$ *OBJECT* [$_{VoiceP}$ *SUBJECT* Voice$_{ERG}$ [$_{VP}$ V <*OBJECT*>]]]]

The high ABS approach to syntactic ergativity in Tongan is supported by the difference between Tongan *v*P and TP coordination: a syntactically ergative coordination pattern (cf. Dixon, 1994) arises in the latter only (Otsuka, 2000), suggesting that T^0 (or some element above *v*P) is responsible for the observed ERG-ABS asymmetries.

Word order: In transitive clauses with two DP arguments, Tongan (5-6) allows VSO/VOS word order, while Niuean (7-8; data from authors' fieldnotes) is strictly VSO.

VSO
(5) Na'e 'ave 'e Sione 'a Mele
PST take ERG Sione ABS Mele

(7) Kua kai he tama e niu
PFV eat ERG child ABS coconut

VOS
(6) Na'e 'ave 'a Mele 'e Sione
PST take ABS Mele ERG Sione
'Sione took Mele'

(8) *Kua kai e niu he tama
PFV eat ABS coconut ERG child
'The child ate the coconut'

As shown in (4), the *base* position of the Tongan ABS object follows the subject, whereas the *case* position precedes it. We maintain that the object can be pronounced in either of its syntactic positions (with the choice governed by pragmatic factors).

Discussion: This paper contributes to research suggesting that syntactic ergativity arises (at least in some languages) from the locus of ABS, as opposed to the properties of ERG directly (cf. Polinsky, to appear), and illustrates how this may affect word order.

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Encoding Perspective

George Tsoulas (University of York)

Introduction: Natural languages provide a range of means to encode perspective. Particles and more specifically those called discourse particles or markers are one major class of such elements. In this paper I address in some detail two classes of particles in Greek. The literature on particles in general takes them to be small, deficient elements (they dont project, select, inflect, or assign case) occupying fixed positions in the sentence that spell out a single feature (Biberauer and Sheehan 2011, Biberauer et al, 2014) and cannot be accounted for in terms of sentence grammar. Here, we look at certain particles of Greek which, when analysed in detail appear to be complex elements whose meaning seems to be a combination of perspective and evidentiality.

The Data: We begin by looking at the simplest particles of Greek namely E and A. The observation here is that while E can appear both at the beginning and end of a sentence, the particle A can only appear at the beginning. Furthermore, we note that the E particle is addressee oriented in that its use both in sentence initial and final position either invites a response or presents the propositional content (but not form) from the perspective of the addressee. It also has a pure vocative use. The particle A on the other hand has no vocative use, and invariably encodes the speakers perspective and attitude and invites no response from the addressee. It appears then that there are specific syntactic patterns (inversion or slifting) that correlate with the appearance of particles that encode speaker or addressee perspective. Casting a wider net, closer inspection of the most common particles in Greek reveals that they fall into two classes depending on whether they include E or A in their morphological composition. Keeping things to a restricted set, we have on the addressee based particles side: Re (Indicating that the proposition associated with it contradicts the default assumptions of the addressee, see Tsoulas and Alexiadou 2006 for a more detailed account of this particle in these terms), Vre (Similar to Re but indicating greater familiarity), De (suggesting that the addressees point of view has greater relevance and power) (this particle only appears sentence-finally) , Ne(Yes). On the speaker oriented side: Na(deictic, modal (irrealis), Dha_1 (exhortative), Dha_2 (deictic), Dha_3 (intensifying), Ma_1 (used in oaths), Ma_2 (but) Ba(negative), Tha(futurate) etc.

Analysis: We propose that Greek particles are complex elements composed, in general, of at least two heads. One of these heads is the perspective encoding head whose morphological exponents are e and a, addressee and speaker respectively. This head is selected by a higher element which is an evidential/attitudinal or modal head. The meanings are derived as the composition of the evidential or attitude element (whatever it may encode) and the perspective head which encodes the source of evidence or holder of the attitude. Evidence for this approach comes from the fact that the distribution of the complex particles coincides with that of the only other clearly evidential element of Greek, namely *lei* (litt. says) (See Tsnagalidis 2010). Roughly, they attach to all major constituents of the sentence as modifiers. The analysis suggests that the complex particle does not merge in the specifier of a clausal spine evidential head but rather, as an evidential in itself it distributes much more like a free adverb. There are few exceptions to this pattern. The more interesting ones involve the modal particles Na (which marks irrealis/subjunctive) and Tha which is a future marker. For these cases we propose the following: The modal head (M) hosts the true modal part of the particlem N- and Th-. The perspective encoding head is immediately below it. Most importantly, the perspectival element is not in a fixed position, it can be selected by anything that requires it and can host it. To summarise: Greek encodes perspective overtly in the form of the elements e and a which can appear as free morphemes with very restricted distribution, and as parts of complex particles encoding a variety of meanings within the attitude/evidential range, modality, and deixis. Syntactically we see that perspective should not be tied to a single position but is rather free to attach to whatever can receive it.

The morphological effect in British English t/d-deletion

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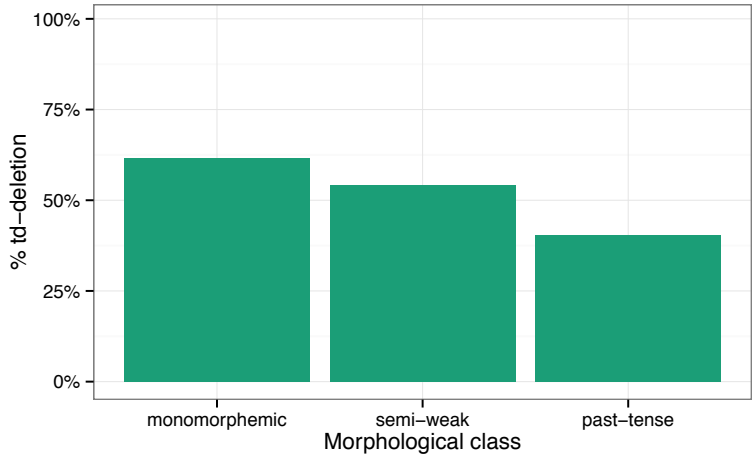
Despite t/d-deletion's position as the most frequently studied variable in variationist linguistics, there is little discussion regarding the reported lack of morphological effect for British English. Since Guy (1991), many studies of American speech communities have replicated the effect that monomorphemes (e.g. *mist)* delete t/d more frequently than past-tense forms (e.g. *missed)*. However, this effect has not been found in previous studies of British English. Tagliamonte and Temple (2005) were the first to report the absence of this, on their 40 speakers from York, (although a weak, non-significant trend could be observed in their data). Sonderegger et al.'s (2011) study of 10 reality TV show contestants (based, but not necessarily born in the UK) showed a small effect of morphological class, but this disappeared once preceding segment was accounted for in statistical models.

Our large-scale study is based on a sample of 95 speakers of Manchester English, stratified by age, gender, socio-economic status, and ethnicity. The informants were recorded during sociolinguistic interviews, supplemented with word list reading. Five socio-economic levels, based on occupation, are distinguished (from lower-working to upper middle). The data is auditorily coded and are subjected to mixed-effects modelling in R, with fixed effects including linguistic factors (morphological status, preceding and following sound, voicing), and social factors (age, gender, socio-economic status, ethnicity, style), with speaker and word included as random effects. Zipf-scaled frequency measures are taken from SUBTLEX-UK (van Heuven et al. 2014).



The results show the existence of the morphological effect between monomorphemes and past-tense forms (See Figure). This effect is robust, and remains when preceding segment is introduced into the model, alongside the effects listed above. Voicing, following and preceding segment are also significant. We conclude that previous studies may have been premature in their dismissal of the morphological effect, and that the effect may emerge with large enough datasets representing a coherent speech community. We also discuss the possibility that different speech communities may merely show different levels of conditioning. This argument is supplemented by the presence of an interaction of age and morphological class. Younger speakers in Manchester show higher rates of t/d-deletion, but only in monomorphemes. This effect is interpreted with reference to cyclic levels (Guy 1980) and the life cycle of phonological processes (Bermúdez-Otero 2014), in that a phonological process starts by applying at lower levels of the grammar e.g. at the word level *(*affecting *missed* and *mist)*, over time it may moving up to the stem level *(*affecting *mist* only). Thus, we would predict changes in progress to be closer towards completion at lower levels e.g. the word level. Monomorphemic *mist* has deletion at stem and word level (and phrase), which explains the higher rates. That is, speakers of all ages t/d-delete at the lower levels of the grammar, whereas younger speakers have advanced this change to higher levels.

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The Typology of the Distribution of |ʔ|: the propensity for bipositionality

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Ontena Gadsup (OG) appears unique in defying the absolute phonological universal that the inventories of all languages must contain oral stop consonants.

(1) OG inventory (Frantz 1994): Group 1 - ɸ, β, s, r, x. Group 2 - m, n, j, ʔ

Consonants of Group 1 surface as [p,b,t,d,k] post-consonantally: after a homorganic nasal [N_] and a glottal stop [ʔ_]; there are no alternations. We propose a two-step diachronic process: *intervocalic spirantisation* and *initial weakening*. Crucially this excludes a unified weak environment: {V_V, #_}.

In fact, confirmation of this diachronic hypothesis comes from the related Akuna dialect of Gadsup (AG), a language whose inventory contains no underlying fricatives (apart from [β]).

(2) AG inventory (Frantz 1964): Group 1 - p, t, d, k. Group 2 - β, m, n, j, ʔ

In AG post-vocalic spirantisation affects all stops. Stops are preserved in post-consonantally (as in OG). AG has only the beginnings of initial weakening (it is an independent process).

In terms of Element Theory (Backley 2011), stops and nasals both contain an 'occlusion' feature known as '*edge*': |ʔ|. In stops, *edge* is headed, while in nasals it is not. Fricatives do not contain *edge*. The peculiarity of OG therefore revolves around the distribution of the headed *edge* element. That in OG *edge* may only be found in post-nasal or post-glottal position is equivalent to saying that *edge* is only licensed in structures where it branches across two positions (head on the right - consistent with TG (Charette 1990)).

The hypothesis that *edge* must occupy two positions is reminiscent of Jensen (1994), Pöchtrager (2006) and Pöchtrager & Kaye (2013), but, unlike these analyses, it is not a necessary condition on interpretation - it is not universal. Rather, there is a language specific *licensing constraint* (Charette and Göksel 1998) that regulates the presence of *edge*. The hypothesis extends into a typology of the distribution of |ʔ|. There are two grand classes:

Type A	|ʔ|	is licensed by being bi-positional	OG, Berber
Type B	C.C	is licensed by branching *edge* |ʔ|	'Prince languages', Soninké

Type A languages can only have *edge* in bi-positional structures. Stops cannot be found as initial or medial singletons, or after any consonant apart from nasals and glottal stops. It would appear that the spirantising dialects of Berber (e.g. Tarifit, Tamazight, Kabyle and some varieties of Tashlhiyt) are also of this type, where stops never spirantise after nasals nor in geminates (Kossmann & Stroomer 1997, Louali-Raynal 1988). Conversely, Type B languages can have *edge* in singleton positions both initially and medially, but whenever there is a bi-positional/dependency relationship ('heterosyllabic', transconstituent government, C.C) both positions *must* contain *edge*. In these languages there are initial and singleton stops, but the only CCs are nasal-stop clusters or geminates (cf. 'Prince Languages'). This type of *edge* licensing will be demonstrated in the Kingi dialect of Soninké (cf. Creissels 2016).

We conclude that in both Types there is a positive relationship between *edge* and bi-positionality; either *edge* is licensed by being bi-positional (branching), or bi-positionality is only possible if there is *edge*. While bi-positionality of *edge* not universal, the variation in *edge* is neither random nor logically exhaustive, therefore it does have value in terms of phonological universal grammar. Indeed, in no language is *edge* explicitly restricted in mono-positional structures. Ultimately this echoes Honeybone's notion: sharing makes us stronger (2005).

Parasitic gaps, depictives, and the nature of the A/Ā-distinction

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1. Summary. Only Ā-movement is capable of licensing parasitic gaps (1a–b).

(1)a. What did Kim file _ [after buying _]? b. *The paper was filed _ [after buying _].

As Pylkkänen (2008) observes, depictives have the ***opposite*** distribution:

(2)a. *Who$_i$ did Sam dance with _ drunk$_i$? b. Ted$_i$ was danced with _ drunk$_i$.

This is surprising if parasitic gaps and depictives involve **predicate conjunction** (Nissenbaum 2000; Pylkkänen 2008). This talk uses this contrast to argue that A- and Ā-movement have the same syntax (both involve intermediate movement), but differ in the type of ***predicate*** they create. Specifically, drawing on Sauerland (1998), I suggest that Ā-movement abstracts over *choice functions*, and A-movement over individuals.

2. Nissenbaum (2000). Nissenbaum proposes that parasitic gaps appear because intermediate movement to *v*P and operator movement in an adjunct both trigger λ-abstraction over individuals. The resulting predicates may be conjoined to form a single predicate. Two problems arise under this analysis, however: 1) such adjuncts should combine with V and *v'* also, and license an operator gap from a thematic position, and 2) intermediate A-movement to *v*P should be able to license parasitic gaps as well.

3. Pylkkänen (2008) on depictives. As Pylkkänen observes, depictives may modify thematic positions, but not all indirect objects or complements of prepositions:

(3)a. Sam$_i$ told Ted$_k$ the news drunk$_{i/*k}$. b. Sam$_i$ danced with Ted$_k$ drunk$_{i/*k}$.

Pylkkänen points out that A-movement of these DPs (4a) , including intermediate A-movement (4c), allows for depictives to be licensed, but not Ā-movement (4b).

(4)a. Ted$_k$ was danced with _ drunk$_k$. b. *Who$_k$ did Sam dance with _ drunk$_k$?
c. Ted$_k$ turned out [$_{TP}$ _ to have been told _ all the secrets drunk$_k$].

Following Geuder (2000), Pylkkänen analyzes depictives as <e,st> predicates, which attach to V or *v'* and form a conjoined predicate via Predicate Modification. If A-movement involves intermediate movement to *v*P (*cf.* Legate 2003), forming a predicate, A-movement can also license a depictive. We now have the opposite problem as with parasitic gaps: Ā-movement too should license a depictive. Compounding this problem, Pylkkänen notes that parasitic gaps can be licensed *inside of a depictive* (5).

(5) Which country did he die for _ [still loyal to _]? (Pylkkänen 2008:40)

4. Choice functions and Ā-movement. To account for these patterns, I propose that what distinguishes A- and Ā-movement is that they create ***different predicates***. Following Sauerland (1998), and Ruys (2000), I propose that Ā-movement involves abstraction over *choice functions*. *Wh*-phrases, for instance, are existential quantifiers over choice functions (*cf.* Reinhart 1998). To interpret Ā-movement chains in this way, two operations are necessary: 1) (distributed) deletion of the NP restrictor in the higher copy, and 2) replacement of the quantifier *which* in the lower copy with a choice function variable. This syntax and the associated LF are represented in (6).

(6) [which ~~book~~] λf. do you like [f book] **LF:** $\lambda p.\exists f.(p = \lambda w.$you like f(book) in $w)$

This explains why intermediate Ā-movement cannot license depictives, since no predicate over individuals is formed. This account also fares well with split scope, conservativity (Abels and Martí 2011), and Weak Crossover (Sauerland 1998; Ruys 2000).

5. A choice function analysis of parasitic gaps. For parasitic gaps, I propose that operator movement, like other instances of Ā-movement, creates abstraction over choice functions. The resulting predicate can be conjoined only with a predicate created by intermediate Ā-movement (8), just as in Nissenbaum (2000). I posit an NP restrictor that moves along with the null operator OP and undergoes *deletion under matching*, as in the analysis of matching relative clauses (e.g. Sauerland 1998).

OCP-driven Local Ordering in Korean Ghost Language

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Anderson 1969 identified a problem for the Strict Ordering assumption of rule-based phonology (RBP, Chomsky and Halle 1968) in Icelandic and Faroese, wherein certain rules appear to apply in different orders for different forms, depending on which order is transparent for the derivation in question. Anderson dubbed this phenomenon Local Ordering; similar analyses were then proposed for French (Dell 1970), Sanskrit (Anderson 1970), Kasem (Newton 1971), Balto-Slavic (Darden 1972), Sundanese (Howard 1972), and Greek dialects (Kaisse 1976). Though Local Ordering was computationally possible in RBP, its existence sat uneasily with phonologists at the time and led to a series of alternative analyses involving rule reformulation (Phelps and Brame 1973), Rule Scattering (Bley-Vroman 1975, Robinson 1976, Darden 1978, Bermúdez-Otero 2010), and OT with candidate chains that interleave phonological and morphological operations (Wolf 2011). At least some of the phenomena in question could also be argued to involve historical residue rather than synchronic interactions.

We suggest that one variety of the Korean ludling Ghost Language (Gim 1987, 2011) revealed in a survey of speakers of the game involves a novel form of local ordering wherein pairs of rules appear to be reordered not to maximize transparency, but rather to avoid sequences of identical elements. This sort of effect is of phonological interest not only because it appears to involve a different mechanism than the other cases adduced in the literature, but also because it cannot be explained away as historical residue and does not submit readily to rule scattering or the other mechanisms mentioned above.

This game, also called Ogre Language (Gim 2011) or Stutterer (Gim 1987), inserts after each vowel in a word a fixed consonant (typically *p*, though any consonant can be chosen) followed by a copy of the vowel, and (in the version on which we focus) deletes any Coda consonants following it, as in /k'aŋts^{h}oŋ/ 'hopping' → [k'apats^{h}opo]. The ludling rules must follow the regular processes of Fortition (which for example changes /hakkyo/ 'school' to [hak.k'yo]) and word-level Syllabification (which for example changes /salm-i/ to [sal.mi]), as /hakkyo/ → [hapak'yopo] not *[hapakyopo], and /salm-i/ → [sapamipi], not *[sapaipi].

Interestingly, when the fixed consonant is identical to one of the consonants in the base form, the ordering of the ludling processes can change. Insertion of -k'V- in /hakkyo/, for example, should yield *[hak'ak'yok'o], but actually produces [hak'akyok'o], where it appears that the ludling bleeds Fortition. Similarly, insertion of -mV- with a form such as /nim-i/ should give *[ni.mi.mi.mi] but instead produces [ni.mi.i.mi], where the ludling bleeds word-level Syllabification.

We analyse the above facts in terms of an OCP constraint on sequences of identical syllables (which is otherwise unmotivated in Korean) spontaneously surfacing in our speakers' version of Ghost Language. This effect is not straightforwardly attributable to diachronic effects, rule scattering, or Wolf's (2011) Optimal Interleaving, suggesting that Local Ordering may in fact be a legitimate synchronic phonological effect that must be generatable by the phonological component. This finding is problematic for encapsulated derivational frameworks such as RBP, because it appears to require look-ahead power and trans-derivational comparison, as well as for most forms of Optimality Theory, because it involves mutliple rankings (or orderings in OT-CC/Harmonic Serialism) that are not easily explained in terms of tied/overlapping constraints, co-phonologies, or PREC constraints.

Embedding (un)selected clauses

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Rosenbaum's (1967) conjecture that a nominal element may introduce sentential complements has been explored from various perspectives (e.g., Kiparsky & Kiparsky 1971, Stowel 1981, Abney 1987). In recent terms, the upshot appears to be this: a functional D-layer, with the semantics of either a definite element or a Negative Polarity Item (NPI), may sit on top of the C-system of certain types of clausal complements (e.g., Adger & Quer 2001, Alrenga 2005, Arsenijević 2009, Kayne 2010, Roussou 2010, Takahashi 2010, Knyazev 2016).

Here, I will claim that the D-layer may also feature the semantics of an indefinite, and demonstrate the empirical power of this claim by unifying three seemingly unrelated constructions: *wh*-slifting (cf., (1)a; Kayne 1998, Haddican et al. 2014), (sequential) scope-marking (cf., (1)b; Dayal 2006), and long-distance *wh*-movement (cf., (1)c; Chomsky 1977).

(1) a. [$_{CP1}$ Where did she go], [$_{CP2}$ do you think]?
b. [$_{CP1}$ What do you think]? [$_{CP2}$ Where did she go]?
c. [$_{CP2}$ Where$_j$ [$_C$ do you think [$_{CP1}$ t$_j$ [$_C$ she went t$_j$]]]]?

(1)a combines a *wh*-question (CP1) with a yes/no question (CP2), each having root properties (see the subject-auxiliary inversion). I will propose that CP1 is hypotactically linked to CP2 (partly reviving Ross's 1973 transformational account, and against Haddican et al.'s 2014 parataxis approach), as in (2):

(2) [$_{CP2}$ [$_{DP}$ [$_{CP1}$ Where did she go]]$_j$ [$_C$ do [$_{TP}$ you [$_{vP}$ think t$_j$]]]].

Think, in (2)*,* selects D, to which CP1 adjoins. D moves to Spec,CP2 (for reasons that will become obvious shortly), pied-piping CP1; hence, the surface linear arrangement in (1)a. Despite its subordination, CP1 bears root-properties as it is not lexically selected (by *think*) (den Besten 1983; Kayne 1982, 1983; Rizzi & Roberts 1989; McCloskey 2006).

Two pieces of evidence will corroborate the analysis in (2): first, *wh*-slifting violates typical patterns of clausal complementation (e.g., Grimshaw 1990). This means that CP1 cannot be the complement of *think*. Second, CP1 behaves like "dislocated" CPs that are adjoined to nouns, in terms of binding (e.g., Moulton 2009, Takahashi 2010): it meets condition A, but bleeds condition C. In present terms, this means that CP1 modifies D.

Dayal (2006) treats sequential scope-marking (cf., (1)b) as syntactically variant of, but semantically equivalent to, typical scope-marking constructions of the Hindi/German kind: *what* in CP1, namely a D-element, originates as the argument of *think*, and moves to Spec,CP1 in order to mark the scope of CP2. Semantically, the scope-marker *what* is an indefinite term, as it denotes a set of propositions, restricted by CP2.

Comparing *wh*-slifting and sequential scope-marking, I will argue that (2) extends the syntactic variants of scope-marking, yielding the same semantics (a view prefigured in Kayne 1998). That is, D in (2) is the null counterpart of the scope-marker *what* in (1)b, takes CP1 as its restriction, and moves to Spec,CP2 (pied-piping CP1) for scope-marking reasons.

Finally, I will extend the above treatment to long-distance *wh*-movement in (1)c, which, as I will argue, differs from the other two constructions only in terms of how D projects: in *wh*-slifting and sequential scope-marking, (null) D merges externally (first merge), while in long-distance *wh*-movement, D merges internally (movement from within CP1). This is schematized in (3), which substitutes for (1)c.

(3) [$_{CP2}$ Where$_j$ do you think [$_{DP}$ t$_j$ [$_{CP1}$ she went t$_j$]]]?

(3) says that (long distance) *wh*-movement proceeds through Spec-D, and not Spec-C, as is standardly assumed (Chomsky 1977). Unlike the standard treatment of *wh*-movement, the present account motivates *wh*-movement to intermediate landing sites in a principled way: a *wh*-element merges at the intermediate Spec-D for scope-marking reasons. *Wh*-movement makes CP1 in (3) transparent to lexical selection by *think*, hence the lack of root-properties.

How EFL learners resolve ambiguous non-rhoticity in spelling

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Accents of English can be divided into “rhotic” and “non-rhotic” on the basis of the phonotactics of /r/ (Wells 1982). Homophony may arise in non-rhotic accents in pairs or groups of words which remain distinct in rhotic accents due to the presence of /r/, e.g. *caught–court*, or *Stella–stellar*. The loss of coda /r/ in non-rhotic accents is not reflected in the spelling. Consequently, native speakers of non-rhotic accents may fluctuate in their spellings associated with the two vowels in new/less familiar words, an effect investigated by such studies as Treiman & Barry (2000) or Treiman et al. (2007). There seems to be a dearth of similar studies using non-native subjects. However, some authors (e.g. Jenkins 2000) recommend a rhotic model for L2 instruction expressly to avoid the ambiguity.

This study is an exploratory investigation into how the NORTH and lettER vowels (as per Wells 1982) are spelled by advanced Polish learners of English when the rhoticity of the context and of the target pronunciations is manipulated. Note that Polish is “rhotic” in the sense of allowing coda /r/ and consistently representing it in spelling.

Sixty first-year students in an English major programme at a Polish university took part in a listening task. All of the participants were taking part in an advanced English Pronunciation course (part of a larger EFL course) and in an English Phonetics and Phonology course. The materials and teachers in these courses are divided into two tracks, with so-called “American” and “British” groups. Non-rhoticity and its relation to spelling is discussed in both of the courses.

The task consisted of two blocks of forty repetitions of the sentence “The next word is ___”. Two native speakers were used, one rhotic, speaking an accent close to General American, and one non-rhotic, speaking Standard Southern British. The participants were asked to complete the gap using a spelling that they thought best represented the pronunciation. Note that the carrier sentence was designed so as to divulge the identity of the speaker as rhotic or non-rhotic, since it contained the “give-away” word *word*. To minimize familiarity and frequency effects, non-words were used as target words. Twenty-two targets were used, such as /ɔː(r)p/, /rɪˈvɔː(r)pɪŋ/ and /ɪnˈzoʊdə(r)/. For the rhotic speaker, each of the target words was recorded in both an /r/-less and /r/-ful form, e.g. both /ɪnˈzoʊdə/and /ɪnˈzoʊdər/. The responses were scored for the presence of of <r> in the spelling.

It was hypothesized that (1) /r/-ful pronunciations would lead to <r>-ful spellings, and /r/-less pronunciations – to <r>-less spellings; (2) for /r/-less pronunciations, the “British groups” would choose <r>-ful spellings more often than the “American groups”; (3) <r>-ful spellings would be used more often for the non-rhotic speaker.

Preliminary results show that a full 100% of rhotic pronunciations were decoded successfully (i.e. spelled with <r>). However, /r/-less pronunciations generated surprisingly high levels of <r>-ful spellings (50-60%). A multiple logistic regression using Rbrul was run on the /r/-less pronunciations. The best model included all the available predictors (participant group, vowel and speaker). The “British groups” were indeed more likely to use <r>-ful spellings but only for the non-rhotic speaker. Unexpectedly, the /r/-less pronunciations of the rhotic speaker were more likely to generate <r>-ful spellings. NORTH was more likely to generate <r>-ful spellings.

That's that construction analysed: *that be* 'resultatives' in Scottish English

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Phenomenon. Many varieties of English allow the 'that be DP XP' construction in (1):

(1) a. That's you told. b. That's Christmas over. c. That's the car repaired.

The meaning is roughly that the 'state' named by the postcopular phrase has 'just come about'. In most dialects of English, the XP has to be a 'result state passive' (Kratzer 2000, Embick 2004) – one argument, with 'completion' as part of the meaning of the participle. However, in some dialects including Scottish English (Miller 2003, 2004), the XP need not have any explicit 'completion' in its meaning (2a). Furthermore, the XP can be active voice (with two arguments) and can be perfect or progressive (2b, c).The XP cannot be 'bigger' than a participle – finite forms are not possible (2d).

(2) a. That's me on the train. b. That's him cooking dinner now.
c. That's him left the school now. d. *That's him cook(s) dinner now.

The construction is not synonymous with the perfect (in any dialect); (1b) is not so paraphrasable (#*Christmas has been over*), and (2b) ≠ *He has been cooking dinner.*

Syntax. The construction resembles non-predicative copular sentences, most closely identificational sentences which also use *that* as subject (Higgins 1973). E.g. in both constructions, extraction is degraded (3), and negation is degraded except 'metalinguistically' (4). There is also a parallel in the use of the pronoun *it* (5).

(3) a. *What is that a teacher of *t* ? b. *What is that him cooked *t* ?

(4) a. That isn't a teacher ??(, is it?) b. That's not him cooked the dinner ??(, is it?)

(5) a. Is that the mayor? – Yes, <u>it</u> is. b. Is that you done? – Yes, <u>it</u> is (me done).

Adapting the syntax for non-predicative copular sentences in Heycock 2012, I propose that in sentences like (1) a functional head F selects a result state passive phrase, $Asp_R P$ (Embick 2004), as complement, with *that* in the specifier. FP is then complement to a copula (with *that* raising to subject position) as in (6).

(6) [be [$_{FP}$ that F [$_{AspRP}$ the car repaired]]]

To capture dialect variation, I propose that (this kind of) F has greater selectional flexibility in ScotE; in most Englishes, if F selects a participle, it can only select a result passive ($Asp_R P$), but in ScotE it can select other participial categories (e.g. perfect or progressive (2b, c); 'pure' statives as in (2a) could correspond to Embick's $Asp_S P$).

Semantics. I follow a version of Romero 2005 and Heycock 2012's semantics for specificational sentences. I argue that the subject *that* has the same meaning as it does in (7) – 'the moment just past'. I analyse *that* as a temporal anaphor, an individual concept which maps the situation of evaluation to a salient moment immediately preceding it. As with all anaphora the pragmatics determines which moment is 'salient'.

(7) Well, <u>that's 7 p.m.</u> and the pizza guy's not here yet.

(8) ⟦that⟧ = λs. ıt. t is a salient moment just before the start of temporal extent of s

The aspectual phrase denotes a property of times. I assume this can be coerced (e.g. via a covert choice function) into some time t' that satisfies the property. F then has the semantics in (10) (after Romero) – the moment 'just past' is equated with t'.

(9) ⟦him left the school⟧ = $\lambda t_i.\ \lambda s.\exists e.$ leave(school)(him)(e)(s) & τ(e) < t
(via coercion/choice function) → t' (i.e. some moment after his leaving school)

(10) ⟦F⟧ = $\lambda t_i.\ \lambda \underline{x}_{<s,i>}\ \lambda s.\ \underline{x}(s) = t$

(11) ⟦ that [F him left the school] ⟧ = λs. the moment 'just before' s = t'

An utterance of (2c) therefore means that the moment just before the utterance situation was one after his leaving the school. This doesn't quite capture the 'just now'/'inchoative' meaning; I argue that this arises as an implicature. Note that it is cancellable (e.g. the 'phone home' scenario in (12)) – which is not true for *(have) just*.

(12) That's me on the train. In fact I've been on for a while.

(13) I (have) just got on the train. #In fact I've been on for a while.

Phonological Encoding of Complex Prosodic Structures in L2 English Speakers

Hilary Wynne, Linda Wheeldon, Aditi Lahiri

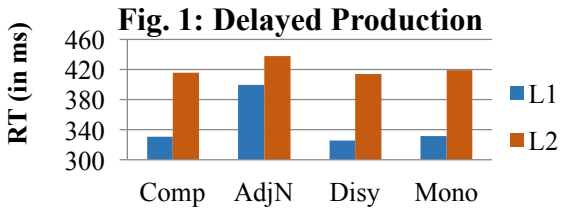
There is increased evidence that prosodic rather than lexical structure governs phonological encoding processes in language production. The claim that compounds are treated as single prosodic units in both native (L1) and non-native (L2) speakers is supported by evidence from prepared speech tasks, picture-word experiments (Janssen et al. 2008), and implicit priming tasks (Jacobs and Dell 2014). However, little is known about how clitics function with compound words: if speakers plan compounds as single phonological units, then it follows that clitics should attach to these units in the same way as they attach to monomorphemic words. Our research question is as follows: how do clitics attach to compounds in L1 and L2 speakers of English during phonological encoding?

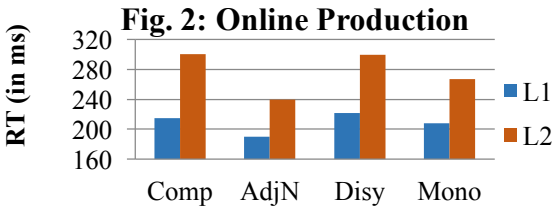
To examine this, we conducted four naming tasks containing the following English stimuli: noun-noun compounds, adjective-noun phrases, disyllabic initial-stressed words, and monosyllabic words. All target items were presented in the plural, e.g. *dishcloths*, and the auditory prompts (e.g. *What are dry?)* were as to encourage reduction and attachment of the auxiliary *are* in responses: e.g. *dishcloths are dry*.

Comp	AdjN	Disy	Mono
dishcloths	*drab cloths*	*donkeys*	*ducks*

Two groups of speakers participated 50 native British English speakers and 50 native Bengali speakers fluent in English. Experiments 1 and 2 presented the stimuli in delayed task conditions (Fig. 1) to both speaker groups, while Experiments 3 and 4 used online task conditions (Fig. 2).

In the delayed tasks, the adjective-noun condition elicited significantly longer latencies in both L1 (400 ms, t=10.63) and L2 speakers (448 ms, t=4.2) than the compound condition, which showed no difference in either speaker group (all t's < 2.00) compared to the other conditions. The online task results showed significantly shorter latencies for the adjective-noun condition (190 ms, t=-2.40 in the L1 speakers; 240 ms, t=-10.51 in L2) compared to the compound and disyllabic conditions, while the monosyllabic word condition elicited slightly longer latencies in both speaker groups





(208 ms, t=-2.41 for L1, and 267 ms, t= -6.52 for L2). In the delayed tasks, latencies reflected the total number of prosodic units in the target sentence. In the online task, however, speech latencies only reflected the complexity of the *first* prosodic unit. In all four experiments, we found evidence that both L1 and L2 speakers of English treated compounds as single prosodic units, to which the reduced auxiliary *are* attached. Our findings lend support to the claim that it is in fact the prosodic structure (not the lexical or morphosyntactic structure) of the utterance that is dictating the arrangement of prosodic frames during phonological encoding.

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Janssen, N., Pajtas, P. E., and Caramazza, A. (2014). Task influences on the production and comprehension of compound words. *Memory & Cognition*, 42(5):780–793.

Cross-linguistic influences on the acquisition of metaphorical expressions

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This study aims to explore possible cross-linguistic influences on the acquisition of conventionally used metaphorical expressions by Chinese learners of English at different levels of proficiency. In this study, "metaphorical expressions" refer to the lexical items that are used to deliver conventional meanings that depart from their literal, core meanings, such as sentence (b) in the following example:

(1) a. He attacked a passenger with a stick. (literal)
b. He attacked my theory. (metaphorical)

In the view of lexical semantics (e.g. Sweetser 1990), the word "attack", together with other metaphorical expressions, should be regarded as polysemous, because it has two different but closely related meanings.

Previous literature on cross-linguistic influences (e.g. Jordens and Kellerman 1981) and bilingual lexicon (De Groot 1992) makes different predictions regarding the transferability of metaphorical meanings of a lexical item comparing with the literal meaning. In particular, it is not clear whether learners have acquired the conventionally used metaphorical meanings that are different from their L1, and whether they are able to derive and/or acquire the metaphorical meaning in a non-guided way when they already acquired the literal meaning of the same lexical item.

Three different conditions are examined in the study: (1) metaphorical expressions shared between the L1 and the L2 of learners, (2) metaphorical expressions available in the L1 but not in the L2, and (3) metaphorical expressions available in the L2 but not in the L1. An acceptability judgement task with sentence correction components was used to examine whether the learners accept different types of metaphorical expressions, and how they correct the incorrect use of metaphorical expressions. An additional survey of psychotypology was also included in the study to discover whether the distance between English and Chinese as perceived by the participants would influence learners' judgement of transferability of metaphorical expressions.

Preliminary results show that the acquisition of metaphorical expressions resides in between the acquisition of literal meanings of lexical items and that of idioms that are semantically opaque. While the participants generally perceive that English is a remote language from Chinese, they are able to discriminate expressions available in different languages, demonstrate various types of cross-linguistic influence, and select different strategies when correcting the given expressions. While participants' general proficiency is an important factor for cross-linguistic influence, it influences the acquisition of metaphorical expressions in an imbalanced way when learners encounter language-specific metaphorical expressions. An asymmetry between the acquisition of literal meaning and metaphorical meaning of a lexical item is also observed, which is shown by the lower acceptability of metaphorical expressions that are available in both the L1 and the L2 in comparison to the literal counterparts.

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Tones and Tunes in Tianjin Mandarin

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This paper investigates the tunes of statements and intonational yes-no questions in Tianjin Mandarin, a northern dialect of Mandarin. Tianjin Mandarin has four lexical tones, which are roughly symmetrical – L Tone (211) vs. H Tone (455), and LH Tone (113) vs. HL Tone (553).

Two production experiments were conducted to examine the interaction of lexical tones and intonational tunes of monosyllabic utterances (Experiment 1) and longer utterances (Experiment 2) in Tianjin Mandarin. Six native speakers of Tianjin Mandarin (3 male and 3 female) were recorded. The central goal of this project was to investigate the interaction of intonational tunes (pitch accents and boundary tones) with lexical tones. Would lexical tones override intonational contours? Or would there be a clear separation between intonational tunes and lexical tones? In Experiment 1, three syllables [ma], [mi] and [mau], each with four lexical tones, were tested for declarative tunes and interrogative tunes. In Experiment 2, those monosyllabic words were taken as target words and embedded in two carrier sentences. This was to keep the target words away from both ends of intonational phrases.

A comprehensive analyses of the data suggest that (i) question intonations do not differ significantly from statements in terms of overall pitch contours or boundary tones and (ii) there are no obvious rising contours for question intonation, suggesting a striking similarity with some African tonal languages (cf. Rialland, 2007). However, there are clear differences in the overall register and individual tonal accents pattern differently in terms of their pitch falls and rises. The details of the analyses (including both temporal aspects and pitch) in ***Experiment 1*** are as follows: (a). The TBU (Tone Bearing Units) in Tianjin Mandarin is the rhyme. (b). The register is higher in interrogative tunes than in declarative for all tones. (c). The pitch range of the intonational yes-no questions is smaller for tones ending with L, but higher for tones ending with H. This implies that, on the one hand, the Ls in the questions do not fall as sharply as those in the statements; and, on the other hand, the Hs in the questions rise even higher than those in the statements. (d). There are no visible boundary tones for statements and intonational yes-no questions in Tianjin Mandarin. (e). The rhymes in statements are significantly longer than in intonational yes-no questions. ***Experiment 2*** also concluded (a)-(e). The monosyllabic target words, which act as the prominence of the utterances, have the same changes as when they are in isolation. No evidence was found to support the presence of postlexical pitch accents or traditional boundary tones either. The results coincide with some African languages, which make questions by utilising the register and degree of pitch rise and fall (Rialland, 2007). Tianjin Mandarin also has syntactically marked yes-no questions, in which the utterances end with a question particle. This construction maybe a consequence of the fact that intonation alone in a tonal language is not robust enough to facilitate effective communication.

The Typology of Opacity and Containment Theory

Eva Zimmermann & Jochen Trommer (Leipzig University)

Main Claim In this talk, we argue that Containment Theory is a general representational solution to the opacity-problems standard correspondence-theoretic OT faces. We show that a specific and restrictive version of Containment Theory employing the so-called 'Cloning Hypothesis' is empirically most adequate with respect to the typology of attested opacity patterns and is hence superior to rule-based alternatives or less restrictive versions of Containment Theory. **A typology of opacity** Phonological opacity (Kiparsky, 1973; Bakovic, 2011) is the pervasive phenomenon that phonological processes apply where they are not longer motivated (e.g. so-called Counterbleeding in, for example, Tiberian Hebrew (1)) or fail to apply even where they should receive input by another process (e.g. so-called Counterfeeding in, for example, Lomongo (2)). Opacity has been a central argument for ordered phonological rules and a major challenge for fully parallell Optimality Theory (McCarthy, 2007). In this talk, we investigate which types of opacity can and which cannot be modeled in a version of OT employing the Containment Hypothesis (Prince and Smolensky, 1993; van Oostendorp, 2007, 2008), i.e., the assumption that all phonological representations from the input remain accessible to output constraints even if they are not overtly pronounced (as in segmental deletion or featural neutralization). More concretely we evaluate the predictions of a containment-based approach where all markedness constraints exist in two versions: one restricts the phonetically pronounced structure and a generalized version is sensitive to all phonological structure, including underlying structure that remains phonetically uninterpreted (Trommer, 2011, 2014; Trommer and Zimmermann, 2014). We show that the Containment&Cloning approach allows to capture many of the classical opacity data, including the general counterbleeding and counterfeeeding patterns illustrated in (1), but also instances of 'Grandfather Effects' (McCarthy, 2002), or self-destructive feeding (Bakovic, 2007). On the other hand, it systematically excludes a range of other imaginable opacity patterns.One example are phonological derived enviroment effects of the type described for Makassarese where only epenthetic final vowels trigger additional consonant epenthesis but underlying final vowels do not (/rantas/→[rantasaʔ] but /lompo/→[lompo]; *[lompoʔ], cf. McCarthy (2002)). In addition, Containment&Cloning excludes counterbleeding of local assimilation processes by epenthesis of intervening segments. We argue that only a few isolated examples apaprently prove the existence of these opacity patterns and a detailled analysis of the empirical facts reveals that all of them are subject to reasonable reanalysis. **Further Implication:** There are other imaginable less restrictive versions of Containment, one being what we term 'full containment'. This theory also allows a third constraint type which refers only to the underlying/morphological structure (as in the correspondence-theoretic model employed in McCarthy, 1996). We argue that this alternative suffers from a severe overgeneration problem predicting exactly the additional opacity patterns that are excluded in Containment&Cloning. We argue that a similar overgeneration problem arises for rule-based accounts.

(1) *Counterbleeding (McCarthy, 1999, 333)*

T. Hebrew			**opaque**
	/melk/	/qaraʔ/	/deʃʔ/
1. Epenthesis	melex	–	deʃeʔ
2. ʔ-Deletion	–	qara	deʃe
	'king'	'he called'	'tender grass'

(2) *Counterfeeding (Bakovic, 2011, 45)*

Lomongo			**opaque**
	/o-isa/	/ba-bina/	/o-bina/
1. Gliding	wisa	–	–
2. Deletion	–	baina	oina
	'you (sg)'	'hide'	'they dance'

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Segmentation differences of phonologically reduced speech: a gating study with L2 listeners of different ability

In paradigms focusing on isolated words, spoken-word recognition involves the simultaneous activation of potential word candidates which compete with each other for final correct recognition (McQueen *et al.*, 1994). In continuous speech, speech reductions existing at word boundaries may complicate the word recognition process – but, of course, contextual information (both linguistic and pragmatic) may help resolve competition of this type. Lexical processing is more difficult in L2 than in L1 because L2 listeners often lack phonetic, lexical, syntactic and prosodic knowledge in the target language. In this study, we investigate the on-line lexical segmentation processes that French and Tunisian listeners to L2 English engage in as discourse is progressively revealed. Our goal is to shed further light on L2 spoken-word recognition in context and to understand L2 listening difficulties through a comparison of the working hypotheses formulated by skilled and unskilled listeners during an on-line task. We used a variant of the gating paradigm (Grosjean, 1980) – run in E-prime – in which subjects were instructed to listen to and transcribe the target English items presented in increments of progressively greater duration. After each gate, they had to indicate how confident they were about their guess using a four-point scale (1 = very sure; 4 = very unsure). Our spoken stimuli were composed of two consecutive words (e.g. ten pence) which include some interesting examples of common reductions and phonetic features in English, such as elision and assimilation. Twenty-one French and Tunisian learners of English completed the task, eleven of whom were identified – through results on a standardized English listening test administered to 226 participants in a larger study – as proficient L2 listeners (the top eleven scores), the other ten as listeners-in-difficulty (the lowest listening scores). Our results indicate that although all listeners can exploit different types of information (bottom-up and top-down) for segmentation, there is an important difference in the manner in which proficient and less-proficient L2 listeners handle connected speech. Skilled listeners are consistently faster and more confident to recognize words, while unskilled listeners delay recognition of words as they wait for more lexical and syntactic evidence to appear in the gates. In addition to quantitative evidence of differences between the two proficiency groups, we will examine individual performance data, and strategies possibly deriving from the learners' first language or culture.

Key words: Gating paradigm, spoken word recognition, lexical segmentation, L2 listening

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